

The Water Therapy Manual

by **VANCE FERRELL**

Chapter One: The healing power of water - Basic principles when using it - Important cautions.

Chapter Two: Over 100 different ways to give water treatments - Step-by-step explanations and diagrams. 124 pages.

Chapter Three: How water treatments have been given for thousands of years - The complete Kellogg remedies - Dozens of single and combination water therapies - 74 pages of formulas.

Chapter Four: Temperature tables - Other helpful information - Bibliography of 132 professional books and research articles on water therapy, written by physicians, nurses, and medical school instructors, including 121 written in the 20th century.

Indexes: Five complete indexes: Disease, Therapy, Principles, Caution, Illustration. 19 pages of indexes.

Remarkably complete. The water therapies in chapter two are categorized and placed in step-by-step outline form, so they can be easily understood and followed.

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THE WATER THERAPY MANUAL by Vance Ferrell

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“TWO MIRACLE FLUIDS”-IN THIS FIRST CHAPTER you will obtain a glimpse of the wonders that water can perform in bringing healing to your body. And you will also learn basic principles and cautions that you will need in order to use it to best advantage.

“THE WATER THERAPIES”-IN THIS SECOND CHAPTER you will learn over one hundred different ways to give water treatments to your loved ones. It is all explained in a step-by-step format. One hundred and twenty-four pages of water therapies are given here.

“THE KELLOGG REMEDIES”-IN THIS THIRD CHAPTER you will discover how water treatments have been used for thousands of years all over the world. And then you will be given dozens of single and combination water therapies for many different physical problems. Seventy-four pages of formulas are given here. (not in this E-BOOK)

“SPECIAL SUPPLEMENT”-IN THIS FINAL CHAPTER you will find information on temperature tables, other helpful information, and a large bibliography of 132 professional books and research articles written by physicians, nurses, and medical school instructors on this important topic.(not in this E-BOOK)

INDEXES-Five complete indexes, covering nineteen pages are given at the back of this book to help you quickly find information on diseases, therapies, principles, cautions, illustrations,-and more.

INTRODUCTION

What is it about water that can make man whole? Let me illustrate with a story from America's past:

On May 2, 1803, Napoleon's Minister of Finance, Marquis Francois de Barbe-Marbois, and the U.S. envoys, Robert Livingston and James Monroe, signed the Louisiana Purchase Agreement in Paris. For \$15 million, the United States had purchased 830,000 square miles-and had doubled in size.

President Thomas Jefferson immediately arranged an expedition to explore this vast new area to the west. On May 14, 1804, Meriwether Lewis and William Clark set sail up the Missouri River. Six months later, after barely avoiding a fatal battle with the Sioux, winter forced them to halt in what is now North Dakota. Next spring, they pushed on into the uncharted wilderness, and narrowly escaped death from an attacking bear, a capsized boat, and a charging bear. Then they rescued one of their number nearly fallen over a precipice, and climbed, what one of them later described as “the most terrible mountains I ever beheld.”

Following the Snake and Columbia Rivers, they finally reached the Pacific Coast on November 1805-and then barely escaped drowning in the Pacific On March 23, 1806, the explorers turned their faces homeward. Back east, President Jefferson had heard rumors that they had

been shot, tomahawked, or worse. Meanwhile, as Jefferson conferred with his advisors about this, Lewis and Clark and their expedition were portaging the waterfalls of the Columbia, and encountering a wild Indian in the Northwest who was bent on killing some of them. On April 27 the voyagers reached the land of the Wallawalla Indians, and then headed into the Nez Perce country of Idaho. By that time William Bratton, one of the men in the party, was experiencing such intense pelvic pain that he could go no farther.

Captain Clark was a physician, but none of his medicines seemed to help. Then Pvt. John Shields, told them what to do: While the party pitched camp, Shields dug a hole in the ground. It was three feet across and four feet deep. Lining it with rocks, he kindled a fire in the bottom to heat the stones. As soon as they were hot, the fire was extinguished, and Bratton, naked, was carefully lowered into a seat they had suspended in the hole.

Over him, the men quickly arched willow poles, covering them with blankets to hold in the heat. Then Bratton poured water onto the stones. Clouds of steam billowed around him. After twenty minutes of this treatment, Bratton was taken out and “suddenly plunged in cold water twice [twice] and was then immediately returned to the sweat hole.”—from the Journal of Captain Lewis, May 1806. There the man stayed for another forty-five minutes, drinking copious amounts of mint tea throughout his time in the hole.

Finally he was “taken out covered up in several blankets and suffered to cool gradually.” What the medicines could not do, the water therapy had accomplished. The next day Bratton was walking about, nearly free of pain, well on his way to recovery. The water treatment had worked so well that Lewis and Clark decided to try it on a nearby Nez Perce chief who had been unable to move either his arms or his legs for three years. The men heated the rocks again, lowered him into the hole, and gave him the hot-and-cold, hot-

and-cold treatment. Again, the simple therapy did its work—and did it well. After three treatments the invalid chief could move his legs and wiggle his toes and use his arms and hands. On May 29, Lewis wrote, “He washed his face himself today, which [he] has been unable to do.”

And then the next day: “. . . We gave the sick Chief a severe sweat today, shortly after which he could move one of his legs and thighs [thighs] and work his toes pretty well, the other leg he can move a little; his fingers and arms seem to be almost entirely restored.”—From the journal of Captain Meriwether Lewis, May 30, 1806, near Kamiah, Idaho.

It took men to conquer the great wilderness, but simple water treatments helped them do it. History has many such incidents.

The hot vapor quickened the blood circulation and brought it in fresh, healing quantities to where it was needed. The brief cold water caused a powerful reaction that deepened the initial effects. Repeated several times, the beneficial results became still more evident. In addition, the sweating was decidedly helpful also.

God has placed in the simple things of nature—such things as water, non-poisonous herbs, rest, nourishing food, sunlight, fresh air, and moderate exercise,—the elements needed to bring health to our human bodies. Let us thank Him for these simple methods and use them carefully and wisely. Let us dedicate our lives to Him and ever obey His laws of health, for He has given us these blessings because He loves us. - Vance Ferrell

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IMPORTANT

The material in this Water Therapy Manual is written by a reporter, not by a trained physician, as source material for those who enjoy reading historical monographs in the medical field. It has also been prepared for use in your own home, under the direction of a qualified physician (or his nurse or physical therapist) in one of the following ways: (1) as emergency therapy during an acute attack; (2) as more prolonged therapy in a chronic condition, whether temporary or permanent; (3) as convalescent therapy following a period of sickness; and (4) as tonic applications to rebuild strength and vitality, both in those who are convalescing and those who are well.

This Manual will provide you with information as to the manner in which certain qualified physicians, nurses, and physiotherapists use water applications. And it will also provide you with warnings, cautions, and contraindications that these experts in this field have expressed in regard to various hydrotherapy applications and complicating conditions and situations.

Everything in this Manual, with the exception of several Biblical and historical quotations, is based on the writings of twentieth century medical personnel qualified in the field of physiotherapy (the modern name for hydrotherapy, or the giving of water treatments).

This Manual is based on writings of the following thirteen authorities: George Knapp Abbott, M.D.; Clarence W. Dail, M.D.;

Kathryn lo Jensen-Nelson, R.N., M.A.; John Harvey Kellogg, M.D.; Ethel M. Manwell, S.S., RN., A.R.P.T.; J. Wayne McFarland, M.D.; Gertrude Muench, R.N., R.P.T.; Fred S. Moor, M.D.; Mary C. Noble, S.S., R.N.; Stella C.

Peterson, R.N., B.S.N.E.; Charles S. Thomas, Ph.D.; Agatha M. Thrash, M.D.; Calvin L. Thrash, M.D. Most, and probably all, of the above medical authorities were, at the time of their writing, either teachers in medical schools, or directors of physical therapy departments in leading hospitals or sanitariums.

The sources used in the preparation of this present Manual are the first eight volumes listed in the Bibliography that begins on page 262. Over 2700 pages of information is included within those valuable books. For additional information, you will want to refer to the entire Bibliography, with its 132 entries.

You have a right to care for sickness within your home, but you should realize that it is current medical opinion that anything you do to regain or improve your health should be done under the direction of a qualified physician.

As stated above, this Manual is here provided to be used in your home, under the direction of the physician of your choice. If difficulties of any kind develop, immediately contact him. Treatments carried on without his aid or counsel are treatments carried on at your own risk. -Vance Ferrell

Only four of the above-mentioned eight books are currently in print. Information regarding where to obtain them will be found on page 49.

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TWO MIRACLE FLUIDS

PART ONE

THE LIVING STREAM

Within the Sacred Scriptures is to be found one of the most basic laws of the human body:

“For the life of the flesh is in the blood.” - Leviticus 17: 11.

What is it that makes you alive? According to the Bible, it is the blood flowing through your body. Your brain and nerves, glands, and internal organs, are all very important. But there is no “Life” intrinsically in any of them. They are only alive because living blood is flowing through them every moment, bathing and nourishing their every fiber, tissue, and cell.

The life is not in your heart, for it is only a fluid pump. Neither is it in your body secretions, limbs, Lymphatic tissue, eyes, or nerve cells. The only life in your body—which imparts life to all your body by a continual drenching process—is in your blood:

“Flesh with the life thereof, shall ye not eat.”—Genesis 9:4. “Be sure that ye eat not the blood: for the blood is the life; and thou mayest not eat the life with the flesh.”-Deuteronomy 12: 23.

How does healing come to afflicted parts of your body? Your internal organs, especially your liver, are very important. So also is your brain. But it is the blood that brings the healing to your body. Not only does it contain life, it is also the only means of bringing vital nutrition from your digested food to all of your body parts. And it also brings that spark of life, precious oxygen, without which you would quickly die.

It is because the life is in the blood that Christ had to die for our sins. Only our God could pay the ransom for our souls, and Jesus laid down His life on our behalf, and shed His blood for us, -that we might have forgiveness of sin and be enabled by His grace to obey His Moral Law of Ten Commandments -to live clean, Godly lives now, and dwell forever with Him in the earth made new.

“Without shedding of blood is no remission [of sin] .”-Hebrews 9:22. “For the life of the flesh is in the blood; and I have given it to you upon the altar to make an atonement for

your souls: for it is the blood that maketh an atonement for the soul.” - Leviticus 17: 11. “The blood of Jesus Christ His Son cleanseth us from all sin.”-1 John 1:7. “Whosoever committeth sin transgresseth also the law: for sin is the transgression of the law. And ye know that He was manifested to take away our sins; and in Him is no sin.”-1 John 3:4-5.” Unto Him that loved us, and washed us from our sins in His own blood.”-Revelation 1 :5. “And she shall bring forth a Son, and thou shalt call His name Jesus: for He shall save His people from their sins.”-Matthew 1:21. “One of the soldiers with a spear pierced His side, and forthwith came there our blood and water.”-John 19:34. “For even hereunto were ye called: because Christ also suffered for us, leaving us an example, that ye should follow His steps; who did no sin, neither was guile found in His mouth . . . who His own self bare our sins in His own body on the tree, that we, being dead to sins, should live unto righteousness, by whose stripes ye were healed,”-1 Peter 2:21-22,24. “For this is My blood of the new testament, which is shed for many for the remission of sins.” -Matthew 26:28. “[He] is able to keep you from falling, and to present you faultless before the presence of His glory with exceeding joy.”-Jude 24. “Whom God hath set forth to be a propitiation through faith in His blood.”-Romans 3:25. “Seek ye first the kingdom of God, and His righteousness; and all these things shall be added unto you . . . Be ye therefore perfect, even as your Father which is in heaven is perfect.”-Matthew 6:33; 5:48. “In whom we have redemption through His blood.”-Ephesians 1:7; Colossians 1:14. “Wherefore He is able also to save them to the uttermost that come unto God by Him, seeing He ever liveth to make intercession for them.”-Hebrews 7:25. “Seeing then that we have a great High Priest, that is passed into the heavens, Jesus the Son of God, let us hold fast our profession. For we have not an High Priest which cannot be touched with the feeling of our infirmities; but was in all points tempted like as we are, yet without sin. Let us therefore come boldly

unto the throne of grace, that we may obtain mercy, and find grace to help in time of need.”-Hebrews 4:14-16. (Also read Hebrews 10: 16-17, 19-22; Exodus 20:1-17.) “Now the God of peace, that brought again from the dead our lord Jesus, that Great Shepherd of the sheep, through the Blood of the Everlasting Covenant; make you perfect in every good work to do His will, working in you that which is well-pleasing in His sight, through Jesus Christ; to whom be glory for ever and ever. Amen.”-Hebrews 13:20-21.

But more: Blood, as it rapidly moves through your body, not only brings food and oxygen; it also carries away waste products from each cell in your body. Thus, the blood not only imparts life; it also heals and restores. And it does this continually. Your blood pump (the heart) need only skip one beat and you may not recover; two beats skipped and you are dead. That is how important the flow of blood is within your body. Every day, your heart pumps an amazing quantity of blood throughout your body. But without it you would die. For flowing from your heart-issuing from it -is your very life.

“Keep thy heart with all diligence; for out of it are the issues of life [for, flowing from it, is the life] .”-Proverbs 4:23. What does water therapy do? It is the most powerful, natural, non-poisonous means of quickly moving the nourishing, healing blood into and out of afflicted, diseased body parts. Let us now turn our attention to how and why water therapy can do this so well:

First, let us take a brief look at two of the many important things that are in the blood. This miraculous fluid contains several different types of cells. One is the Red Blood Cell (RBC). This cell, which is the red color of the blood, is the carrier of nutrition and oxygen to every tissue and fiber of your body. And it also takes away carbon dioxide and other waste products. Thus it both nourishes and cleanses. RBC's are so tiny that 3,000 of them could lie side by side in a distance of but one inch. In an amount of blood smaller than a tiny drop (one cubic millimeter), there are

about 4% to 5 million RBC's. Then there are the White Blood Cells (WBC). These colorless micro-dots protect the body against toxins, disease organisms and various irritants. Our heavenly Father gave us the RBC's to bring nourishment to the entire system; and He gave us the WBC's to attack and destroy disease wherever it may be found throughout the body. When a person is well, there are normally about 7,000 to 9,000 WBC's in every tiny blood drop. But when infection is present, this increases to 15,000 to 25,000.

There are many types of cells and factors in the blood, but we will not mention them here, even though they are all so important. All in all, there are about 25 trillion blood cells in your body. Laid end-to-end, they would reach to nearly four times around the earth.

As the healing, life-giving blood enters the injured or infected area, it brings nourishment and oxygen. It also brings phagocytes (another name for the White Blood Cells), which literally gobble up the infection and foreign substances. And the blood also provides the materials with which the body can rebuild the torn, diseased structures in the body.

But there are two limitations to the blood:

(1) There really is not enough of it. Your heart would have to be several times larger than it is, in order to provide you with all the blood you need. This is why you should not swim for thirty minutes after a meal: there is not enough blood to care for initial digestion and muscle activity at the same time. It is the same when there is a problem in part of your body: You need more blood-or a quicker flow of blood-than normal in order to bring healing. In connection with this, keep in mind that, at any given time, at least one quarter of all the blood in your body is in your lungs. And what is it doing there? It is rapidly moving past the 1,200 square yards of lung surface area in order to receive a fresh supply of air. Every second 2 trillion blood cells pass by the air chambers of the lungs. But it still means that one-fourth of your body's five

quarts of blood are in the lungs, being re-freshed there.

(2) The blood has a tendency to congest, or pool, in a damaged or infected part of your body. The result is a clogging up of too much blood in one place. The blood circulation to that part has slowed and the pooled blood has less ability to nourish and heal.

So, we need to bring larger quantities of blood to the afflicted areas, and we need to move it in and out again more rapidly. We need to loosen up, speed up, and equalize the blood circulation. We do not want it pooling in one area; we want it moving back and forth through the body at a good pace, for this is what keeps the blood healthy, and full of fresh oxygen from the lungs, and abundant nourishment from the liver and portal vein.

And, interestingly enough, as the blood quickens in healthy activity, the bone marrow begins to make more blood than it normally would!

God has provided that carefully-given applications of hot and cold to the body will provide the needed help. But what shall we use to place this hot and cold in contact with the body? The answer, in large measure, is water-the most abundant, natural source of hot and cold to be found on our planet. Water: the substance that can retain heat and cold better than any other common element around us. Water: the substance that can cleanse better than anything else in the world.

Water, like blood is a very special gift of God to mankind.

You, yourself, are about 65 percent water, and this wonderful liquid is a continual necessity to your existence both within your body and outside of it.

Fortunately, water is one of the most common substances on Planet Earth. It covers more than 70 percent of the earth's surface, and fills the oceans, rivers, and lakes, and is in the ground and the air we breathe.

PART TWO

Principles and Cautions

In order to make the best use of water therapy, we need to understand a number of principles-and cautions. In this present section, we will provide you with an overview of these basic principles and cautions.

Hot and cold water can powerful help to bring healing to your body. The following statement by medical and nursing authorities in the field, although written in somewhat technical language, will give you an idea of the effective help that water therapy can bring you in your own home. Here are some of the effects of water when applied to your body:

“Following all sorts of cold procedures associated with mechanical stimulation, and after hot baths or douches when they are followed by cold applications, there is a decided increase in the number of [blood] cells in the peripheral circulation. This increase often amounts to from 20 to 35 percent in the red corpuscles [RBC’s] and from 200 to 300 percent in the white corpuscles [WBC’s]; the hemoglobin also shows an increase of 5 percent or more.

“Not only does the activity of the peripheral blood vessels keep the blood cells evenly distributed, but the normal movements of the spleen, i.e., its alternate dilation and contraction, are also a factor in distributing the white blood cells evenly throughout the body. Various applications to the abdomen and over the spleen stimulate this organ to increased activity. The splenic douche, alternate hot and cold applications, and cold friction to the abdomen are especially efficient in this respect.

“Another factor in changes in blood counts is the increase of blood volume (fluid) found to occur with applications of heat, so that heat alone may result in a relative lowering of the hemoglobin and the red cells. Strange as it may seem, both hot and cold baths cause an absolute increase in the white blood cells. But in induced fever therapy the white cells in the periphery increase up to 10,000 or 15,000. The more or less permanent increases in these elements after a course or

series of tonic treatments must be attributed to an entirely different mechanism, and can scarcely be explained in any other way, than by the stimulation of the blood-forming organs.”

“The earlier experiments done by the Winternitz school [of water therapy studies] indicated a rather notable increase in the completeness of absorption of nitrogenous food and the hastening of nitrogenous catabolism, as shown by the lessening of nitrogen in the feces on days when tonic cold baths were given, and an increase in the percent of nitrogen in the urine at the same time. On these treatment days the excretion of urea was increased about 20 percent and uric acid about 30 percent. The excretion of ammonia was increased as much as 50 percent, and the alkaline phosphates 25-30 percent. After the bath period the more completely burned nitrogenous extractives of the urine sank as low as 0.5 or 1.0 percent of the total nitrogen excreted, whereas the extractives usually take up from 3 to 4 percent of the total nitrogen. With hot treatment these changes were very slight unless it was much prolonged or frequently repeated.”

“In one experiment the middle finger was able before complete fatigue to execute work equal to 5.139 kilogram-meters (a kilogram-meter is equal to 1/75 of a horsepower). After a cold bath at 500 F. for fifteen seconds, the same muscles were able to do work equivalent to 9.126 kg-m. before complete fatigue. . Even after the muscles have been fatigued by active work and are able to work but a very short time longer, the giving of cold treatment restores them to their usual capacity for work, or the working ability may even be increased over the normal.”

“Hot baths have the opposite effect; i.e., the muscles become more quickly fatigued and are able to do less work. On an average, various cold treatments, increase the working ability about 30 percent, and hot treatments decrease muscular capacity to the same extent. When, however, a hot douche [a very brief hot application] is given, the work-

ing capacity is increased, but to a lesser extent than by cold treatment. The mechanical stimulus of the percussion [hitting of the water on the skin by the douche] is responsible for this difference between a hot bath and a hot douche. For this reason the alternate hot and cold percussion douche is a most efficient means of relieving muscular fatigue. For this purpose the hot should be of brief duration, just sufficiently long to prepare the body for the cold.”

“All alternate hot and [then] cold applications have the same effect in varying degree, according to the nature of each treatment. General cold treatments, such as the cold-mitten friction, cold-towel rub, wet-sheet rub, cold shallow bath, pail pour, cold percussion douche, and even the salt glow, are powerful means of restoring the muscles to conditions for renewed activity.

“Sugar from foods is the source of muscle energy. In muscular activity it is changed to lactic acid, the accumulation of which produces fatigue. But increased circulation carrying plenty of oxygen quickly changes the lactic acid back into a source of energy. Tea and coffee, while acting as muscle stimulants, add a fatigue poison, which is not easily or quickly got rid of, thus lengthening the recovery time, lessening the work done, and decreasing endurance.

“Mechanical effects alone, such as massage, also raise the working capacity of the muscles, but to a lesser degree than hydriatic [water therapy] procedures. Cold applications should be properly graduated to suit the needs and reactive ability of each individual case.

“These beneficial effects cannot be produced by any medicinal stimulus reputed to possess the power of increasing working capacity. The effects of strychnine [for example] are irregular and transient. It is a whip only, and in no sense a real tonic, since it does not tend to restore to a normal condition.

“On the other hand, those drugs which are used to give relief from fatigue, such as the coal-tar products, bromides, caffeine, etc., do

not promote normal rest, but only deaden the nerve centers so that there is not a true appreciation of the worn-out condition of the body. For this reason, the body when under the influence of tea or coffee (caffeine), goes on working when it should rest, and hence to its own damage. A warm bath, however, gives no such false sense of energy, but is conducive to the perfect relaxation and quiet which normal rest and sleep require in order that the powers of the body may be recuperated.”-G.K. Abbott, M.D., F.B. Moor, M.D., K.L. Jensen-Nelson, R.N., “Physical Therapy in Nursing Cure, “ pages 52-53,50-51,54-55,55-56.

We mentioned, earlier, that there were two problems about the blood: (1) There may not be enough of it for emergency needs, and, (2) it has a tendency to congest, or pool, in infected or damaged areas. But water therapy can help provide solutions to both of these situations. For water treatments can speed up the circulation of the blood, bring it more powerfully into and out of the afflicted area, and, over a period of time, even increase the total amount of blood in the body. Water therapy brings the blood where it is most needed. But when a congestion of blood has occurred, the skillful use of water applications drains away the congestion and brings a refreshing quantity of fresh newly-circulating blood to the area needing it. In addition, there is the “peripheral heart” factor. The heart, itself, pumps the blood all over the body. But in the more distant parts, the pumping action of the heart cannot send the blood along very fast. But the blood vessels, themselves, have the ability to dilate (enlarge) and contract (reduce) in size-and thus pump the blood along also. Oh, how wondrously our God has made us! This is called the “peripheral circulation.” And in reaction to hot or cold water applications, this peripheral circulation really jumps into high gear. This pumping action of the heart, which normally occurs four or five times a minute, powerfully increases under many different water treatments.

Here are a few additional principles that will help you to better understand some of the effects of hot, cold and neutral (lukewarm) water on the human body:

1-It is the heat and cold of the water that produces the results. Neutral temperatures are quite relaxing, but they do not produce the other-the powerful-effects that hot and cold can give.

2-Heat is measured in degrees by a thermometer. In this present water therapy manual, we will only use Fahrenheit. Scientists may prefer centigrade, but your home and my home only has Fahrenheit thermometers, so that is what we will use. On this scale, normal body temperature taken by the mouth is 98.6 ° F. Temperature is important in water therapy, and so we have provided you with so me very helpful temperature information on pages 253-256.

3-Water is capable of absorbing and storing a larger amount of heat than nearly any other substance. (It has high "specific heat.") This means that when water is applied to the body (in a cloth, bath, shower, etc.), it will impart more heat (or cold) than any other substance at the same temperature. Because water stores so much heat and gives it off so readily, it will seem to the body to be hotter or colder than other substances. (Example: Step from a room at 75° F. into a bathtub at the same temperature!) One substance has a higher specific heat at body temperature-and that is paraffin (see page 78). 4-Without going into the technical details, ice is, in its effects, far colder than its temperature of 32° F, and steam is far hotter than 212° F. This is known as "latent heat." This gives water a very wide heat and cold range. (In connection with this, keep in mind that steam can burn!)

5- Water must be in contact with the body for awhile to impart heat or cold. But it only need contact it for a moment to give a "thermic impression" that can be quite strong. For example, plunge your arm for only a moment into a pail of very cold water. It was only there for a moment, but the effect on the circulat-

ing blood in the arm will be powerful. This is "thermic impression," and it is important,-for you do not have to cool the body with lengthy cold in order to have it react strongly to that cold.

6- In the Cold Mitten Friction, the impression of cold from the brief application of water is combined with the mechanical stimulus of "friction" (the rubbing of the cloth on the arm). Both acting together produce a much greater effect on the body than either alone. The same is true of sprayed water and .. pail pours. The water "hits" the skin (there is "percussion" on the skin) and deepened the reaction of the body to the cold.

7 -Water is the world's greatest solvent. As a result it can cleanse better than anything else. It can remove wastes. But it can also hold nutrients placed within it for the body to absorb. Keep this in mind: many of the diseases of mankind would not exist if people drank an adequate amount of water.

8 -When the body remains in contact with cold for a long time, its real effects are seen: Body functions are slowed or depressed; the respiration and pulse are less rapid; the circulation slows; sense of touch is blunted; muscles move sluggishly and clumsily; digestion is retarded or stopped. These are the effects of long-continued cold,-but in water therapy we rarely give a "long cold" to the body. (Dangerously-high fevers are among the only exception.).

9-Moderate heat stimulates the life processes: It quickens the circulation, pulse rate, respiration, digestion, and makes the muscles more active, and skin sensations more sensitive. Many water treatments consist of moderate heat.

10-Brief cold has dramatic, powerful effects, and is one of the primary types- of water treatment. These effects are caused by "reaction." The body received only a quick cold application that made the body react to the "thermic impression." Recognizing cold as a depressing agent, the body reacts in several ways: The heart beats more rapidly and forcibly; the circulation is quickened; the

nerves tingle with new life; breathing becomes at first rapid, then slow and deeper; muscles are energized and have new power for work.

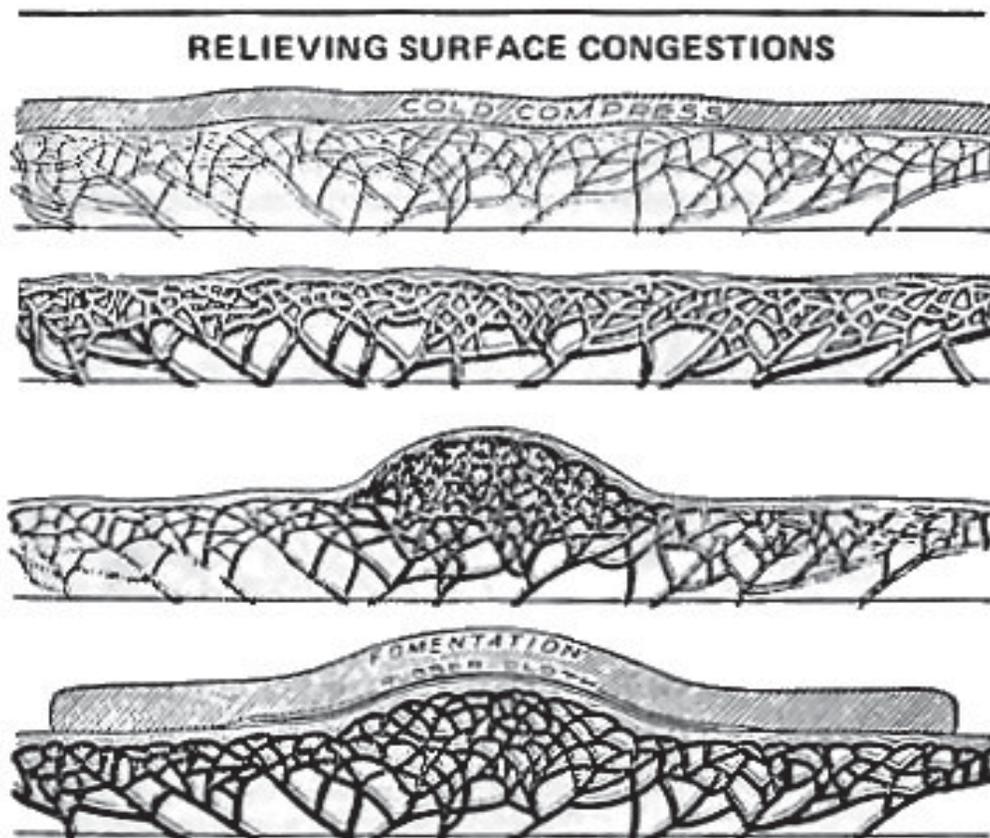
11-A prolonged hot application to the body will, eventually, depress all body processes. Therefore, we only apply a very hot application for a fairly short period of time, and we generally conclude it with a brief cold application to strengthen the body and equalize its circulation.

12-When giving a brief cold application, be sure the one receiving it has a good reaction. This will be shown by the reddening of the skin, the increase of body heat, and the tingling of the nerves to new life. An "incomplete reaction" will result in duskiness of the skin, goose flesh, chilliness or shivering, cold feet or hands, a feeling of fullness in the head or faintness. At this.. immediately do some-

thing! First, warm him up with a hot application, and then give another, less severe, brief cold. Or, give no cold at all. Quickly dry him and put him into a warm bed in a warm room free from drafts. (Normally, if healthy and having had a good reaction, he will dry, dress, and then exercise.)

13-A set of two or three cycles of hot and cold may be given. This is called "repeated reactions." But after two or three, give no more immediately. Note that in order to maintain or increase the height of reaction, the second and third applications of hot and cold must either be more intense than the first, or friction or percussion must be added.

14-Sometimes it is best to "suppress the reaction." This is frequently done in local applications of intense cold, such as an ice bag. Sometimes overactivity in an area, be-



The illustrations above show superficial (at or near skin surface) congestions and sample ways they are dealt with. (1) A congested skin area has the congestion reduced by a cold compress over it. (2) A small cutaneous (skin) congestion (such as a boil) is relieved by a fomentation which dilates (enlarges) the surrounding blood vessels.

cause of infection or inflammation, requires a cooling effect. Perhaps an ice pack or ice bag may be used, or a cold cloth frequently renewed may be applied. When this is done the usual changes produced by reaction do not occur, simply because the cold has been so long continued.

15-If it is desired to suppress or prevent a reaction following the removal of a prolonged application, a brief application of heat may be given immediately after the cold is removed.

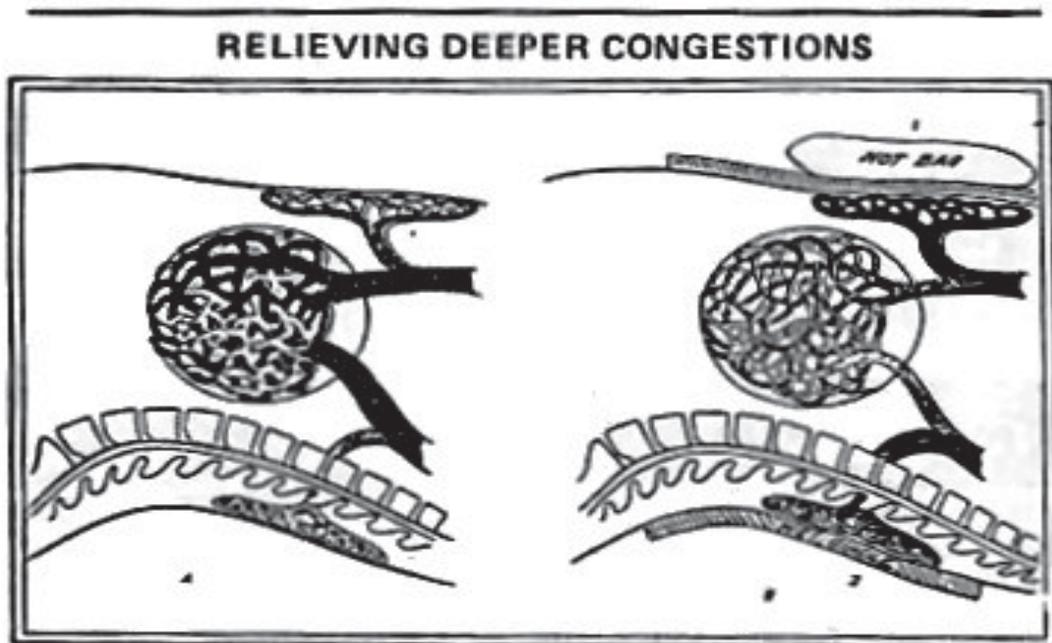
16-Neither infants nor aged persons bear cold treatment well. Some people chill after almost any kind of cold application. Remember: they are only being helped if they react well to the cold application. If they don't, then they are not being helped! Conditions which do not always react well to cold would include anemia, emaciation, asthenia, extreme thinness, etc. If they cannot be benefited by cold, then apply mild heat alone.

17- The body should be warm before the

cold is applied. Exercise, friction, percussion all help bring a good reaction. Hot given beforehand to warm the body also aids it. (Remember: the body should always be warm before the cold is briefly applied, or there will not be a good reaction. The skin should be warm, and, very important, the feet should be warm.) He should receive the cold in a room with warm air and no drafts, and he should remain in a warm room without drafts until the desired reaction occurs.

18-Another excellent help is to apply hot to the feet before the cold is given, and-if needed-after the cold is given. After the cold is given, it may be necessary to provide him with additional covering (either bedding or clothing) in order to secure the full reaction.

19- The colder the water, the greater the reaction. The reaction will come more quickly if the cold is accompanied by friction (rubbing) or percussion (the splashing, pouring, or spraying sensation of the water on the skin). The larger the cold application or the



The illustration above shows typical ways in which the congestion in a deeper organ is relieved: (1) A hot water bottle (or a fomentation, hot blanket pack, moist abdominal bandage, etc.) is placed above the inflamed organ (or it is placed over a surface area reflexly related to that organ). (2) A wet girdle (a wrap-around moist abdominal bandage), given at the same time, aids in diverting blood from the congested area. (3) A hot foot and leg pack [not shown] will draw the blood away from the congested organ to the legs and feet by derivation.

more general the surface treated, the less promptly will the reaction appear. A "combination treatment" is the keeping of hot on part of the body at the same time that the cold is given for purposes of reaction. This will help the reaction. (Example: Continue to keep hot applications, such as a hot foot bath and fomentations, in place while a cold mitten friction is given.)

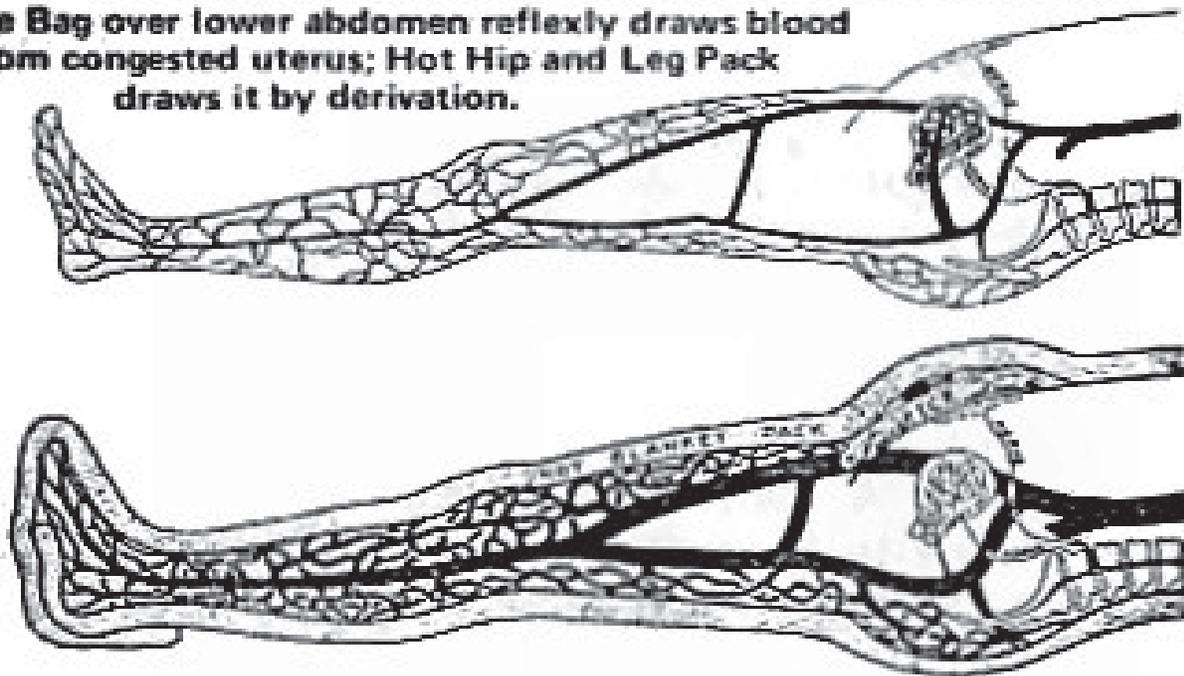
20- The cold treatment should be given quickly. As soon as it is completed, quickly dry him. Friction with the dry hand or the rubbing of a rough towel following the drying, will help the developing reaction to be a good one. Percussion (light slapping on the skin) has the same effect. He must be dried very quickly-and well. If moisture is left on the surface, the resulting evaporation will cool his body, delay the reaction and make it less complete. Dry him in a warm room near the place where the last application of cold water was given. Have his clothes all ready for him to put on, or have a warm bed in a warm

room ready for him. This requires planning ahead! Carelessness after the cold can undo all the value that could have been gained from it.

21-By alternating the hot and cold applications, the beneficial properties of both hot and cold may be obtained without many of the disadvantages of either. Thus, the congestion that tends to come with the application of heat is overcome by the cold application following it. The depressant effect of the cold is counter-balanced by the heat preceding it (and following it, if a series is given). The reaction will stimulate metabolism, and thus increase circulation, oxidation of toxins, enzyme action, and nerve tone. One example is the contrast bath (hot and cold bath to a limb) as an aid in the healing of fractures: Heat alone may hinder the calcification process, and even induce decalcification. But hot and cold together speeds up the formation of new bone. Another example is alternate hot and cold applications in conquering infec-

REFLEXIVE AND DERIVATION EFFECTS COMBINED

Ice Bag over lower abdomen reflexly draws blood from congested uterus; Hot Hip and Leg Pack draws it by derivation.



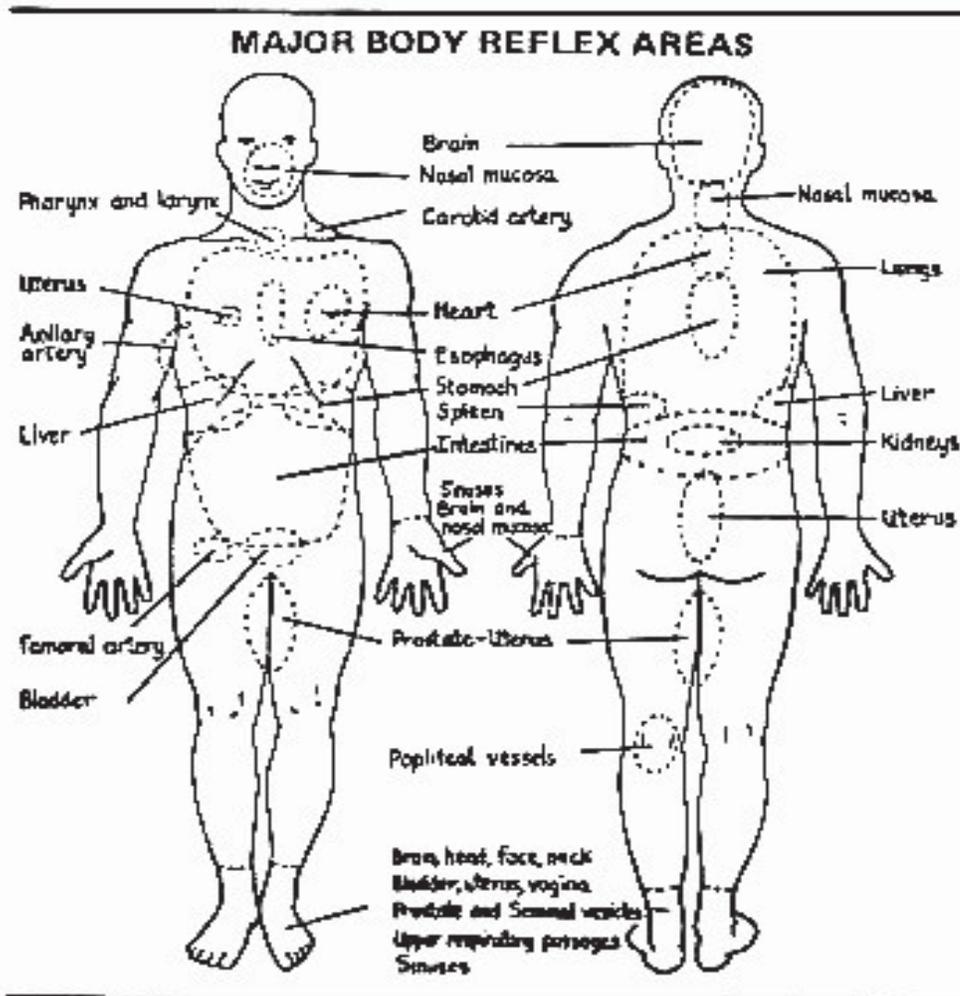
Depletion by Simultaneous Hot and Cold. Upper Figure Shows a Congested Uterus. Lower Figure Shows Depletion of the Uterus Secured by the Harmonious Action of an Ice Bag Acting Reflexly, and a Hot Hip and Leg Pack Acting Hydromechanically (Illustration)

tions in the extremities. A powerful new surge of blood is brought to the infected hand, arm, foot, or leg, as it is alternately plunged into the hot pail of water and then into the cold. A more speedy recovery is the result.

22-As you become acquainted with the many water therapies given in this manual (pages 44-169), you will notice that they tend to do one or more of six things: (1) Bring blood to an afflicted part. Frequently, this will be an area that is closer to the surface and outside of the trunk. (2) Pull blood from a deeper internal organ to the skin just above it. This deeper, congested area is often in the trunk, and the hot application (or a cold-to-heating application) was placed on the skin just above that organ.

(3) Draw blood away from a deeper congested organ, by placing the application, not on the skin just above the internal organ, but on a reflex area somewhere else on the body. We will discuss this more below. (4) Pull blood from the internal organ to a distant

body part (usually the legs and/or feet-best both). This is called "derivation" and is frequently done at the same time that an application is made just above the internal organ (or to a reflex area connected to it by nerves) is given to also pull blood away from that congested organ. See page 95 for one of the best therapies for "derivative treatments." (5) A "proximal compress," consisting of a cold application, may be placed on an extremity. Here is how this works: Place an ice bag on your upper forearm, and you will lessen the amount of blood supplied to everything below it (the lower arm and the hand). Place an ice compress around the neck, and you will greatly reduce the amount of blood flowing into the head. For more information on "proximal compresses," see pages 50-51. (6) A sixth pattern that may be mentioned is a full application to most of the body to relieve congestion, equalize the circulation, and bring warmth from that



application (a hot pack - applying heat) or by reaction to it (a heating compress - applying cold for the body to heat).

REFLEXIVE AND DERIVATION EFFECTS COMBINED

Ice Bag over lower abdomen reflexly draws blood from congested uterus; Hot Hip and Leg Pack draws it by derivation.

23-We will now consider the principle of "reflex areas." Internal organs are connected by reflex nerves to various surface portions of the body. In most instances, the area they are connected with is the skin surface directly above that organ. But it has long been known that there are certain other, special reflex areas. These exceptions are primarily the brain, the mucous membrane of the upper respiratory tract, and the organs within the pelvis. But before describing them, here is an example of reflex nerve action: Place the left hand in hot water, and the right hand (as well as the left) will quicken in its blood flow; place either hand in cold water, and the circulation of blood will lessen in both hands.

MAJOR BODY REFLEX AREAS

24- The special reflex areas normally used are shown on the chart on page 24. Here is a brief description of them:

"1. The skin areas of the face, scalp, and back of the neck are reflexly related to the brain. 2. The skin of the neck is reflexly related to the pharynx and larynx. 3. The back of the neck is reflexly related to the mucous membrane of the nose. 4. The skin of the chest (front, back, and sides), dorsal region, and shoulders has reflex relations with the lungs. 5. The precordia [see chart] is in very perfect reflex relation with the heart through its accelerator nerves (sympathetic). 6. The hands are reflexly related to the brain and the nasal mucous membrane. 7. The skin over the lower right chest, to the liver. 8. The skin over the lower left chest, to the spleen. 9. Lower dorsal and lumbar spine, to the kidneys and intestines. 10. The skin of the central abdomen from the naval to the pubes is in reflex relation with kidneys and ureters. 11. The lower lumbar and sacral spine [both

on lower back], to the pelvic organs (uterus, ovaries, bladder, and rectum). 12. The epigastrium [see "stomach" on chart], to the stomach. 13. The skin of the entire abdomen, especially that of the umbilical [naval] region, is reflexly related to the intestines. The fact that the pain of colic, appendicitis, etc., is referred to the region of the umbilicus [naval], is an evidence of a similar nervous connection. 14. The lower abdomen, including the groin, and the upper inner surfaces of the thighs, are reflexly related to the pelvic organs. 15. The saddle-shaped area covered by a sitz bath [page 118-121] is in reflex relation with the prostate and seminal vesicles. 16. The skin of the feet and legs is reflexly related to the brain, the lungs, and the pelvic organs. 17. The breasts are reflexly related to the pelvic organs." -G.K. Abbott, M.D., F.A.c.S., F.B. Moor, M.D., K.L. Jensen-Nelson, R.N., M.A., "Physical Therapy in Nursing Care," page 60-61. As the above three medical authorities tell us: "When an application to the skin affects a part through nerve connection, it is said to produce a reflex effect. A reflex effect is, then, an indirect effect produced through nerve connection." (Ibid, page 60.) In some instances, heat to a reflex area will produce a different response than cold that area: Heat to the thighs has little influence on gastrointestinal action, but cold to the same area will cause vigorous movement of the stomach, with little or none in the small or large intestines. Cold to the thighs will decidedly increase stomach acidity in most people.

There are a number of CAUTIONS that should be observed in giving hydrotherapy treatments. The next several paragraphs (paragraphs 25-35) will provide you with far more general cautions than you will find in many modern textbooks on hydrotherapy. (In addition, many cautions relating to specific therapies and diseases will be found later in this Manual.)

25-Always keep the feet warm. In case of any kind of heart problem, keep cold over the heart. It is often necessary to keep cold

to the forehead and back of the neck. Too lengthy a water treatment may cause "hydrotherapy headache" for a while afterward. Dry him quickly and well. He should be kept warm after that for a time. Here are three things that could cause this headache: (1) Applications that are too long, an incomplete or an excessive reaction, or insufficient time in bed afterward to obtain the needed reaction. (2) Failure to place a cold compress on the head or neck, when giving a heating treatment. Any time the body temperature goes over 100° F., a cool washcloth should be laid on the forehead and the face and neck should be sponged occasionally. Do this for all kinds of elevated temperatures: fevers as well as water treatment induced.

26-The lower the temperature, the shorter should be the application: only 1-5 seconds for very cold applications. Neutral and warm applications can be continued for quite some time. Very hot applications should rarely be more than a minute in length. When used to reduce fevers, cool applications, without percussion or friction, can be prolonged to 15-20 minutes. The neutral bath can continue for any length of time. It has been used for months on people afflicted with insanity. But in such instances, the temperature was carefully watched so that there would be no reaction or chilling. Normally, from 30 minutes to 1-2 hours is the usual time for a neutral bath.

27- Try to train him to progressively react to the coldest applications. The best and most durable effects come from short cold applications, frequently repeated. Few people are helped by long cold; remember that. Exercise before and after a cold treatment is good, but not always feasible.

28-Here is a list of the people that perhaps should not receive certain water treatments: Those who are anemic, very thin, overly feeble, neurasthenics, chronic inebriates, hysterical, or exhausted by loss of sleep or other causes should only receive short cold treatments. This would also include those with neuralgia, myalgia, painful congestions,

or chronic rheumatism with painful joints. Some, such as those with painful neuritis, cannot take any cold. Those that can only take a very brief cold should first receive a hot application. This would also apply to those who are very sensitive, timid, or hypochondriac in temperament. In connection with this, be sure to always explain what you are going to do next.

29- Only give mild cold to those with a weak heart, organic heart disease, Bright's disease and other forms of kidney disease, diabetes, or to children under seven. Avoid cold baths during menstruation, pregnancy, and old age (especially if the aged have arteriosclerosis and similar degeneration, cardiac weakness, emphysema, or bronchitis). Those with aneurism of the aorta, advanced arteriosclerosis, or a tendency to apoplexy should also avoid it.

30-Very hot applications should be avoided in such conditions as cardiac disease, aneurism of the aorta, advanced arteriosclerosis, apopleptic tendency, or aortic stenosis. For such, non-percussion applications of moderate temperature applications should be used. In giving hot applications, keep in mind that you should never apply heat, at a temperature higher than 102.104° F., to the feet of an Insulin-dependent diabetic. This is because, not sensing heat as well in their extremities, they can be more easily burned. Do not apply heat to an abscess in a closed space. An example of this would be an inflamed appendix. Heat over it can cause the appendix to swell and burst. Contrariwise, moist heat over a boil will soften it, bring it to a head better, and help the pus to come up and out.

31-Regarding ability to give a good reaction to cold water, we have already discussed this, but will here mention that very fleshy persons do not at first react so well as lean people, but they bear prolonged application much better, due to their large heat-making resources. Lean folk react well, but their powers of reaction are very quickly exhausted; hence more likely to suffer from secondary

chill, etc. Thick-skinned people of calm temperament readily tolerate very cold and applied with strong pressure in the stream of water; that is, if no other negative symptom is present (such as heart disease, etc.).

32-On the topic of hot and cold precautions, here is some additional counsel from Dr. John Harvey Kellogg:

“Precautions: 1. When fatigued as the result of the loss of sleep or severe muscular exercise, a cold application should be preceded by a hot douche or immersion bath for 3 to 7 minutes. 2. If but slightly fatigued, a short cool or tepid douche, or cold friction may be substituted for the cold bath. 3. A very cold bath should always be short, and should never be administered when the body surface is cold or chilly. The hot bath carried to the point of gentle perspiration is an excellent preparation for a cold application. 4. The temperature of the air of the room in which cold bath is taken should always be higher than that of the bath. 5. Avoid frequent hot baths at all seasons, and especially in winter, as they are depressing, and lessen vital resistance to cold and other disturbing influences. The best time for hot or warm bath in cold weather is just before retiring.”- J.H. Kellogg, M.D., “Rational Hydrotherapy,” page 396.

33-Here are still more cautions in regard to cold applications, whether for tonic or recovery purposes: Extremely feeble persons are the ones most needing tonic treatment, but those who have the least tolerance for cold water. Therefore, begin with very gentle measures, such as the Cold Wet Hand Rub, Salt Glow, Cold Mitten Friction, Alternate Hot and Cold to the spine, etc. Confine the first applications to small areas, rubbing each, drying it well, then passing on to the next. Do this symmetrically: right arm and hand and then left arm and hand, etc. Feeble people often experience a very unpleasant and discouraging sense of fatigue after tonic applications, especially when the course of treatments first begin. So use great care to avoid exhausting him with much cold. This will discourage him

and blight his prospects for recovery. (In his writings, Kellogg tells of the time when the famed Bavarian water therapist, Joseph Kneipp, was called to the Vatican to treat an aged pope who had chronic rheumatism. Upon his arrival, he was received with great honors; but the first cold bath given to the aged prelate, entirely unaccustomed to such heroic treatment, caused the pope to quickly send Kneipp back home.) Instead, begin with mild cold applications, while his feet are in a hot foot bath. The impression of heat on his feet helps him take the cold elsewhere. And/or prepare him for the cold by giving him a very hot spray or shower (110-1200 F.) for 1-3 minutes beforehand. This hot application should be of gradually increasing temperature, then turned off and the cold applied.

34-Be on guard to avoid the cold douche (cold hand-held spray) with strong pressure to the upper part of the chest. The effect on the respiratory nerve centers can cause temporary coughing and a sense of distress. Also avoid the cold douche over the stomach, loins, and abdomen in cases of hyperpepsia, ulceration of the stomach, hemorrhage from the bowels, or any form of uterine hemorrhage, as menorrhagia or metrorrhagia. (Obviously, because it would increase blood circulation, and hence internal bleeding, in the afflicted part.) Again, care must be taken to avoid the abdomen, the chest, and particularly the region of the heart in nervous cases, especially those in which hysteria, heart disease or asthma is a well known symptom.

35-In certain instances, one water application can nullify the effect of another. Kellogg was a master in the field of water treatments, so we will let him give us the following cautions:

“Hydriatic Incompatibilities: Wise discretion must be used in the combination of procedures, lest one measure shall undo the therapeutic work accomplished by another. The combination of hydriatic processes in such a manner as to enable one procedure to intensify or to prolong the effect of another is perhaps the best test of a physician’s experi-

ence and skill. The following meager suggestions barely touch the surface of the subject:

“1. Tonic procedures [quick cold and/or rubbing] must be carefully avoided when a sedative effect is desired, such as cold and neutral baths or other measures. The tonic application may be accidental. The contact with pure cold air after a neutral bath, or of the feet with a cold floor, may destroy the sedative effect of the bath altogether.

“2. Sedative [relaxing, sleep-inducing] measures must be as carefully suppressed when tonic procedures are employed for their specific effects. When a hot bath precedes a cold bath, if too prolonged, or if the cold application is too short, or if the patient is exposed to an overheated atmosphere after the bath, the tonic effect will be lost.

“3. In the use of antipyretic measures, the procedures must be so managed that heat production will not be increased so much as to more than counterbalance the increase in heat elimination; hence.. short cold or cool applications may be injurious [by making him hotter] . Cool sponging often raises the temperature by increasing heat production.”- Kellogg, “Rational Hydrotherapy,” pages 978-979,

To conclude this chapter of basic principles, we will give you several water therapy CLASSIFICATIONS that may help you more clearly obtain a broad view of the general categories they fall into and their relationships to one another.

36-Scientists have discovered that water therapy can help the human body in so many ways. For example, Crawford was the first to observe that brief cold applications will increase the difference in color between arterial and venous blood. This is the result of increased oxidation. Liebig discovered that cold air, cold water, and exercise, habitually employed, are the most powerful of all means of stimulating tissue activity. And Strasser has shown that general cold applications increase the alkalinity of the blood, the reduction in acid phosphate amounting sometimes to fifty percent. Beginning just below is Dr. J.H.

Kellogg’s “Comparative Summary of the Chief Effects of Cold and Heat.” It is taken from pages 188-189 of his book, “Rational Hydrotherapy.”

COMPARATIVE SUMMARY OF THE CHIEF EFFECTS OF COLD AND HEAT.

COLD.

General.

Primary, depressant.

Short, excitant by tonic reaction.

COLD.

Prolonged, depressant.

Special,

Skin: Action, diminished activity.

Reaction, increased activity.

Diminished sensibility.

Heart: First quickened, then slowed.

Increased force.

Vessels: Action, contraction.

Reaction, dilatation.

Increased tone and activity.

Local anemia, collateral hyperemia,

With reaction, local hyperemia, collateral anemia.

Short, reflex dilatation of visceral vessels.

Nerves: Benumbs and paralyzes. Excites by tonic reaction.

Muscles: Snort, increased excitability and capacity.

Prolonged, lessened excitability and capacity.

Lungs: Slows and deepens respiration.

Increased amount of respired air. Increased CO₂.

Increased respiratory quotient. Stomach: Increased HCl and motor activity.

Kidneys: Congests and excites.

Animal Heat: Short, increased heat production.

Prolonged, diminished heat production.

Blood: Increased blood count, especially leucocytes.

Metabolism: Increased CO₂.

Increased urea, and improved oxidation.

TONIC REACTION.

1. Vasodilatation.

2. Skin red.

3. Pulse slowed.
4. Arterial tension increased.
5. Skin action increased.
6. Temperature lowered.
7. Feeling of invigoration.
8. Muscular capacity increased.
9. Amount of respired air increased.
10. Heat production increased.

HEAT.

General.

primary, excitant.

Short, depressant by atonic reaction.

HEAT.

Prolonged, mixed, excitant, and depressant.

Special.

Skin: Action, increased activity.

Reaction, diminished activity.

Diminished sensibility.

Heart: First slowed, then quickened.

Decreased force.

Vessels: Action, contraction, then dilatation.

Reaction, contraction.

Lowered tone-paralysis. Local hyperemia, collateral anemia.

With action, local anemia, collateral hyperemia.

Short, reflex fluxion and derivative effects,

Nerves: Excites.

Depresses by atonic reaction.

Muscles: Short. lessening fatigue effects.

Prolonged, diminished capacity and excitability.

Lungs: Quickens and facilitates respiration.

Diminished am't of respired air. Decreased CO..

Diminished respiratory quotient.

Stomach: Decreased HCI and motor activity.

Kidneys: renders anemic and lessens activity.

Animal Heat: Short, diminished heat production.

Prolonged, increased heat production.

Blood: Decrease in number of red cells. increase in number of leucocytes.

Metabolism: Decreased CO₂. Increased urea and general proteid waste.

ATONIC REACTION.

I. Vasoconstriction.

2. Skin pale.

3. Pulse rate increased.

4. Arterial tension diminished. 5. Skin action decreased.

6. Temperature lowered.

7. Languor.

8. Muscular capacity decreased.

9. Amount of respired air decreased.

10. Heat production decreased.

37-Charles S. Thomas has, for years, made a careful study of the field of hydrotherapy. As a university professor teaching the subject, he is uniquely qualified to speak. Here, slightly adapted, is his classification of the water therapies by their effects.

SHORT COLD and CONTRASTS: The predominate effect is that of a reaction

General applications that give a tonic effect: Tonic sprays; tonic frictions; hot and cold and revulsive compresses. pail pours, plunges, cold shallow bath.

Local applications that give a stimulating effect: Contrast baths, hot and cold and revulsive compresses, contrast douches and local sprays, local tonic frictions.

Reflex applications that give a tonic effect: Contrast baths, hot and cold and revulsive compresses, contrast douches and local sprays, local tonic frictions.

PROLONGED COLD: The predominate effect is that of intrinsic action

General applications that give an anti-pyretic (fever-reducing effect: Graduated spray and bath, sponges, ice pack and rub, enemas and colonies, wet sheet pack, exposure to air, fanning.

Local applications that give a decongestive and depressant effect: Ice pack, ice bag, cold local bath, cold compress. direct ice application.

Reflex applications that give a constriction (lessening of blood) effect: lee pack, ice bag,

cold local bath, cold compress, direct ice application.

MILD HEATING (without perspiration): The predominate effect is that of a reaction

General applications that give a sedation (sleep-inducing effect: Continuous flowing bath, wet sheet pack, local warm bath, fomentations.

Reflex applications that give a relaxing effect: Heating compresses, Kenny packs, mild fomentations, warm bath.

MODERATE HEATING (with only a moderate rise in body temperature): The predominate effect is that of a reaction—General applications that give a diaphoresis (increase of sweating) effect: Hot bath (partial and general), blanket pack, wet sheet pack, fomentations.

MARKED HEATING: The predominant effect is that of a reaction with a marked intrinsic action

General applications that give a peripheral vasodilation (enlargement of blood vessels distant from the heart) effect: Warm full bath, hot local bath. blanket pack, wet sheet pack, steam bath, fomentations.

General applications that give a stimulation of blood circulation and body metabolism: Hot full bath, steam bath, fever cabinet (for fever therapy), insulating blanket.

Local applications that give a stimulation of circulation and metabolism: Whirlpool (circulating) partial bath, Fomentations, Kenny packs (5 minutes), hot water bottle, paraffin bath, thermal mud baths, heating appliances, hot air applications.

Reflex applications that give a relaxation and counter-irritation effect: same as those listed immediately above.

Adapted from "Simple Water Treatments for the Home," by Charles Thomas, Ph.D., Loma Linda, California, 1983 Revision, pages 100:47-48.

38-Water, applied to the body, can do seventeen different things. Dr. Abbott called them the "remedial properties" of water. Here they are: "Remedial Properties of Water-The terms listed below are commonly used to designate

the various physiologic or therapeutic effects of water. The definitions given should be studied thoroughly and memorized.

"1. TONIC-A tonic effect is one in which vital activities are increased so as to restore the body to a normal tone or condition. The nutrition, circulation, and other body functions are promoted.

"2. PURE STIMULANT -A stimulant arouses the body to unusual activities. It may be compared to a whip, and is used chiefly in emergencies. Like a tonic it increases vital activities, but. to a much greater degree. Between a pure stimulant and a tonic there are various graduations which might be designated as mild stimulant, extreme tonic, etc.

"3. SEDATIVE-A sedative or calmative agent is one which lessens vital activity and is conducive to relaxation and rest.

"4. ANTISPASMODIC-The relaxing of spasm or relieving of convulsions.

"5. DEPRESSANT -A depressant effect is one in which heightened or normal body activities are decreased to a marked degree. Such an effect is desirable only in cases in which a function is greatly overactive.

"6. ANODYNE-An anodyne effect refers to the relief of pain.

"7. SPOLIATIVE-A spoliative treatment is one which increases the oxidation and breaking down (catabolism) of tissue, which tends to reduce weight.

"8. DIAPHORESIS-The production of sweating. An agent that produces sweating is said to have a diaphoretic or sudorific effect.

"9. DIURESIS-Increasing the excretion of urine.

"10. ELIMINATIVE-An eliminative effect consists in promoting and hastening excretion from the kidneys (diuresis), the skin (diaphoresis), and the lungs.

"11. DEPLETION-Depletion is the lessening of the amount of blood in a given part. Practically, it is the reduction of congestion.

"12. DERIVATIVE-Derivation is the drawing of blood or lymph from one part of the body by increasing the amount in another part. The term "depletion" is also applied to

this process, but refers particularly to the result produced. [The blood was pulled away by derivation; the result was depletion, or less blood in the congested part.]

“13. FLUXION-Fluxion consists in greatly increasing the rapidity of the blood current in a particular part. It is the production of active or arterial hyperemia.

“14. ANTIPYRETIC-The lowering of body temperature in fever.

“15. REFRIGERANT -Relieving of thirst and restoring the alkalinity of the blood by such means as free water drinking and the use of fruit juices.

“16. REVULSIVE-A term used to designate a treatment consisting of a single prolonged application of heat followed by a single very brief application of cold. This meaning is not strictly adhered to, as the term is also used where three applications of such proportionate duration are made.

“17. ALTERNATE-The expression “alternate hot and cold” is used in this text to describe treatments in which the duration of the cold application is from one-fourth to one half that of the heat {in a few cases equal to it}, and in which three or more changes from heat to cold are made.-G. K. Abbott, FB. Moor, K.L. Jensen-Nelson, “Physical Therapy in Nursing Care,” pages 70-72.

39- Throughout the treatment, give him the best of care: The room should be warm, free of drafts, and with no bright lights shining in his eyes. Avoid possible water damage by covering bedding, rugs, furniture, etc., Avoid distracting noise (such as overly-talkative people, radios, etc.) where the treatment is being given. Plan ahead in the giving of each treatment; this will help everything go smoothly and will eliminate undue delays that might overheat or chill the one you are working with. This includes assembling everything you need ahead of time. Briefly explain before-hand what you are going to do. Stay with him or within easy-calling-distance throughout the treatment. Quietly tell him at each step what is coming next and the effect desired. While not too talkative, you are con-

tinually studying your patient, noting his words, feelings and actions. Are the applications helping him or not? Why? Make the changes quickly. Be neat and pick up, clean up, as you work. Use both time and materials carefully and economically, and put everything away when finished.

Know when to talk and when to keep quiet. Talking and extra noise wearies the sick. But do keep a cheerful outlook and express cheerful, hopeful comments from time to time. Pray with and for the one you are helping. Bring him to God; there he will find the strength and courage that he needs.

40-Helping him is what it is all about: He must be warm before you begin. Apply a cold compress to the head or neck when giving a heating application. Do not unnecessarily expose him,-but rather only the part under immediate treatment. He should be comfortable at all times. Protect him from falling, burns, chilling, and uncomfortable positions. He should not be chilled or sweating when the treatment ends, but should be warm and dry. When cold is given, he must have a good reaction or you must do something to restore proper warmth to his body. If necessary, put him in a warm bed in a warm room for 30-60 minutes.

41-Here are some basic nursing observations that you should keep in mind: Note signs and symptoms without his realizing it, otherwise he will tend to exaggerate every little ache and pain. It is equally important to note the symptoms and signs that are not present. The general appearance of his face, skin, expression, movements, along with what he says will tell you a lot. Keep in mind that symptoms can point to a number of different things, so do not quickly jump to conclusions. (Indicators of a common cold, such as runny nose, sneezing, coughing, hoarseness, difficulty in breathing, and sore throat - can be symptoms of other conditions also).

Here are additional things to watch for: Skin-Any discoloration, itching, swelling, rash, etc.? Mouth-Are the gums pink and firm? How about the tongue? Voice-Anything

unusual about it? Appetite-Any loss of appetite? Weight-Unusual weight changes? Continued loss or gain? Sleep-easy or difficult to obtain? General fatigue indicators-and why? Fever -Is the skin moist or dry? cool or hot, or alternating cool and hot?

Take his temperature (1) when he complains of feeling ill or shows signs of it, (2) once or twice daily during illness, (3) when there is a sudden change in his condition (chills, restlessness, pain, etc.), or (4), when he has a headache, chest or abdominal pain, sore throat, chills, vomiting, diarrhea, or skin rash. A fever in addition to the above signs indicates a significant illness or condition demanding immediate attention.

Pulse and respiration-Is it different than normal for him? Pain-Another warning Indicator. Pain in the abdomen should be relieved quickly by rest, drinking charcoal in water, and skipping a meal; if not-call a physician. Nausea and Vomiting-What is the color, general appearance and amount of material vomited? Bowel Movements-Note number, frequency, color and consistency. Urinary problems- Is there inability to urinate, pain or burning sensation, incontinence, presence of blood? Are they too frequent?

42- In the next chapter we shall discuss a large number of practical water therapy applications. But just before concluding this present chapter, we shall let three experts in the field tell us how useful such simple water treatments can be in the home:

“Hydrotherapy may be given with very meager facilities. The procedures are not so difficult but that a layman of average intelligence may be taught how to give them with a little practical instruction. Reference to Table 10 will show that with the materials available in the home all the effects of hydrotherapy may be accomplished.

“Table 10: Procedures: Fomentations, compresses, hotwater bottle, ice bag, heating compress, cold mitten friction, cold hand and towel rubs, sponging, alcohol rub, partial bath, sitz bath, hot half bath, full immersion bath, hot blanket pack, wet sheet pack,

shower (optional), pail pour, enema, vaginal irrigation. Materials [needed to give the treatments]: Blankets, old blanket that may be cut up (part wool!), hand towels, Turkish towels, sheets, old sheet that may be cut up, newspapers, hot water bottle, ice bag, bathtub, shower (optional), pails, wash tub, small basins, enema can and tube with rectal and vaginal tips, ice, hot and cold water.”

- Fred B. Moor, M.D., Clarence W. Dail, M.D., J. Wayne McFarland, M.D., “Hydrotherapy,” 1980, page 2829. (This book is a partial reprint of their medical college textbook, “Physical Therapy, Textbook for Medical Students and Practitioners of Medicine, “ 1944.)

WRITE-IN MATERIAL AVAILABLE

We did not have space in this present Manual for four significant sets of material: (1) Fever Therapy, (2) The Kenny Packs for Polio, (3) The Kellogg Reflex Douches, and (4) The Kellogg formulas for Typhoid Fever and Malaria.

A copy of this information may be obtained by sending \$3.00 to the address given below. Along with that information, we will send you a copy of one of our most interesting publications: “Beyond Pitcairn.”

The Kenny Packs must be applied immediately upon onset of the disease; even a few hours delay can cause irreparable nerve damage. The Fever Therapy information is helpful in a wide variety of infections and inflammations. A brief explanation of the nature of the Kellogg Douches is given on page 168. The fourth topic is the Kellogg remedies for Typhoid Fever and Malaria. Dr. J.H. Kellogg considered these two infections as “models” of hydrotherapy treatment, and so he wrote fifteen pages of Information about them! There are nineteen subsections under Malaria, and sixty-six under Typhoid!

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THE WATER THERAPIES PART ONE

21 BASIC PRINCIPLES

In the preceding chapter, we learned the

great importance of blood, and of the careful use of water in aiding the blood to bring both restoration and increased physical capacity. And we learned many basic facts about how to apply neutral, hot and cold to the human body.

In this present chapter, we shall consider over a hundred different water therapy applications, under fifteen major categories. In preparing this list of the water therapies, as in the rest of this Manual, we have tried to combine simplicity with thoroughness, clarity with cautions. We hope that we have succeeded. This entire Manual is the result of a careful study of over 2700 pages of hydrotherapy material. Extracting the best and making it as simple and usable as possible was the objective of the present writer.

But before turning to the individual water therapy applications, let us stand back for a moment and obtain a wide-angle view of them all-in relation to the major ways in which they can be of help to us in our own homes. The following section is summarized from pages 327-329, 968-978, and 194-200 of Kellogg's 1193-page, "Rational Hydrotherapy":

WATER THERAPIES WHICH INCREASE BOTH HEAT PRODUCTION AND HEAT ELIMINATION-This listing is arranged in order from the most to the least powerful, and is primarily composed of tonic and fever-reducing applications:

Graduated bath. Cooling wet sheet pack
Cold friction bath. Prolonged tepid full bath at 88° F. Cold full bath followed by a short hot full bath, pail pour, or sprinkling (shower). Tepid pail pour. Cold pail pour. Cold compress. Graduated compress. Evaporating sheet. Cold to head and neck. Cold to spine. Cold to abdomen. Cold over heart. Cold colonic. Tepid or cold enema. Cold water drinking, a measure that should be combined with all the others named above. Cold air bath.

WATER THERAPIES WHICH INCREASE THE ELIMINATION OF HEAT-These are the best methods to use when a fever is present

and the cold bath should be avoided. This one is also arranged in a list from the most to the least powerful:

Hot bath for 2-3 minutes followed by a cold bath with friction for 1 minute. Hot blanket pack. Hot evaporating sheet. Hot sponge bath. Fomentation to the back. Fomentation to the abdomen, followed by the cold enema. Fomentation to the back, followed by a cold wet sheet pack. Hot blanket pack, followed by graduated bath. Hot blanket pack followed by prolonged tepid bath. Hot blanket pack followed by cold friction. Dry friction (rubbing the skin with a dry cloth). Cold friction.

WATER THERAPIES WHICH ENCOURAGE THE DESTRUCTION OF TOXINS-These are procedures which encourage vital resistance to disease, while at the same time encouraging the destruction of toxins by stimulating the toxin-destroying cells of the thyroid, liver, spleen, lymphatics, and other tissues. (From this point forward, the listings will not be in order of decreasing strength, unless otherwise stated.) Hepatic douche. Splenic douche. General cold douche.

WATER THERAPIES WHICH ENCOURAGE THE ELIMINATION OF TOXINS-"In observations made upon rabbits some seven or eight years ago, the writer demonstrated that the perspiration of the ordinary healthy man contains toxic Substances in such quantity that from 100 to 200 c.c. of the Liquid collected from the surface of a sweating man, is, when Injected intravenously, capable of killing a rabbit weighing one kilogram."-Kellogg, page 970.

Radiant Heat Bath. Sweating wet sheet pack. Steam bath

WATER THERAPIES WHICH GREATLY INCREASE LEUCOCYTIC ACTION-The following applications help increase white blood cell formation. WBC's, as you know, are a primary body fighter against toxins and bacterial infection. General cold bath. Heating compress frequently renewed. Alternate heating compress. Revulsive douche. Alternate douche.

WATER THERAPIES WHICH GREATLY

ENCOURAGE ELIMINATION OF BACTERIA BY THE SKIN AND KIDNEYS-Especially: Steam bath. Sweating wet sheet pack. Prolonged neutral bath. Also good: Sweating baths. Copious water drinking. -Each of these should be followed by a cold mitten friction, cold towel rub, or some other cold procedure.

WATER THERAPIES WHICH INCREASE OXIDATION Cold baths increase the absorption of oxygen, the elimination of carbon dioxide, and the oxidation of fat and carbohydrates. Thus, all cold applications will tend to do this, but here are some of the best:

More prolonged cold baths, such as: Dripping sheet rub. Rubbing shallow bath. Cold full bath. Plunge (quick dip into a bath tub of cold water). Cooling wet sheet pack.

WATER THERAPIES WHICH ARE THE MOST EFFICIENT MEANS OF STIMULATING NITROGEN OXIDATION-Hot applications are what are needed for this, and here are Kellogg's top recommendations:

Hot full bath. Heating wet sheet pack. Dry pack. Steam bath. Hot air. Sun bath. Radiant Heat Bath. (We should here mention that Kellogg called this the "electric-light bath," a device he invented consisting of a boxful of incandescent bulbs for heating purposes. We have changed it to "Radiant Heat Bath," with the thought in mind that electric space heaters, or something similar, could be used in your home for this same purpose.)-In each case, follow these general hot applications

with a very short general cold application.

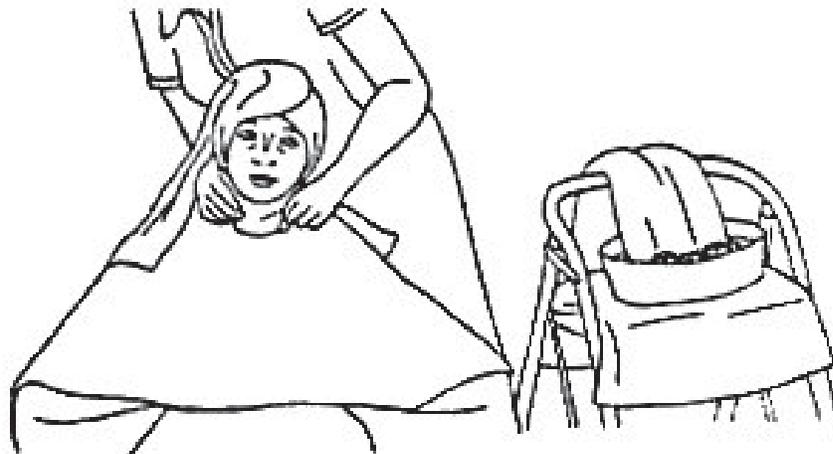
WATER THERAPIES WHICH EXCITE THE CENTRAL NERVE GANGLIA-The following are especially helpful in adynamic fevers, many neurasthenic conditions, cardiac failure (Kellogg says), hypopepsia, kidney insufficiency, and various visceral congestions, and are primarily very hot followed by very cold applications. But, of course, much of the time you will have to gradually work up to "very" hot and "very" cold. Alternate general douche. Percussion spinal douche. Alternate spinal douche. Alternate spinal sponging. Alternate spinal compresses. Alternate full bath, followed by various forms of cold. Alternate localized compresses.

WATER THERAPIES WHICH ENCOURAGE METABOLIC PROCESSES-In most forms of chronic disease, there is a grave disturbance of the general nutrition, arising from failure of the tissues to maintain normal metabolism. The most permanent effects toward improving the metabolism, either locally or generally, come from somewhat prolonged hot applications followed by a brief cold application. Here are the most effective:

Apply one or more of the following to the skin area affecting the body part(s) you wish to help: Short cold douche with strong pressure. Alternate douche. Alternate or heating compress.

WATER THERAPIES WHICH INCREASE BLOOD FORMATION -General cold applica-

COLD COMPRESS



tions, whether mild or more severe, are the best hydiatic means of promoting the processes of blood formation. The metabolic applications listed, just above, also increase blood formation and glandular activity, but the following ones are especially helpful for anemia: Short general cold baths are the best: the lower the temperature, the better, but the applications must be very short. The cold mitten friction and the cold towel rub applied 2-3 times daily are especially valuable for this purpose. For those trained to react 'well to it, the cold douche is especially good.

WATER THERAPIES WHICH INCREASE GENERAL BLOOD MOVEMENT AND LOCAL BLOOD SUPPLY-Both in providing nutrition and oxygen, carrying away wastes and toxins, and in fighting disease,-the ability to move fresh vitalized blood into and out of key areas is very important. Here are some suggestions:

Cold applications to the surface of the body: excite the heart, increase blood pressure, and increase blood and lymph movement throughout the body. All tonic measures may be used for this purpose. The cold compress over the heart area can be used in many cases, when general cold applications are ruled out. In cases of fever, or heart or kidney disease, or in neurasthenia with general feebleness, and in chronic tuberculosis and other wasting diseases, the cold mitten friction and the cold towel rub are especially useful in reinforcing the energy of the heart and strengthening the circulation.

General hot applications are not helpful here. They ultimately lower the blood pressure, diminish heart energy, and lessen blood flow. So avoid them. If a hot application must be made, guard against heart failure by applying a cold compress T'lt the heart area while the hot application is being given. IS especially applies to steam baths and hot full baths.

WATER THERAPIES WHICH INCREASE HEAT PRODUCTION-It is the impression of cold on the thermic nerves of the skin that best increases heat production. The more in-

tense (and sometimes prolonged) this impression, the greater the desired effect. The most intense effects are produced by prolonging the application until the temperature of the body has been slightly lowered. But if the cold is greatly prolonged, or is repeated at short intervals, the heat-rise effect fails.

WATER THERAPIES WHICH INCREASE THE ELIMINATION OF HEAT-Nearly all types of fever cases need an increase of heat elimination. Elevation of temperature in fever is due less to increased heat production than to decreased heat elimination.

Vigorous rubbing in a cold full or shallow bath. Wet sheet rub. Wet sheet pack. Very short hot applications followed by short cold to the surface. Cold friction bath. Cold towel rub. Cold water drinking. Cold enema. Cold applications to the spine. In certain cases, the hot blanket pack, evaporating wet sheet pack, and similar measures may also be used.

WATER THERAPIES WHICH RELIEVE PAIN AND NERVOUS IRRITABILITY-Hydrotherapy applications can greatly help in this area also.

The general neutral bath, and the neutral douche are very effective in relieving nervous irritability, inducing sleep, in insomnia, delirium, and even acute fevers. Moist abdominal bandage. Cool head cap. Heating spinal compress, in certain cases. For relieving localized pain and irritability, the hot fomentation and the heating compress are both good. The cold compress and ice compress are both valuable in those instances in which the pain is in superficial (near the surface) parts and the applications can be made directly to the area of pain.

WATER THERAPIES WHICH COMBAT BACTERIAL DEVELOPMENT -This is done by increasing blood movement through the infected parts, while at the same time increasing white blood cell activity.

Prolonged applications of cold, when it can be applied directly to the parts involved. For deeper areas of infection, it is best to increase blood alkalinity by means of general cold applications, and by measures for increasing

local leucocytic action, such as the frequently renewed heating compress, and the alternate compress.

WATER THERAPIES WHICH CONTROL BLOOD MOVEMENT AND VOLUME-The slowing of blood and lymph encourages morbid processes as waste and toxic materials accumulate in the tissues.

Apply to inflamed or congested parts the measures (mentioned earlier) which encourage leucocytic (white blood cell) activity. Also helpful: Derivative measures (such as hot leg and foot pack, hot foot bath, etc.). Cold compress over the affected part. Revulsive douche. Revulsive measures of all sorts.

WATER THERAPIES WHICH LESSEN HEAT PRODUCTION-Heat production must be discouraged in fever cases, and it is best inhibited by short hot applications to the surface, and by prolonged or frequently repeated cold applications.

The best heat applications for this purpose would be: short hot full bath. Hot blanket pack. Fomentations to the spine. Hot evaporating sheet. The best cold applications would be: Graduated bath. Prolonged tepid bath. Cooling wet sheet pack.

WATER THERAPIES WHICH LESSEN HEAT ELIMINATION-It is seldom necessary

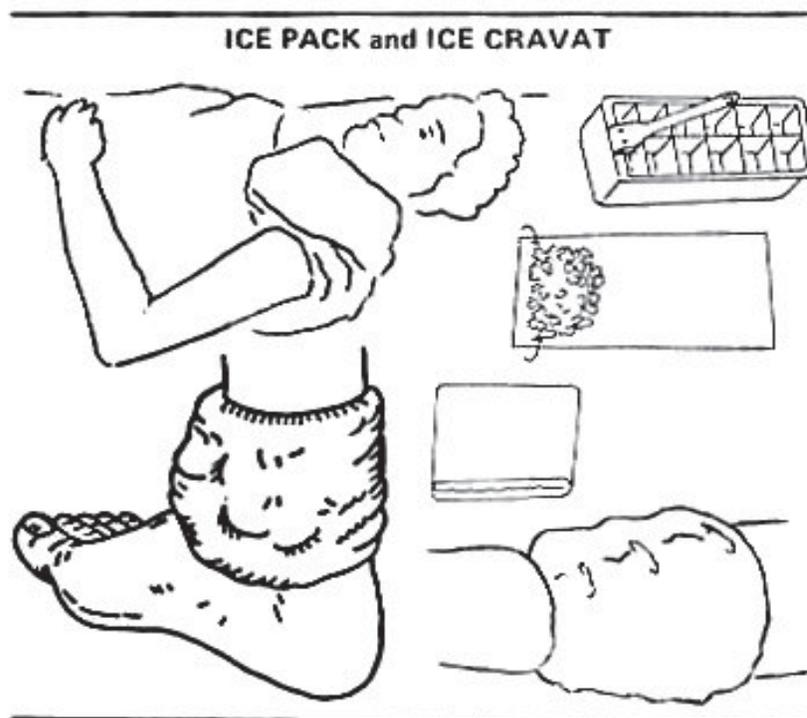
to discourage the elimination of heat by the body. But fainting is an exception.

These help prevent excessive heat loss: Dry pack. Hot blanket pack. Hot enema. Hot water drinking. Avoid exposing him to cold while changing applications. It is wise to alternate the hot application by a short cold application, such as: vigorous cold wet hand rubbing, and cold mitten friction.

WATER THERAPIES WHICH DIMINISH GENERAL METABOLIC ACTIVITY-Above all, maintain absolute rest in bed. Also good is the neutral bath. Diminishing activity of an overexcited gland (such as in hypopepsia (inadequate stomach HCL) or catarrh of the intestines or uterus) may be lessened by various derivative measures (leg and foot baths, etc.) which will draw blood away from the part.

WATER THERAPIES WHICH CONTROL BLEEDING Hemostatic (stopping of bleeding) effects may be obtained either directly by application to the bleeding area, or indirectly through applications to a reflex area.

To obtain direct effects, either very hot (110-115° F.) or very cold (32-40° F.) applications must be used. The most valuable hot applications are the hot douche and hot com-



press. A jet of hot vapor has also been used successfully. Here are some examples of hot applications: Hot nasal douche and sponging the face with very hot water for nose bleed; hot vaginal douche for menorrhagia; hot uterine irrigation in metrorrhagia and post-partum hemorrhage.

The most convenient cold applications are ice, and ice compresses. These should be applied directly to the bleeding area, or (as a proximal compress) across the trunk of a main artery supplying the bleeding part. An example of this would be an ice collar (ice cravat) for nosebleed.

Here are some indirect or reflex applications: Cold applications to the upper spine are a most excellent measure for checking nosebleed. Placing the hands in ice-water, while applying ice to the base of the cranium (lower back of head) and to upper part of the spine. Placing the feet in cold water will also help stop nosebleed. For hemorrhage of the lungs, place cold compresses over the chest and very hot fomentations between the shoulders and over back of the neck and upper spine. Ice applied to the nostrils will also contract the blood vessels in the lungs. For stomach hemorrhage, swallow lumps of ice, and place ice compresses over the reflex area that affects the stomach (see reflex chart on page 24). In apoplexy, the ice cap and ice-cold compresses to the head, face, and neck are very helpful.

PART TWO CLOTH AND BLANKET APPLICATIONS That which in centuries past was called

“home remedies” or “water treatments,” became known in the early and mid-nineteenth century as “water cure,” as Drs. Thatcher Trail and James Jackson helped thousands in their “water-cure institutes.” By the beginning of the twentieth century, it gained the title of “hydrotherapy” and “hydriatics,” and, for several decades now, it has been called “physical therapy” or “physiotherapy” by the medical world.

We will here give it the humble title of “water therapy.” Yet whatever name you care to give it, -it is still a most wonderful blessing of God to mankind.

Here, now, is the first of the two sections that will explain to you over one hundred water therapies:

SECTION ONE LOCAL COLD

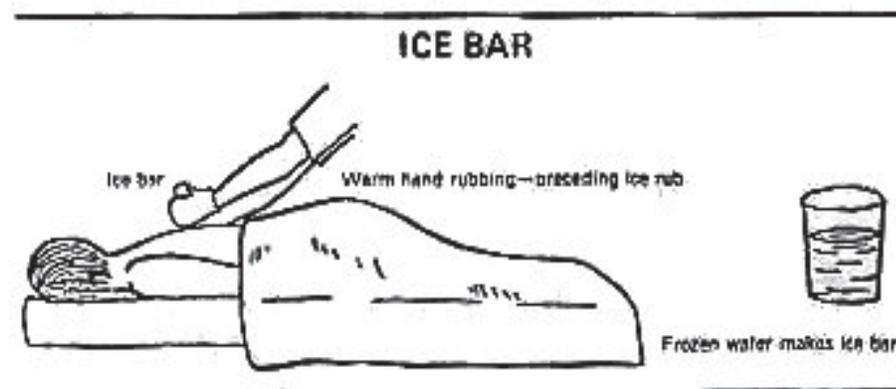
WHAT THEY ARE-These are localized applications of cold water, which means that they are applied only to smaller parts of the body.

These cold applications can also be used as a “proximal compress” (pages 23-24, 50-51) to reduce blood flow to a limb.

1 - COLD COMPRESS

WHAT IT IS-A Cold Compress is a local application of cold given by means of a cloth wrung out of cold water. Either hand towels or cotton cloths may be used.

HOW IT CAN HELP YOU-The Cold Compress is very helpful in cases of fever, pain due to edema or trauma (such as sprains). And they are used for congestion in the sinuses and for congestive headaches (for both of these, use a Cold Compress along with a



Hot Foot Bath (page 115). In addition, they are helpful for tachycardia (heartbeat over a 100 per minute).

HOW TO APPLY IT

1-Use Turkish towels to protect the bedding, as well as his clothing, from becoming wet.

2-Fold the towels (or cloth) to a desired size, then dip into cold water and wring them out - but only enough to prevent dripping. (Better: take the wet cloths off a block of ice and quickly apply them. In this way the compresses will be far colder.)

3-Lay them on the afflicted part.

4-Change the compress for a fresh cold one every 1-5 minutes. A set of two compresses will be needed so they can be continually alternated. If this is not done, the compress quickly warms up. The thicker the compress, the less often will it have to be changed for a new one.

5-Cold compresses can be placed on the head, neck, over the heart or lungs, and to the abdomen, spine, etc. When applied to the head, they need to be pressed down firmly - especially over the forehead and temporal arteries (these arteries are to the right and left of the front forehead, just above and to the front of the ears). The compresses can be placed over the abdomen in typhoid fever.

ADDITIONAL POINTS-Unless the application is quite thick, and always when it is left on too long (over 3-5 minutes), the application changes from a cold compress to a heating compress. And when you are applying a Cold Compress, you do not want it to turn into a Heating Compress! (For more information on Heating Compresses, see pages 51-59.)

2 - ICE PACK

WHAT IT IS -Although not given that name, this is actually an ice compress, and it will always produce a stronger cold effect than cold cloths wrung out of water.

HOW IT CAN HELP YOU-It can be used over the heart and chest to slow the heart. It has been used for sprains or torn ligaments, acute joint inflammation, in rheumatic fever,

acute infectious arthritis, bursitis, and burns. (In hospitals, it has been used successfully to slow the heart and limit thermic reaction following surgical operations for exphthalmic goiter.)

HOW TO APPLY IT - (See picture on page 47.)

1-Pound ice into snowy bits and pieces, or use snow itself.

2-Wrap the body part in flannel (to keep it from freezing).

3-Pack the snow or pounded ice very closely around it, until the pack is about one inch thick.

4-Wrap a large flannel cloth over it all to keep everything in place. Pin it together.

5- Interrupt the ice pack frequently in order to prevent freezing. Rub the part with snow, or apply a hot fomentation over the body part to bring an a local heating reaction.

3 -ICE CRAVAT

WHAT IT IS- The Ice Cravat is basically the same as the Ice Pack, described just above. Instead of being laid around part of the body and then wrapped, the snow or crushed ice is placed inside a towel and then wrapped around the neck or another joint area of the body. The Ice Cravat is thus easier to work with than is the Ice Pack.

ICE PACK and ICE CRAVAT

When wrapped around the neck, the Ice Cravat becomes an Ice Collar (ice neck pack). But it can also be laid around a shoulder, elbow, knee, or ankle.

The effect is that of a proximal application (Proximal Compresses are explained on pages 23-24, 50-51), for the carotid arteries in the neck, and the vertebral arteries by the spine that go into the head, along with their small branch arteries, are all contracted. Thus the blood supply to the brain and the head is lessened.

HOW IT CAN HELP YOU-The Ice Cravat is frequently used in fever, congestive headache, acute epidemic meningitis, sunstroke, and

whenever prolonged sweating treatments are given, as in eclampsia and uremia. Contraction of the blood vessels slows down the oozing of blood into the injured tissues; thus edema is prevented. It can also help prevent black-and-blue and swelling when tissue has been injured (by sprains, contusions, etc.). In addition, it is used for rheumatoid arthritis, acute infectious arthritis, and the acute joint inflammation of rheumatic fever.

HOW TO APPLY IT - (See picture on page 47.)

1-Crush ice and place it in a towel. (Instead of placing snow or crushed ice inside of a dry towel, you can, instead, wring the towel from cold water - without putting ice or snow inside it. But this will not be as cold and must be changed much more frequently.)

2-Fold the towel until it is about 3 inches wide, and long enough to encircle the neck.

3-Put it in place around the neck.

4- If, instead of being applied to the neck, it is to be placed on a different body joint area: Use a piece of flannel that is at least 12 by 12 inches - for the shoulders and knees; and 8 by 9 inches - for the elbow or ankle.

4 - ICE BAG (ICE CAP)

WHAT IT IS-Ice bags and ice caps can be purchased or ordered from your local drug store. Ice bags come in various shapes and sizes. (One example is the spinal ice bag, which is about 3 inches wide by 7-10 inches long.) The best ones are made of pure natu-

ral gum rubber, and all come with screw caps.

BOOKS ON HYDROTHERAPY

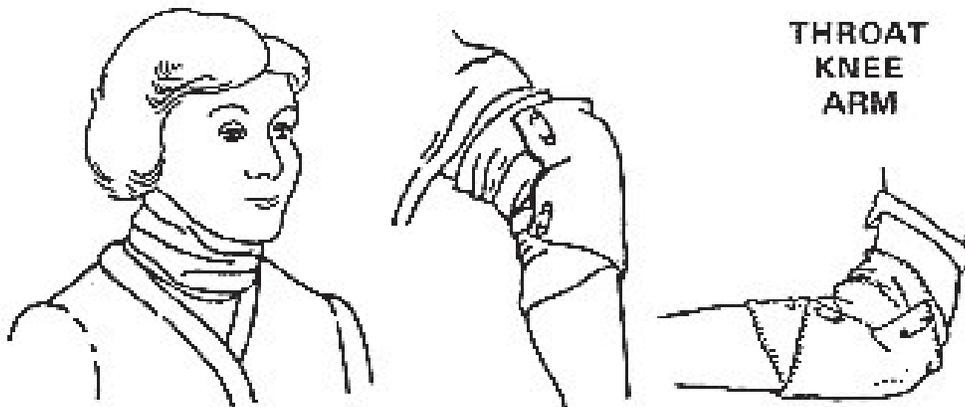
Four of the eight books used as sources for this present Manual are still in print. You may wish to purchase a copy of one or several of them for your home: "Home Remedies," by Agatha M. Thrash, M.D., and Calvin L. Thrash, M.D. Published by Yuchi Pines Institute, Health Education Department, Seale, Alabama 36875. This 174-page book contains a wide range of hydrotherapy information, plus other natural healing data.

"Hydrotherapy in the Home," by Stella C. Petterson, R.N., B.S.N.E. Published by Eden Valley Institute Press, Loveland, Colorado 80537. This 49-page booklet is simple and to the point.

"Manual of Hydrotherapy and Massage," by Fred B. Moor, B.A., M.D., Stella C. Petterson, B.S., R.N., A.R.P.T., Ethel M. Manwell, B.S., R.N., A.R.P.T., Mary C. Noble, B.S., R.N., A.R.P.T., and Gertrude Muench, R.N., R.P.T. Published by Pacific Press Publishing Association, Nampa, Idaho, 83651. This 169-page book was written for use by physiotherapists, and is the official hydrotherapy textbook at Lorna Linda University, Lorna Linda, California 92350.

"Simple Water Treatments for the Home," by Charles S. Thomas, Ph.D. Published by Lorna Linda University Press, Lorna Linda, California 92354. This 371-page book was prepared for laymen.

THROAT COMPRESS / JOINT COMPRESS



All of the above books, except the third one, have very helpful illustrations that make the text much easier to follow.

HOW IT CAN HELP YOU-The Ice Bag (or Ice Cap) prevents or reduces swelling, relieves pain, checks bleeding, and reduces congestion and inflammation.

A second value lies in their reflex effects: They can relieve congestion and inflammation of deeper, internal organs, such as in appendicitis and salpingitis. For this purpose, the application must be placed over the reflex area that affects that deeper organ. (See pages 24-26 for additional information on reflex effects.)

A third use is to strengthen and slow the activity of the heart when the pulse is rapid and weak.

HOW TO APPLY IT - (See pictures on pages 22 and 77.)

1-Fill the icecap or ice bag about one-half full with finely chopped ice. Press it down to expel the air, and then screw the cap on tightly. Dry it and test for leaks.

2-Cover it with a flannel or hand towel, and apply it where needed. Never apply an ice bag or ice cap directly to the skin; always place a cloth over the body part first.

3-Continually watch to see that there is no danger of injuring the skin through frost-bite.

4-When the ice melts, refill it with more ground ice.

SPECIAL POINTS-Choose a bag that is light in weight, and if it is used continually (especially on the abdomen or chest), you may want to suspend it in a cradle, to take off part of the weight. When it is filled, if all the air is not expelled, the ice will melt more rapidly.

5 - PROXIMAL COMPRESS

WHAT IT IS-A Proximal Compress is any type of cold compress, ice bag, etc., that is placed over a large artery in order to reduce blood circulation in the part of the body or limb served by that artery. It is not always convenient to apply a wet cloth to an afflicted part. This is especially true with open wounds, which need to be kept very clean.

HOW TO APPLY IT - (More data on pages 23-24,50.51.)

1-A Cold Compress (page 45) is wrung out of water (60-70° F.) and then placed over the artery supplying the afflicted part. Instead of a Cold Compress, an Ice Bag (page 49), filled with ice or ice-water, can be used.

2- The compress must be frequently changed in order to maintain the cold effect.

WHERE TO APPLY IT-What one needs to know is where to apply the cold Proximal Compress. Here are the most useful places to put it - and the corresponding areas in which the temperature and blood supply will be reduced:

1- To the knee and the calf of the leg (to affect the foot).

2- To the femoral artery on the inside of the leg, or to the whole thigh, or an ice bag to the back side of the knee (to affect the portion of the leg below the knee).

3-An ice bag to the groin (to affect the whole leg).

4-A cold compress around the elbow joint (to affect the hand).

5- To the whole upper arm (to affect the forearm).

6-An ice bag to the arm pit (to affect the whole arm).

7-An ice bag at the bend of the elbow (to affect the hand).

8-An ice collar or cold, wet towel, around the neck (to affect the brain). This application helps reduce congestion in the brain, reduce laryngeal inflammation, and aids in meningitis.

9- Over the carotid arteries, which are located on both sides of the neck (to affect the brain).

SECTION TWO COLD-TO-HEATING

WHAT IT IS- These are applications of cold cloths, covered with flannel, to a body area. The body reacts and heats up the pack and the result is improved circulation and a better flow of healing blood in and out of the afflicted area.

1 - HEATING THROAT COMPRESS AND

DRY THROAT COMPRESS

WHAT IT IS-This is a cold compress that is so covered up that warming soon takes place. The effect produced is that of a mild, prolonged application of moist heat.

HOW IT CAN HELP YOU-Gradually, over several hours, a throat compress can reduce inflammation and bring healing to a body part. A cold, wet cloth is placed about the throat, then covered with dry flannel to prevent air circulation, thus increasing body heat in that area. Mothers will often place a heating compress on a child with a sore throat in the evening and take it off the next morning. The compress should be dry by then.

PROBLEMS IT CAN HELP SOLVE-The Throat Compress is a very common household remedy for sore throat, hoarseness, tonsillitis, pharyngitis, laryngitis, quinsy, and eustachian tube inflammation.

WHAT YOU WILL NEED-2 or 3 thicknesses of ordinary cotton cloth about 3 inches wide and long enough to encircle the neck twice. Two thicknesses of flannel not less than 4 inches wide. Safely pins. Possibly a piece of bandage.

HOW TO APPLY IT - (See picture on page 52.)

1-Prepare your materials for the neck compress. If it is to go on one who is too frail to warm it up, then use a Dry Throat Compress, which is prepared in the same man-

ner as the regular Heating Throat Compress, but without being first wrung out of cold water.

2-In giving a regular Heating Throat Compress, wring the cotton cloth from cold water and place it around the neck. This should be about 2-3 thicknesses about the neck.

3-Cover it well with the flannel (single or double thick, depending on the weight of the material). Fit the flannel snugly but not too tightly that it will be uncomfortable. Pin it securely.

4- In tonsillitis, quinsy, and inflammation of the eustachian tube, the compress should extend upward about the lower part of the ear. You may need to hold up this part of the compress (that is by the lower part of the ear) with a bandage that is fastened to it and goes over the top part of the head and back down to it on the other side.

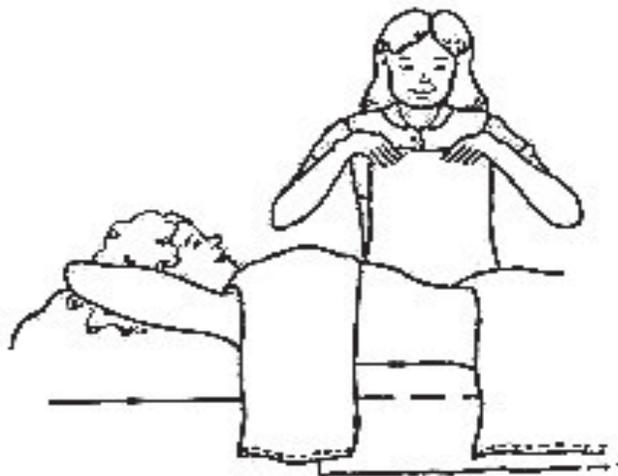
5-Remove it the next morning. It should be entirely dry. When first put on, it can be quite wet but should not drip. But the next morning it must be dry.

6-As soon as you have removed the compress, rub the neck with a cloth wrung out of cold water.

2 - HEATING JOINT COMPRESS AND DRY JOINT COMPRESS

WHAT IT IS- This compress is quite similar to the Heating Throat Compress, de-

MOIST ABDOMINAL BANDAGE



scribed above. The primary difference lies in the fact that this heating compress is applied to one of the joints (foot, ankle, knee, elbow, hand, or wrist) instead of to the neck.

PROBLEMS IT CAN HELP SOLVE-The Heating Joint Compress is most frequently used in cases of rheumatism and rheumatic fever. But there are other painful joint conditions that it may also alleviate.

HOW TO APPLY IT - (See picture on page 52.)

1- You will need similar materials to those listed above under the Heating Throat Compress. If the one it is to be placed upon is too weak or frail to heat up a wet compress, it may be best to make it a Dry Joint Compress (several layers of flannel, with or without dry cotton beneath it).

2- You may wish to place solution (such as oil of wintergreen, camphorated oil, menthol, mustard water, etc.) on the cotton before it is wrapped around the joint. This helps relieve pain, and by its counterirritant action enhances the heating effect by increasing the blood circulation at the painful joint.

3- Two thicknesses of cotton cloth are wrapped around the afflicted joint(s). Sometimes gauze is used, but cotton will enable you to bring the material closer to the skin surface.) This is then held in place either with

a three-inch roller bandage (obtainable from a drug store) or with a broad flannel cloth.

3 - MOIST ABDOMINAL BANDAGE
AND
PARTIAL ABDOMINAL BANDAGE
PROTECTED JOINT BANDAGE
WET GIRDLE

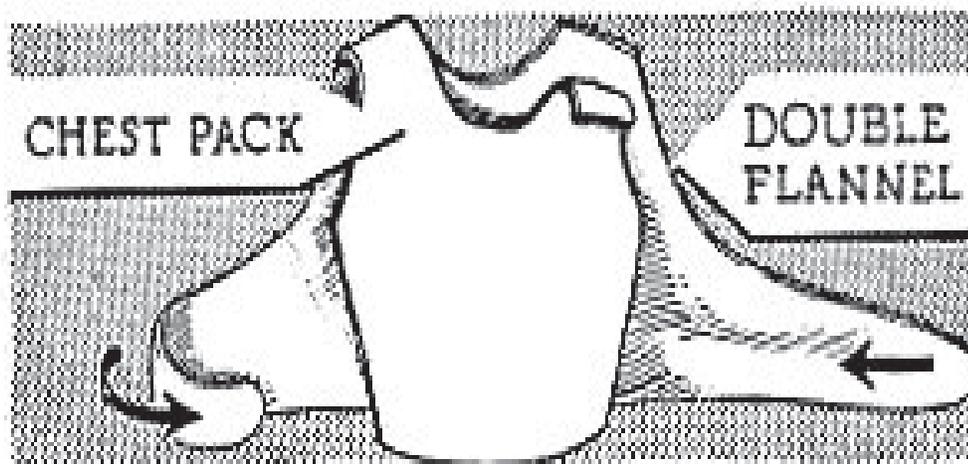
WHAT IT IS-This is a heating compress (page 51) applied

over the stomach and intestinal area. It is an application of cold, wet sheeting, covered up with dry flannel, which the body then warms up into a very helpful heating pack. This Moist Abdominal "Bandage" is also called a "binder," "girdle," or "pack." When only the front part is moistened, it is called a Partial Abdominal Bandage.

HOW IT CAN HELP YOU-The Moist Abdominal Bandage (or Binder) is one of the most useful of the heating compresses. It is recommended in nearly all forms of atonic indigestion, neurasthenia, anemia of the liver, insomnia, catarrhal jaundice, constipation, and similar conditions. For these purposes, it is generally worn only at night.

With a hot-water bottle (page 76) placed over the stomach, it is also useful in milder cases of nausea and vomiting. If plastic is placed over the flannel to prevent the cotton from drying out, it is called a Protected

HEATING CHEST PACK



Binder, and is used for hyperacidity, and also to obtain relaxation in the abdominal organs. A protected binder, by keeping the cotton from drying out, will induce a stronger perspiration than would otherwise occur.

WHAT YOU WILL NEED-One thickness of cotton sheeting or linen, or 3-4 thicknesses of gauze. It should be 8-9 inches wide, no matter what this material is made of, and a little longer than 1 1/2 times around the body. Over this will go an outer flannel covering that is about 12 inches wide and about the same length as the linen, or slightly longer. Safety pins, and possibly plastic, will also be needed.

HOW TO APPLY IT - (See picture on page 54.) 1-Prepare the sheeting for a Moist Abdominal Bandage by dipping it into cold water.

2-(If the one receiving the treatment is too frail to warm up the large wet surface of the cotton wrapping, give him a Partial Abdominal Bandage: Only wet that portion of the cloth that is over the front (over the abdomen). Or, only place a smaller, wet cloth over the abdomen, and let the rest of the encircling covering be flannel alone. These two variations of the Partial Abdominal Bandage are milder forms of the Moist Abdominal Bandage.)

3- The dry flannel is placed across a table, and the linen (or gauze), wrung nearly dry

from cold water, is placed over it.

4- The one not feeling well now lies back on the bandage. The lower edge of the cloth and flannel should touch below his hipbones (below the iliac crests).

5-Pull each end of the wet cloth tightly over his abdomen and tuck them under the opposite side.

6-Cover quickly and snugly with both ends of the flannel, and securely fasten the ends with safety pins. Also pin darts at each side to make the binder fit better. The flannel piece should project 1 1/2 -2 inches beyond the wet gauze or linen.

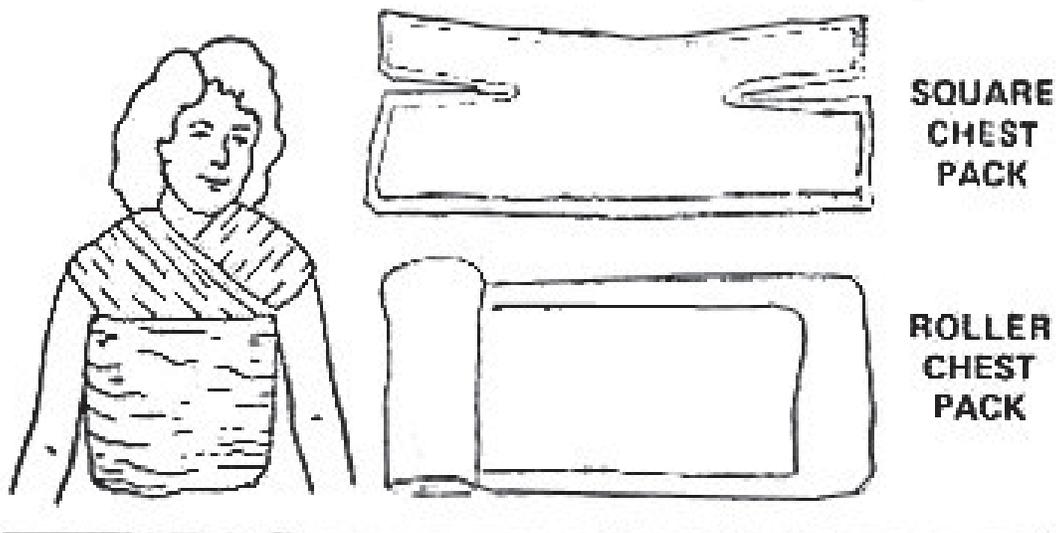
7-(If plastic is now placed over the flannel to keep it from drying out (for hyperacidity), it now becomes a Protected Bandage, -but understand that this is not the usual way of preparing Moist Abdominal Bandages.

8-A hot-water bottle is sometimes placed, outside the flannel, over the stomach area.

9-When you later remove the binder, wash the area with cold water and dry thoroughly.

THE WET GIRDLE-The Moist Abdominal Bandage is a heating compress over the front of the abdominal area. Kellogg frequently made use of the "Wet Girdle." This is a wrap-around Moist Abdominal Bandage, in that it covers both the front, sides and back of the lower trunk. "The region to which it is ap-

HEATING CHEST PACK / DRY CHEST PACK



plied is bounded by the nipple line above and the hip joints below.”-Kellogg. In nearly every instance in which “Hot Abdominal Pack” is given in the Kellogg Water Remedies section of this Manual, the “Wet Girdle” is the application referred to. (See pictures on pages 22 and 59.)

4 - HEATING CHEST PACK

WHAT IT IS- The Heating Chest Pack is similar in some respects to a fomentation over the chest. The difference lies in the fact that, instead of continually applying and changing fomentation cloths, a piece of wet cotton sheeting is wrapped around the chest and then covered. Thus, a slow build-up of heat occurs over a longer period of time.

One alternative is the Partial Chest Pack (page 59), in which a wet cloth is placed only over the chest. This is used when the person would be too frail to heat up the full wet pack. Another alternative is the Dry Chest Pack (page 60), which has no moist compress within it, and is especially helpful between other treatments, and for those who are thin, aged, do not react well to cold applications, and those in the early stages of pneumonia.

HOW IT WORKS-These chest packs gradually build up heat in the skin above the chest, and thus aid in relieving various congestions in the chest and lungs.

Of the above packs, the Heating ‘Chest

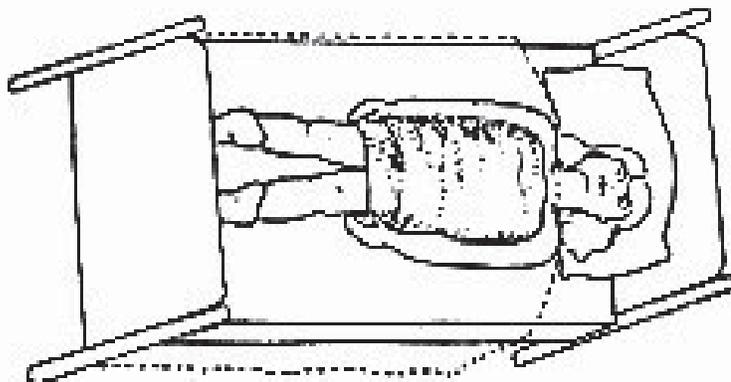
Pack is the most powerful (but not as immediately powerful as Fomentations to the chest: see page 69); the Partial Chest Pack has far less strength; the Dry Chest Pack is the mildest.

PROBLEMS IT CAN HELP SOLVE-Here are some of the conditions the Chest Pack is used for: Bronchial and respiratory colds that hang on. Influenza of the respiratory type. Pneumonia: Only use a Dry Chest Pack during the acute stage of pneumonia; only use a Heating or Partial Chest Pack during later convalescence from it. During pneumonia, the skin does not have its normal ability to adjust to changes in outside temperature. Pleurisy: When treating this condition, if he is robust, use the heating pack immediately after an application of heat, such as a Fomentation (page 69); but if he has lessened vitality, only use a Dry Chest Pack, with a hot-water bottle applied outside the pack. These chest packs are also helpful for whooping cough, croup, asthma, and similar conditions.

WHAT YOU WILL NEED-The chest pack can be made in several ways, but, since you will be using it many times on the same person, we will here describe the simplest: the fitted chest pack.

Take flannel material and cut it with scissors into two fitted pieces; one will go over his chest, upper shoulders and sides; the other will cover his back and lower shoul-

WET GIRDLE (HEATING TRUNK PACK)



ders and side. Allow for overlapping under the arms and on the shoulders. This will be pinned together each time it is used.

You will also need a cotton cloth (such as old sheeting material) if a wet cloth (inside a regular Heating or Partial Chest Pack) is to be used. You will not need it if a Dry Chest Pack is being applied.

HOW TO APPLY IT - (See picture on page 57.) 7-Warm up his chest with fomentations, or a heat lamp over his chest.

2-If a moist cloth is to be applied, wring it thoroughly from tap water and place it on his chest (Partial Pack), or wrap it about his chest and upper back (Heating Pack).

3-(At this point, you may wish to put warm camphorated oil, or something similar, on the wet sheeting over his chest.)

4-(If you wish to increase the sweating, place plastic over the moistened cloth.)

5-Cover quickly with the fitted flannel (that you earlier cut out for this purpose). He should be covered well, but not too tightly. Pin securely.

CAUTIONS- The wet compress should be wrung out thoroughly, and then covered well to avoid chilling and to aid in a prompt reaction. The pack must be snugly applied at all places, but not so tight as to restrict the movements of the chest in breathing. The pack should be comfortable and should feel warm in a very short time. If not, remove it and apply a milder pack (a Partial or Dry Chest Pack). Use a Dry Chest Pack (not a Heating Chest Pack) during the acute stages of pneumonia. When caring for pleurisy, it is best to only use the Dry Chest Pack. Both the Partial and Dry Chest Pack are described just below:

5 - PARTIAL CHEST PACK

WHAT IT IS- The Partial Chest Pack is identical to the Heating Chest Pack, described just above, with the exception that the wet cloth is only placed over the chest.

HOW IT CAN HELP YOU-This pack can enable you to give a heating-type chest pack to one would be too frail to warm up the full wet pack (the Heating Chest Pack).

HOW TO APPLY IT

1- The cotton covering for the partial pack can be cut to any desired shape, since it will only go over part of the chest.

2-Wring it out wet and apply it over the chest.

3-Cover it with the flannel.

Since most of the chest is covered with dry material, this pack is quite similar in effect to the Dry Chest Pack. CAUTION-Only use the Dry Chest Pack during the acute stage of pneumonia; only use a Heating or Partial Chest Pack during later convalescence from it.

6 - DRY CHEST PACK

WHAT IT IS-The Dry Chest Pack is also like the Heating Chest Pack, with one primary exception: It does not have any wet cloth between the skin and the blanket.

HOW IT CAN HELP YOU-This pack is especially helpful between other water treatments. It is also well adapted to the special needs of the thin and the aged who are not able to react and heat up the moist cloth used in the Heating Chest Pack. The dry pack is also the best method for the early stages of pneumonia.

HOW TO APPLY IT

1-Only the flannel is used, and should be applied over a thin undergarment that he is wearing.

The dry Pack is necessary for thin, weak people, because it is almost impossible to pin the wet pack tightly enough to prevent air from circulating under the edges of the pack - and yet be loose enough to be comfortable and not restrict the breathing.

CAUTION-Only use the Dry Chest Pack during the acute stage of pneumonia; only use a Heating or Partial Chest Pack during later convalescence from it.

SECTION THREE LARGER COLD-TO-HEATING

1 - WET SHEET PACK

AND

STAGE ONE: COOLING WET-SHEET

PACK

STAGE TWO: NEUTRAL WET-SHEET PACK

STAGE THREE: HEATING WET-SHEET PACK

STAGE FOUR: SWEATING WET-SHEET PACK

WHAT IT IS- This is a bed sheet wrung out of cold water, and then quickly draped around a person, who is then covered with a blanket or two. The body, in reaction, quickly begins warming-up the sheet, -and fairly soon turns it into a moist heat heating pack.

HOW IT CAN HELP YOU-According to how long it is left on, the Wet-Sheet Pack has one or more of four different effects. This is due to the fact that, according to the degree of warming that it undergoes, the Wet-Sheet Pack passes through four stages: (1) the Cooling Stage, (2) the Neutral Stage, (3) the Heating Stage, and (4) the Sweating Stage. The stage that you stop at-or prolong-is determined by the effect that you wish to produce. We will conclude this explanation of the Wet Sheet Pack with a careful look at each of these four stages.

HOW TO APPLY IT - (See picture on page 61.)

1-Having all the materials ready, explain the treatment to him. An enema (page 145) or colonic (page 149) is considered to be an important preliminary step. Also, if needed,

give him a 10-minute Hot Foot Bath (page 115), with a Cold Compress (page 45) to his head, -for the entire body should be warm before beginning the Wet. Sheet Pack. If not, precede it with a Hot Full (tub) Bath

2-Place a plastic or rubber sheet on the bed. Over it, place a double blanket, folded lengthwise, with the edge of the far side hanging longer than the near edge. The upper end of the blanket should cover the lower half of the pillow.

3- Take the wet sheet from the cold water and wring it as dry as possible. Place it on the blanket, with the upper end a little below the top of the blanket.

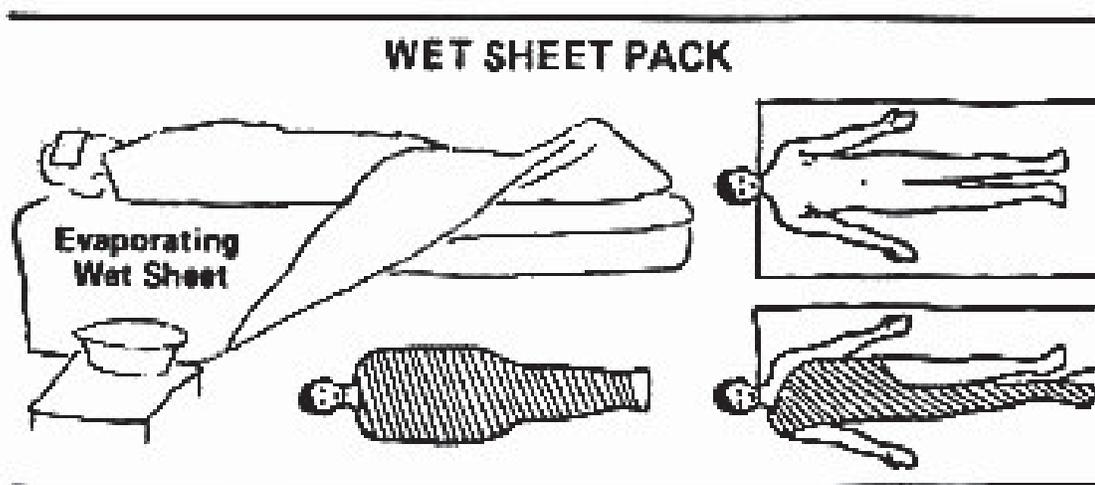
4-Now help him lie on his back on the sheet, with his shoulders 3-4 inches below the upper edge of the sheet.

5-As his arms are held up, you quickly wrap the short side of the sheet around his trunk, and also around his nearest leg.

6-Draw the sheet smoothly in contact with the skin in all places. Tuck it under on the opposite side.

7-Lower his arms, and then wrap the other side of the sheet smoothly over his arms, trunk, and his farther leg. Fold the sheet over his shoulders, and across his neck. Tuck it in. Important: Wrap him in the sheet quickly. The wet sheet must come in close contact with the skin at all points.

8-Wrap the narrower edge of the blan-



ket around his body and tuck it in. Do the same on the opposite edge, pulling it snugly around him. At this point, pull the remainder of the blanket over and tuck it also under his body and under his feet. Important: Wrap him in the blanket quickly. The dry blanket must prevent circulating air or he may become chilled. Warming up should begin immediately.

9- It may be best to now cover him with a second blanket. Additional blankets may be laid over him and tucked in on the sides and about the feet, if needed.

10-Place a Turkish towel around his neck to protect him from the blanket and to keep out the air. Put the hot water bottle to his feet to hasten warming.

11-Sponge his face with a Cold Compress (page 45) at the beginning of the pack, and also after the first 10 minutes when the reaction begins (when he begins sweating).

12-His feet must be kept warm at all times. Take his temperature before and after the pack is given.

13-When the pack is removed, give a Cool Sponge (page 100), with brisk drying to the body.

14-Repeat with another Wet-Sheet Pack later that day, or give it daily until the fever comes down. Duration of each Wet-Sheet Pack: 15-20 minutes. Have him rest afterward. Liquid nourishment is best.

FOUR TYPES OF WET-SHEET PACK-As mentioned at the beginning of this section, there are four stages to the Wet Sheet Pack. The stage you bring him up to and stop at-or prolong-will determine the objectives you are going to achieve:

1-Cooling Wet-Sheet Pack: This is the first stage of the pack before the sheet has been warmed to the temperature of the body. 5-12 minutes is needed to reach this stage. At the end of this time the effect can be intensified by removing the sheet and applying another (wet, cold) sheet; or by folding back the blanket and sprinkling cold water on the wet sheet that covers him.

This cooling pack is a powerful way to

lower a high temperature, and is especially useful in typhoid fever and other continued fevers.

2-Neutral Wet-Sheet Pack: This begins when the temperature of the pack reaches or slightly exceeds skin temperature. After body warming has well begun, this second stage can be prolonged by removing all but one or two dry coverings over the wet sheet. But the body must continue to be evenly warm, with no circulating air reaching it.

This neutral pack is excellent for insomnia, and helps put the sleepless to sleep. It is also used for mania, alcoholic delirium, and restlessness. A neutral bath will accomplish the same purpose as a neutral pack-and probably do it better.

3-Heating Wet-Sheet Pack: This begins when the warming pack has raised the body temperature slightly above its usual degree; and it ends when general perspiration begins. Once achieved, this should, for best results, be continued for about 20 minutes.

This heating pack helps warm the body, and lessens localized congestions wherever they may be in the body.

4-Sweating Wet-Sheet Pack: This last stage begins with the onset of general sweating. The sweating may be increased or prolonged by additional coverings, hot-water bottles between blanket layers, or by drinking hot water or lemonade. The cold compresses on the head should not be very cold or renewed too frequently.

This sweating pack is excellent for childhood fevers, capillary bronchitis, colds, and also for obesity and obese rheumatism.

Heating and sweating packs are also used for alcoholism, gout, influenza, and the elimination of nicotine from the body (which lessens the physical craving for more tobacco).

One of the most useful treatments for the fevers of early childhood is this: Give him a Full Hot Tub Bath (page 121), followed by a cold Wet-Sheet Pack, as described above. The child, so exhausted by the fever on his body and head, will often fall into a quiet sleep after the pack reaches the heating stage.

SECTION FOUR LOCAL HOT AND COLD

1 - ALTERNATE COMPRESS

WHAT IT IS- This is an application of very hot and very cold compresses in alternation (one following the other).

HOW IT CAN HELP YOU-There is probably no other procedure which is capable of so intensely and rapidly exciting the flow of blood in various parts of the body. Thus it helps to eliminate pus formation, avoid bed sores (which are so likely to appear in typhoid fever, tuberculosis, and other wasting diseases). It can also be applied to paralyzed limbs, to parts affected by chilblains, and as a means of stimulating absorption in dropsy of the abdomen, dropsy of the chest, and in chronic pleurisy and pneumonia, in which the parts damaged by the acute inflammatory process have not been fully restored.

Alternate Compresses to the spine are a very effective means of arousing one from morphine-derivative poisoning, alcoholic intoxication, and similar problems.

“The author recalls very vividly a case of

opium poisoning to which he was called in consultation some twenty-five years ago, in which a patient's pulse was reduced to less than twenty, and respiration to four per minute. Thoroughgoing hot and cold applications to the spine quickly brought the pulse to a nearly normal count, the respiration became twelve per minute within five minutes, and the change in the entire aspect of the case was so marvelous as to seem little short of a miracle to the by-standers, who had never before witnessed the powerful stimulating effects of thermic applications properly managed.” -Kellogg.

HOW TO APPLY IT

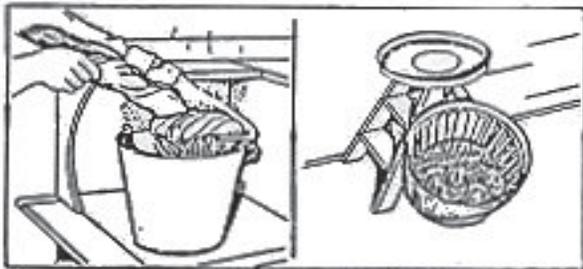
1- This is a Fomentation application (page 69), with the addition of a Cold Compress (page 45) after it: When the fomentation cloth is removed, a hand towel, wrung from cold water or ice water is placed on the body part. The cold application will need to be renewed frequently in order to keep it cold, but it may be left on nearly as long, or as long as the hot application (but never longer). 2- Then it is removed and the surface dried well. Another fomentation is then applied. Three changes from hot to cold are usually given. The procedure must always begin with a hot application and end with a cold one.

2 - REVULSIVE COMPRESS

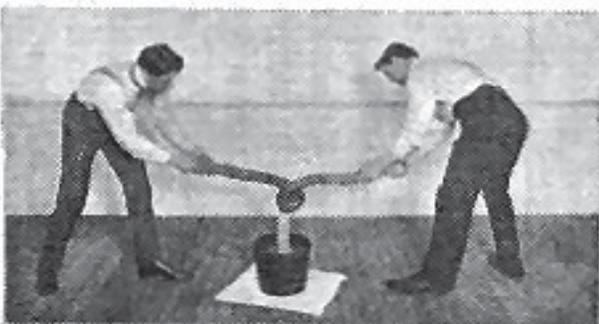
WHAT IT IS- This hot and cold application differs from the Alternate Compress, described just above, only in the different timing of the heat and cold. In the Alternate Compress, the applications are of equal time, or at least the hot application does not exceed the cold. In the Revulsive Compress, the hot application is decidedly longer.

HOW IT CAN HELP YOU-This compress is very helpful in relieving pain in many, many physical problems. (Neuralgia is but one example.)

(It should be understood that pain is sometimes best relieved by very hot applications, in others by cold ones, and in still others by alternate hot and cold. But in many instances, pain is increased as the affected nerves are excited (especially when inflam-



LEFT & BELOW: The fomentation can be heated in boiling water, then wrung out. **RIGHT:** An alternate method is to place quilted cloths in a canner. Above is pictured an improvised “steamer”—a can with a lid with a false (second bottom) in it to keep the cloths out of the boiling water (so only steam penetrates them).



FOMENTATION

mation is present). At such times, alternate hot and cold will best help reduce the pain.)

The Revulsive Compress is also a powerful aid in reducing congestion, such as gastric congestion, gastritis, enteralgia, acute sciatica, neuritis, painful affections of the eye, and spinal irritation. It often affords immediate relief from the heavy pain of toothache.

HOW TO APPLY IT

1-Follow the directions for giving a Fomentation (page 69). But when each hot application has been lifted off, place a hand towel, wrung from cold water or ice water (according to his ability to react to cold) on the surface. Let it remain there a few seconds, then turn it over to remain a few seconds more.

2- The skin is now dried and the next fomentation is applied. Three changes of hot and three of cold are usually given.

3 - ALTERNATE HOT AND COLD TO THE HEAD TWO DIFFERENT TREATMENTS-

There two totally different hot and cold application to the head. We are placing them here together, one right after the other, so that you will make no mistake regarding which one to use. First, we shall describe the Alternate Hot and Cold to the Head:

WHAT IT IS-This is an alternation of hot and cold to the head, which means that first you place hot to the head, and then cold; and then hot and then cold again, for three complete sets or cycles.

HOW IT CAN HELP YOU-This set of applications causes fluxion, or an increase of blood, to the afflicted area. Thus it can work to improve the circulation of blood within the head, and relieve an anemic headache (a headache caused by a lack of blood in the brain). It is also helpful in remitting passive congestion and cold in the head.

WHAT YOU WILL NEED-Two pieces of Turkish toweling or thick hand towels (about 12 inches square) for wet compresses. Two ice bags, filled with finely chopped ice and then covered with a thin cotton cloth (or cheesecloth). A hot-water bottle, partly filled with hot water and then covered either with a dry fomentation cloth or with a towel. A

bowl of ice water and a pail of boiling water.

HOW TO APPLY IT

1-Place the hot-water bottle crosswise over the back of the neck, bringing it well up under the back of the head and over the neck.

2-Wring the toweling compress out, lightly, from ice water and then apply it to the face. It should cover the face, top of the head, and the ears. Press down firmly over the forehead and the temporal arteries (these arteries are just above and in front of the ears).

3-Renew this compress every minute.

4-After three minutes, remove the hot-water bottle and put two cloth-cover ice bags where it had been. And also replace the cold compress over the face by another wrung quite dry from hot water. Follow the cautions listed under "cautions," below, in applying hot cloths to the face.) Renew this hot compress every minute.

5-In another three minutes begin the cycle over again: Replace with the first applications of hot-water bottle to the back of the neck and the cold compress to the face.

6- Continue these alternations for three complete sets. Then cool all the parts by wiping off with a cold compress and dry thoroughly, especially the hair.

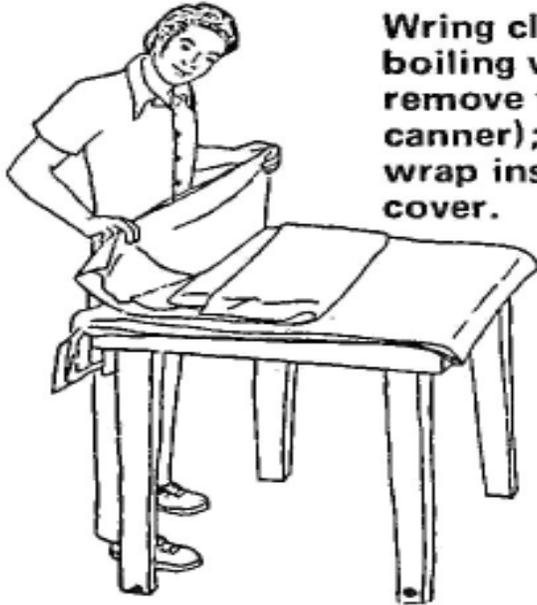
CAUTIONS-The bed should be protected with plastic sheeting. The hot compress should not be pressed to the face. The eyes should be protected from the heat with a thick compress or towel.

4 - SIMULTANEOUS HOT AND COLD TO HEAD

WHAT IT IS-Again, hot and cold are placed to the head, but instead of alternating back and forth (first hot and then cold) to those places,-the hot is kept on certain areas and the cold is kept on others. A primary difference is that the cold application is placed over a reflex area of a deeper part, or over a large artery supplying blood to it. This produces depletion, or a removal of blood from the head. Thus, the effect produced is the exact opposite of that produced by alternate hot and cold to the head.

HOW IT CAN HELP YOU-This treatment

FOMENTATION



Wring cloths from boiling water (or remove from canner); then wrap inside wool cover.



Now roll it up for ease in carrying and to conserve heat.



Next, place the feet in hot foot bath. (104° F.) Your hands go in before his heels. Note towel under tub.



Place towel next to skin before any fomentations are applied.

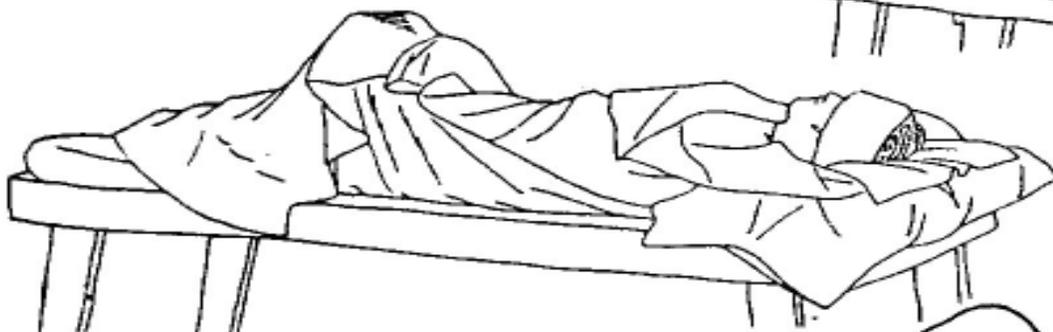
Now place two fomentation pads across his chest. As soon as he is warm, put a cold compress on forehead.



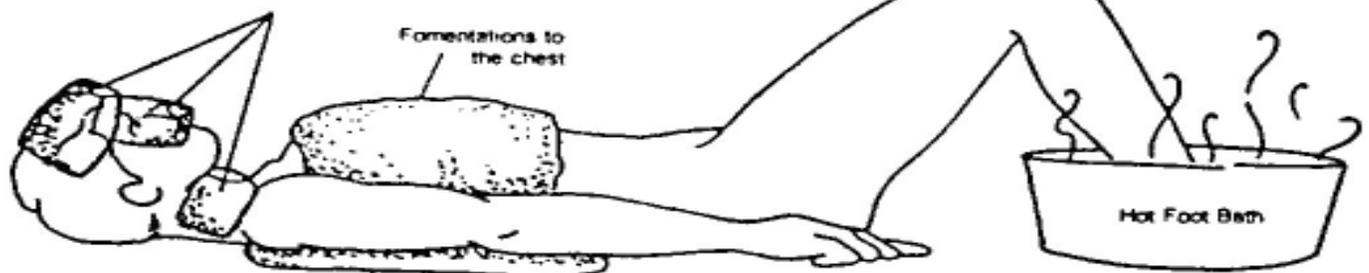
Carefully tuck sheet tightly under foot bath.



Cover him well, with no drafts entering coverings.



Cold compresses to keep head cool



Fomentation to the back

Alternate: Fomentation to chest and back.

is very effective in reducing congestion in the head and relieving congestive headache (headache caused by an excess of blood in the brain).

WHAT YOU WILL NEED-Essentially the same articles are needed for this, the Simultaneous Hot and Cold, as were used for the Alternate Hot and Cold, described just above.

HOW TO APPLY IT

1-Place an ice bag to the base of the brain (the back of the neck), and a second ice bag (or better, an ice cap [both are obtainable at your local drug store]) to the top of the head. A cold, wet towel on the hair will intensify the cold application to the top of the head (do this instead of wetting the hair).

2-Also place ice bags or ice compresses (ice inside a folded towel) over the carotids. (The carotid arteries are on both sides of the neck, and are the arteries near the surface that bring blood to the brain.)

3- Then apply a Fomentation (page 69) to the face, covering the ears and forehead. Cotton sheeting material (or gauze or cheesecloth) should be used under the fomentation when it is applied to the face. The nose should not be covered by the fomentation, for it is better that he be able to breathe cooler air.

4-Conclude the treatment by first pouring hot, and then cold, water onto the feet. Keep a cold neck and head compress (cold, damp toweling) on him while pouring the

water on the feet.

5 - ALTERNATE HOT AND COLD TO THE SPINE

WHAT IT IS- This is a Revulsive Compress (described just above), except that instead of the cold compress, a small piece of ice is rubbed over the part. Thus, it is a regular set of Fomentation applications (page 69), plus the use of ice in between each hot application.

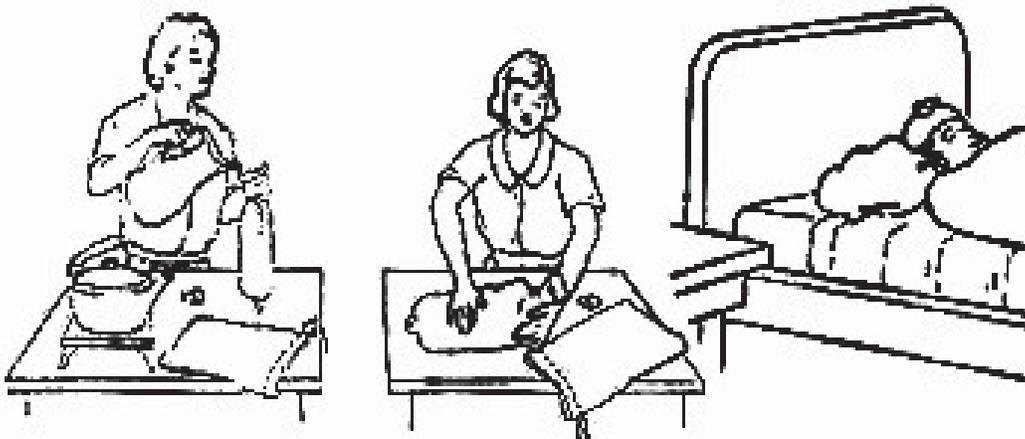
HOW IT CAN HELP YOU-This alternate hot and cold application to the spine acts as a strong stimulant and tonic, and is used in a large number of conditions which are helped by such a general treatment. It improves the circulation, increases muscular tone, and stimulates vasomotor nerve action.

HOW TO APPLY IT

1- The Revulsive Compress is described immediately above, and is a variation of the standard Fomentation (page 69). Give Alternate Hot and Cold to the Spine in the same manner as the Revulsive Compress, with the following exception:

2-When each fomentation is removed, instead of briefly placing a cold compress on the part, as is done in the Revulsive Compress, a small piece of ice is quickly rubbed back and forth over the area, making three to five or more to-and-fro movements. The part is then dried and another fomentation

HOT WATER BOTTLE and ICE CAP



is placed there. (In making these applications, it IS important that the next fomentation be ready before the ice is applied.)

SECTION FIVE LOCAL HOT

1 - FOMENTATIONS

WHAT IT IS -A Fomentation is an application of moist heat to part of the body. The moist heat is produced by cloths wrung from hot water and then laid upon the afflicted part. Of all methods of applying heat to the body, there is no more effective or simpler method than the use of cloths wrung out of very hot water.

Heat can be applied as dry heat or moist heat, but moist heat is the more powerful of the two. When given to relieve pain, this heat is best given locally, that is, to only part of the body. A fomentation is one of the simplest and most effective means of applying moist heat to various parts of the body.

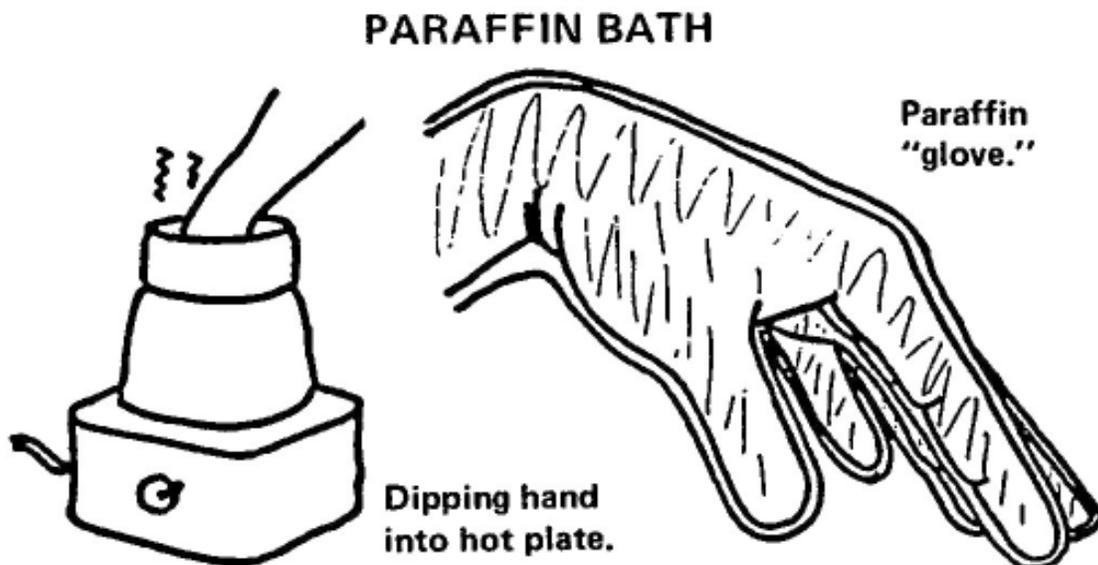
HOW IT CAN HELP YOU-A fomentation can relieve pain, but (if the heat is more moderate and the application more prolonged before being renewed) it can also relax and enable a person to go to sleep. It also increases the circulation of white blood cells and the flow of blood to the skin, thus relieving internal congestion. It relieves muscle tension and spasms, and pain in muscle joints and internal organs. It promotes

sweating, thus increasing the elimination of toxins. And it either stimulates or relaxes, according to the temperature of the application. Fomentations are excellent for chest congestion due to colds, bronchitis, or pleurisy.

WHAT YOU WILL NEED-You will need a kettle of boiling water (or a steamer), at least four fomentation cloths, one or two Turkish towels, a washcloth, and a basin of cold water. Here is how to make your own fomentation cloths: The material can be cut from blankets or purchased especially for this purpose. The size should be 30-36 inches square, so four cloths can be cut from one regular-sized blanket. It is best when it is part wool and never all cotton. In fact, it is ideal when it is 50% wool (to retain heat) and 50% cotton (to retain moisture). Some folk use quilted 36-inch-square cloths made of 50-50 wool and cotton. These are considered best if a steamer is used to heat the cloths, yet, ultimately, they are somewhat less effective than the single folded cloths (cut from blankets) wrung out of boiling water.

(If the cloths are placed in a steamer to heat up, instead of being wrung out of a pot of boiling water, there is also more danger of burns, since steam is so much hotter than boiling water. With all this in mind, we will only describe below the boiling water, not the steamer-method.)

HOW TO APPLY IT - (See pictures on pages



21, 70, 72-73.) 1-The room should be warm (75-80° F.) with no drafts, and the water on the stove should be boiling. Fold one fomentation cloth into about three thicknesses. 2-Grasp the ends and partially twist them. Now immerse all but the ends you are holding - into the boiling water. Lift out and twist tightly, as you hold the dry ends. Stretch or pull the twisted fomentation to wring it as dry as possible. Then untwist it quickly (by dropping one end while holding the other end) and wrap it in a dry fomentation cloth. For moderate heat, use only one wrung-out cloth inside the dry one; for stronger moist heat, place two inside the dry fomentation cloth. 3-With the hot, moist fomentation quickly placed inside it, quickly fold over the dry fomentation cloth onto itself, and carry it to the bedside.

4-Unfold and place the inner side of the dry cloth on the area to be treated. (The moist ones are still inside it.) Cover with a towel. A fomentation should be large enough to cover a much larger area than the afflicted part of the body.

4-(If the treatment is to be given at some distance from the stove, three sets of fomentation cloths may be wrung out and placed in the bottom of a pail lined with large, dry fomentation cloths. They will preserve their heat for 30 minutes or longer. If thought necessary, a hot-water bottle can be placed at the bottom of the pail, and a second one at the top, over the three cloth sets.)

5-If the fomentation is unbearably hot to the one it is placed upon, rub underneath it until it can be tolerated. Always ask if the fomentation is burning him. If it is too hot, place another towel (best a rough or Turkish towel) between him and the fomentation.

6- The outer, dry, fomentation cloth should lie in close contact with the skin and should be changed every 3-5 minutes, unless a relaxing effect is all that is desired (see next paragraph). In case of pain, very hot applications should be used, and changed as soon as they begin feeling comfortable.

7-(When given for insomnia or only to re-

move pain, milder heat should be applied, and for a longer time (6-10 minutes), -and it is best placed over the spine or, if there is spasticity of the bowel, over the abdomen.

8-Have another fomentation ready to replace the one being removed. Be sure and quickly wipe the moisture from the skin before applying the next application. Work quickly to expose the area as little as possible.

9-Usually three successive applications are made. When the last fomentation is removed, cool the area with a washcloth wrung from cold water (or a wet-hand rub, a cold compress, or a rub with a cold, wet towel), and then dry thoroughly, and cover at once to prevent chilling.

IMPORTANT POINTS-It is important that the room be warm. Be especially careful when working with thin or aged persons, or with children. Avoid chilling him during or after the treatment. Keep his feet warm. Wipe moisture from the skin before applying each fomentation (it is moisture on the skin that can cause burns). All changes should be made quickly. A cool cloth on the forehead or neck may be necessary. Keep the head cool. In fomentations to the face or other sensitive parts, first apply gauze next to the skin. If perspiration continues after the treatment is ended, give a general cold friction, wet-hand rub, or wet-towel rub. Sensitive surfaces, especially bony prominences (and also scars and metal implants) should be protected by extra coverings of flannel or Turkish towel. If he is liable to congestion in the head, and always in case of fever or general perspiration, lay cold compresses (cloths wrung out from cold water) on his head and neck. In case of heart disease, usually in fever, and with rapid pulse from any cause, place an ice bag over the heart. Where there is extreme pain, have the fomentation as hot as can be tolerated. Omit the cold afterward in extreme pain, as in pleurisy, kidney pain, and dysmenorrhea. In such cases, at the end of the fomentations, the part is dried-without the cold application-and immediately covered

with flannel or other dry covering.

STEAMER METHOD-An alternate method is the use of a steamer. This is also a good method and is often easier to do, but one must remember that the cloths have been taken out of a steamer pot and therefore are much hotter than the regular method. Be careful not to burn yourself or the one receiving the Fomentation! Here is how it is done: Sprinkle the fomentation cloths (the cut-up blankets) as you would do to clothes you are about to iron. Then place them in the steamer. (This is the type of steamer, or canner, used to cook jars of fruit or vegetables for canning. It should have a second bottom in it (above the floor of the steamer) with approximately 3-inch diameter holes in it. Below this second bottom is water in the bottom of the steamer.) After sprinkling, roll up the cloths and stack them in the steamer vertically. Cover and let it steam for 20 minutes. Then remove and proceed as normally, except that you need not now wring out excess moisture.

CAUTIONS-Do not give fomentations when the sick person is unconscious, has paralyzed body parts, malignancy, tendency to bleed (hemorrhage), or stomach or bowel ulcers. Do not place fomentations on the legs or feet of a diabetic, or on the legs or feet of one with edema, varicose veins, or advanced vascular disease in these extremities. Never

place hot of any kind directly on an eyeball.

2 - HOT GAUZE COMPRESS

WHAT IT IS-This is an application of heat to a small and delicate part of the body, such as an eye, or a fresh wound.

And for both, sterile (perfectly clean) dressings should be used. This small heating compress of gauze has an effect similar to that of a Fomentation (pages 69-75).

HOW IT CAN HELP YOU- These small compresses are most generally used to relieve localized congestion and inflammation, and to stimulate circulation in the afflicted part.

HOW TO APPLY IT

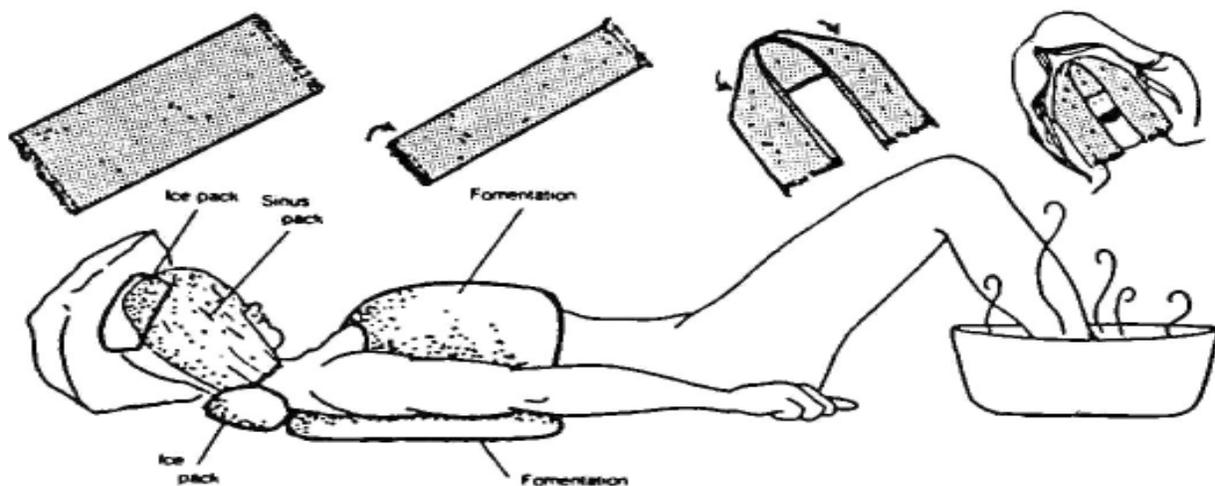
1-Dip the gauze into boiling water and then wring it out.

This is done in a manner similar to that of Fomentations (page 69), in which the ends are kept dry and the boiling hot center part is twisted. Care must be taken not to apply too hot a compress. For this purpose, a temperature of 120° F. is best.

2-Be very careful to place no pressure on the cloth, for you do not want it to touch the eyeball. While one eye is being treated, the other should be protected with a clean, dry dressing or with a shield of some kind.

3- The eye should be dried well before the next hot compress is applied, in order that burning will not occur. Because the compress is usually quite small, and uncovered, it cools

SINUS PACK



quickly, and must be changed about once a minute. 10-15 minutes of such compress changes will usually bring the desired results.

4- The treatment should be concluded by cooling the body part with a cool cloth, then drying thoroughly and covering it to keep it warm.

CAUTION-Memorize this sentence: No hot cloth should ever touch an eyeball.

3 - HOT WATER BOTTLE

WHAT IT IS-This is a soft rubber bag filled with hot water that is laid on or beside a body part. Most people are well acquainted with hot water bottles, but many do not realize the several precautions that should accompany their use.

HOW IT CAN HELP YOU-The hot water bottle provides localized heat just where it is needed, and it does it with relatively little effort. A hot water bottle can be used to relieve pain and congestion, provide relaxation and rest (if prolonged), and reinforce or prolong the effect of Fomentations (pages 69-75).

WHAT YOU Will NEED-A hot water bottle (obtainable at your local drug store), a flannel cover or a Turkish (rough surface) towel, a pitcher or jar with water (at 115-125° F), and a bath thermometer if you need to test its temperature.

HOW TO APPLY IT - (See picture on this page.)

1-Fill the pitcher with water (115-125° F),

and from the pitcher fill the hot water bottle a third to half full. Place the bottle on its side, tip up its mouth, and press lightly until the water comes up to the top; this expels the air within it. (Expelling the air from the bottle enables it to lie flat, be less bulky and difficult to use, and thus provide the most heat.) Then close it tightly and test for leaks. Cover the bottle with a flannel cover or a Turkish towel. (It is best to sew a cover with a button flap for the bottle, instead of wrapping it in a towel. For movement can cause it to become separated from the towel and possibly burn him.)

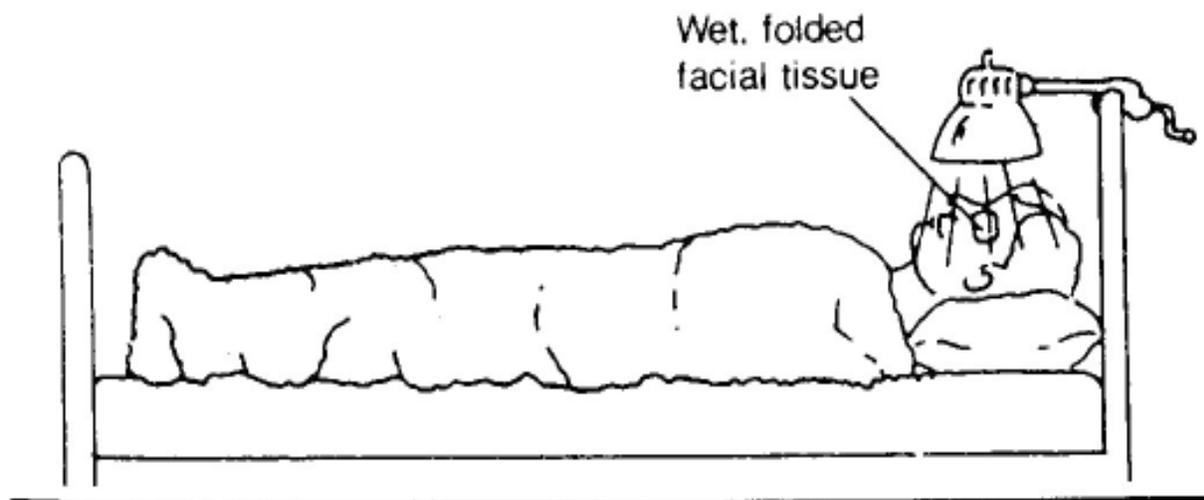
2- The value of a hot water bottle is in the temperature of the water within it. Therefore you will need to refill it regularly during the time it is being used.

3-Later, store the hot water bottle by hanging it up, bottom up, with the stopper out.

ADDITIONAL POINTS- The hot water bottle can be wrapped in a moist cloth, which is then covered by a dry one. This will give the effect of a mild Fomentation (page xxx). And Fomentations, themselves, may be reinforced or prolonged by the use of hot water bottles placed outside of them.

CAUTIONS- The hot water bottle should only be partly filled with water; never fully. Test the water temperature in some way (thermometer is best), so that you are not placing water that is too hot inside it. Water tempera-

HEAT LAMP



ture is especially important if the bottle will be warming a dazed, unconscious, or overly-weak person. Be very careful about placing a bottle by a paralyzed or diabetic person, lest he be burned. Always test the bottle for leaks, and always cover it with flannel or toweling. Watch the position of the bottle, for, if he is restless, it may be moved and burn him. Avoid unnecessary weight on him. Never leave the hot water bottle doubled on itself or in contact with anything oily (oil rots rubber).

4 - PARAFFIN BATH AND HOT PARAFFIN PACK

HOT PARAFFIN DRESSING

HOT PARAFFIN WRAP

WHAT IT IS- This is a warm bath for an extremity (often an arthritic hand). It is especially helpful because of certain properties of paraffin, described just below.

PARAFFIN AND HEAT-Paraffin is a waxy, white, tasteless, odorless substance that can be a real blessing in your home. One of the important properties of water is its high heat conduction. This means that it can quickly transfer heat to something else. But paraffin has a low heat conduction. This means that it can be used to apply heat for a longer period of time to a local area. Paraffin will hold heat longer than water, because it has a heat capacity of .62 as compared with 1.0 for water. Thus it is about half that of water. But its heat-retaining qualities are greatly increased by the fact that it solidifies only a few degrees above tolerable temperature. Therefore if you place your hand in paraffin just above the melting point, a solid layer, or glove, of paraffin quickly coats the skin, and just as quickly becomes a temperature that is not too hot. But all the rest of the paraffin in the bowl will continue to be too hot for your hand-but the hand will continue to feel nicely warm, and for quite some time to come. This is due to the low heat conductivity of the paraffin and the absence of convection currents next to the skin. Also, because the covering of paraffin will not permit the coated skin to sweat, -the actual skin temperature can be hotter than otherwise possible without burning, pain

or any injury. Paraffin does not lose heat by evaporation or by convection once it is hardened. Last but not least, it has a "latent heat" of 35 calories, and water has no latent heat so near to body temperature.

HOW IT CAN HELP YOU- The Paraffin Bath is used for painful, arthritic-type joints in the arms or the legs. Most often it is used on the hand. It soothingly relieves pain as it greatly increases the blood circulation to the afflicted body part. Even the smallest blood vessels become dilated as the nourishing, healing blood courses through the painful extremity. In addition, the temperature of the surrounding areas are elevated, thus helping them to resist the disease.

The Paraffin Bath (or Paraffin Pack, Dressing, and Wrap) can help in conditions of arthritis, gout, and sciatica. It is also helpful for stiff joints, tendon repair, sprains and strains, tenosynovitis, old burns, skin grafts, following fractures. -But do not use it if there are open sores or lesions on the area to be treated. Those with diabetes, or any tendency to lessened skin sensibility, must use it with caution.

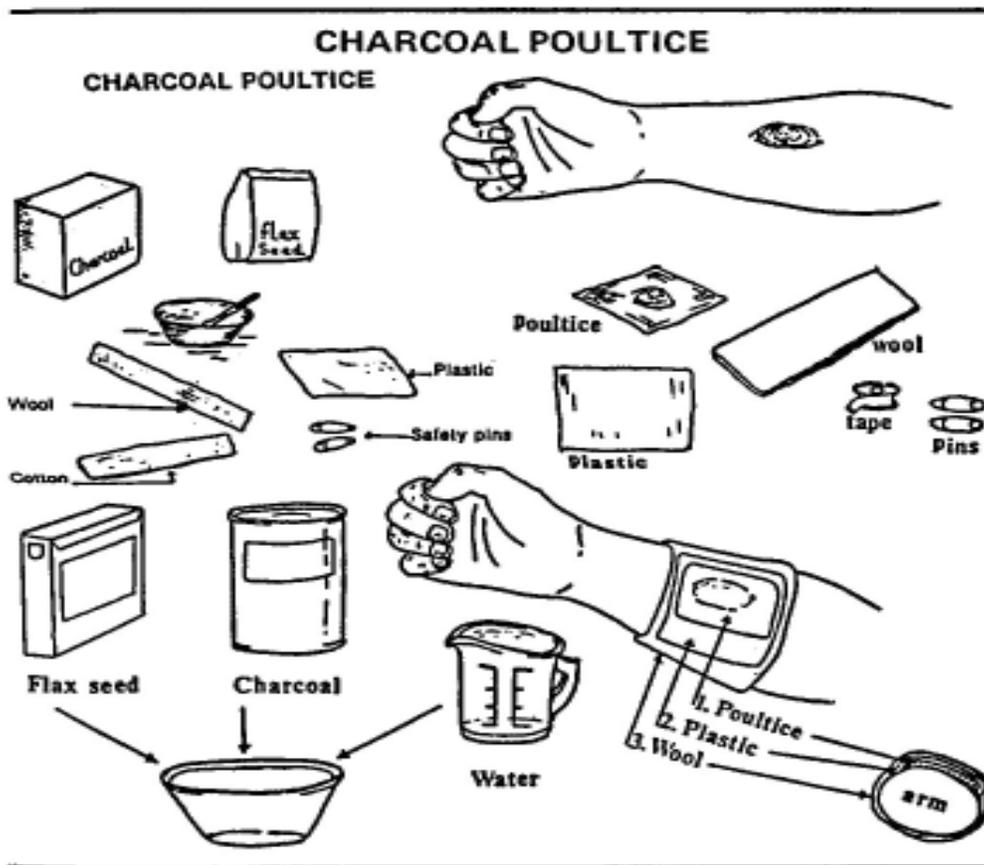
WHAT YOU WILL NEED-2-4 pounds of paraffin wax and 4 tablespoons mineral oil. Double boiler. Bath towel. Piece of oiled silk. Thermometer.

Paraffin wax which is used in household preserving can be used. It is best to add some mineral oil to it so that the solid paraffin is less brittle and melts more easily. The added oil also helps the tissues to be softened preparatory for later massage. Use 1 pint mineral oil to 5 pounds of paraffin.

HOW TO APPLY IT - (See picture on page 79.) (1) THE PARAFFIN BATH

1-Melt the paraffin in a double boiler or crock pot, and let it cool until a thin film begins to form on top.

2-Examine the skin for open sores, lesions, unhealed scars, and skin infections. Never use the paraffin bath if there are sores, open wounds, etc. Hairy areas on the part to receive the paraffin should previously be clipped, shaved, or oiled. Now wash and dry



very carefully the hand (hands, foot, etc.) to be treated. (We will here assume that only one hand is to be treated.)

3-Dip the hand quickly into the paraffin, keeping the fingers separate. If the wrist needs to be coated also (because it also is in pain), the container should be deep enough for this to be done. (Or paint the paraffin with a brush over the parts that cannot be dipped.) If both hands are to be treated, then dip one hand in first, remove and wrap it in plastic while the other hand is being coated. The effect is prolonged by treating the opposite hand also. Instruct him to hold the fingers or toes in a relaxed position without moving - in order to avoid cracks in the paraffin "glove."

4-Remove the hand until the paraffin hardens; then dip it again. Repeat this (10 times) until a thick glove forms.

5-When the glove is thick enough, immerse the hand into the paraffin in the pot for 10-15, or up to 30 minutes or longer. (or wrap the hand in plastic, towel, and wool fomentation cloth and leave for 15 minutes). Be careful with elderly or weak people. Have

a rack in tank so their fingers do not touch the bottom. Read all of the directions below in order to learn additional variations.

6-Leaving the hand in the paraffin bath does not macerate the skin as might happen if it were left in water for the same amount of time.

7-When finished, remove the wax by peeling off the "glove," and put the glove back into the pot of paraffin.

8-Massage and exercise can now be given to the hand; this will help it retain the better blood circulation that it received during the bath. For exercise, squeeze and mold a piece of warm paraffin in the hand.

9-While the paraffin was on the hand, it absorbed some of the acids in the hand. You can clean this "glove" by placing it in a different pot, if you wish, and then heating it to the boiling point, then removing from the fire. The acids and other wastes quickly boiled off. When cold, place the chunk of paraffin back into the regular paraffin pot. When not in use, keep this pot covered at all times.

(2) HOT PARAFFIN PACK

1-Heat the paraffin in the double boiler (or any double container with water in the lower pot and the paraffin in the upper one). Again, add some oil.

2-By means of a soft paint brush, about 3 inches wide, the paraffin is applied to the area in successive coats, each of which is allowed to harden enough so that the next one can be put on. Usually about ten coats are sufficient. You have now made a "hot Paraffin Pack" on the afflicted part. It will remain warm for about an hour.

(3) HOT PARAFFIN DRESSING

1- This is similar to the Pack, except that the layers of paraffin are alternated with a gauze bandage. Such dressings are applied to arthritic joints which are acutely inflamed, for they furnish both heat and immobilization. 2- This Dressing may be kept on overnight.

(4) HOT PARAFFIN WRAP

1- This is yet another variation that is especially helpful for sciatica. The paraffin is applied rapidly with a brush, 10-12 coats, then covered with oiled silk or wax paper, then a towel or flannel. It may be kept warm with a heat lamp for 10-30 minutes.

5 - KIDNEY STONE PACK

WHAT IT IS- This is a hot application over a painful kidney when sharp pains from a kidney stone are felt.

HOW IT CAN HELP YOU-A Kidney Stone Pack is placed over the painful kidney area at a time of a kidney stone attack (sharp pain from the stone). The pack, renewed as frequently as needed, is kept on for hours until the stone passes or the pain stops.

WHAT YOU WILL NEED-Heating pad. Plastic square or garbage bag. Hot fomentation pack. Towel. Sheet. Blankets. Cold compresses. Radio.

HOW TO APPLY IT

1-Spread a half-sheet across the middle of the bed. Over this place a heating pad turned up high, with a plastic square or garbage bag over it. On top of this, place a hot pack (see Fomentation on page xxx), with a towel over it. This is a large, very hot fomen-

tation and should be applied quickly, while the heat is still almost unbearable. The electric heating pad will keep it hot.

2-Position the sufferer on the bed so that his painful kidney is centered over this fomentation. Bring up the sheet on each side and pin it snugly around the body, to help hold the pack in place.

3-Plug a radio into the same electrical outlet that the heating pad is connected to. Tune the dial to an area of no radio reception, and then turn the volume to high. (If moisture accidentally gets on the electrical units of the heating pad, the short will cause static on the radio, thus alerting you.)

4 -Keep the head cool with cold compresses.

5 -Conclude the application when the stone passes or the pain ceases. Then keep him covered and warm. It is well to let him sleep awhile afterward.

6 - SINUS PACK

WHAT IT IS- This is a combined set of applications applied simultaneously to reduce sinus pain.

HOW IT CAN HELP YOU-These applications can help relieve the pain of a sinus attack.

WHAT YOU WILL NEED-Fomentation cloths. Two trays of ice cubes. Two small dry towels. Hot foot bath. Hot spinal fomentation.

HOW TO APPLY IT - (See picture on this page.)

1 -Put one end of the bed (or treatment table) against the wall. Then place a set of three hot fomentations to the chest (3 minutes hot, with 30 second cold applications between them). There should be no delay between the removal of the hot fomentation and the placement of the cold compress on the chest. Leave it there a full thirty seconds. The third fomentation should remain on the chest throughout the remainder of the treatment.

2-Put one tray of ice cubes in a small dry towel; fold it over to a 5 x10-inch size. Then make a second ice pack in the same manner.

3-Place one ice pack under the back of

the neck, centered over the lower edge of the skull. Wet the top of the head slightly and then place the second ice pack on the top of the head. Hold the pack in place with a pillow.

4-Fold a small towel lengthwise, and, holding it in its center edge with one hand, fold the ends down 900 from the central point (see picture on page 83).

5-Place it on the face for protection (especially to protect the eyes), leaving the nose exposed through the opening made in the middle (see picture).

6-Using a single hot fomentation, fold it as the towel was folded, and place it over the towel on the face for exactly three minutes. Then remove both the fomentation and the towel beneath it.

7-Wring another small towel from ice water and place it on the face over the reddened area. Make this change quickly and leave it on for a full thirty seconds.

8-End by drying briskly, -and then repeat steps 4 through 7 three times. Conclude with a cold mitten friction, beginning with the face. A hot and cold shower can be taken instead of the mitten friction.

7 - HEAT LAMP

WHAT IT IS-This is an ordinary incandescent light (or an infrared heat lamp, if you prefer), used as a local hot application. Either way, we will here call it a "heat lamp,"

but we highly recommend that, in most cases, you use an incandescent and not an infrared lamp (and never an ultraviolet lamp for this purpose).

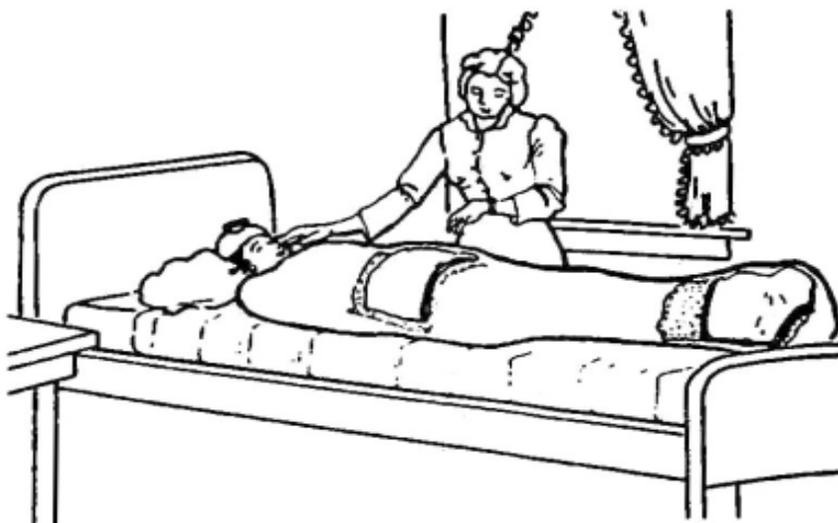
HOW IT CAN HELP YOU- Some conditions are best cared for with a heat lamp. An outstanding example is its use in clearing out stuffy, swollen nasal passages. Another example would be earaches. It can also be used for other local heating applications, such as limbs, perineal care, etc.

WHAT YOU WILL NEED-The simplest and least expensive is a shop lamp with a wire screen over it. Screwed into this is a regular incandescent light bulb. Different size wattages may be used for different heating effects, but, normally, a 100-watt bulb will suffice for most purposes. The shop lamp should have a clamp attached to it, or should be attached to a clamp. This clamp can then be attached to a bed head-board, chair, or some other bracket above the bed.

An infrared bulb can also be used. But this is more expensive and actually somewhat less useful over an extended period of time, due to its intense heat. (Be very careful to follow the directions on the package.) But in certain situations an infrared lamp can be helpful in the house.

(Do NOT use an ultraviolet lamp as a heat

HOT BLANKET PACK



This is a "cutaway view" showing the various layers, towels, fomentations, plastic sheeting and blankets. An ice bag is on his head and a helper is taking the pulse at the temple.

lamp! It can cause severe sunburn and permanently damage the eyesight. Ultraviolet rays are powerful, and intended only for sun bathing purposes in wintertime. When used (if at all), they should only be turned on for a few moments and at a distance from the body.)

HOW TO APPLY IT - (See picture on this page.) 1-Firmly set the incandescent heat lamp over the part to be treated. The lamp can be clamped either to the bed head-board, or to a temporary arm or bracket.

2-A folded, wet facial tissue or thin cotton cloth should be laid over the part to be heated with the lamp. If he is laying down in bed, the rest of his body should be covered and kept warm.

3- The average timing is 20-30 minutes, but in certain conditions, such as earache, it might be used for several hours so that he can obtain rest.

SPECIAL APPLICATIONS -Here are several specialized uses for a heat lamp:

1-Opening nasal passages-Place a 100-watt (incandescent) shop lamp about 2 inches from the nose. Two small squares of moistened tissue can be placed over the eyes to protect them. The heat wonderfully opens up the stuffed nose and lets it drain. (Be sure that enough water is drunk: this alone will open up many stuffed noses!)

2-Earache-Again, use a 100-watt regular light bulb. Even children and small babies will lie still as they quickly feel the relief from the pain.

3-Postpartum perineal care-Following a childbirth, pain from damaged tissue can be relieved during the healing process by occasional use of the lamp. No assistance is needed for it is simple to use. The lamp is also helpful and soothing after a hot sitz bath.

8-POULTICES INCLUDING

CHARCOAL POULTICE

CLAY AND GLYCERINE POULTICE

CLAY POULTICE FLAXSEED POULTICE

GARLIC POULTICE

COMFREY AND SMARTWEED POULTICE

HOPS POULTICE

MUSTARD POULTICE

CHARCOAL AS A NON-POULTICE

WHAT IT IS- This is a salve of one or several things combined with a little hot water, which is then spread on a damp cloth and placed over an infection which is generally, but not always, on or just below the surface of the skin.

HOW IT CAN HELP YOU-Poultices can help in a number of ways in dealing with problems in local, surface portions of the body. Here are some of them: (1) To reduce inflammation. (2) To relieve pain and congestion and act as a counterirritant. (3) To absorb poison (one of its outstanding advantages!) (4) To adsorb and thus neutralize chemical toxins, and insect bites and stings. (5) To hasten the formation of a head in an abscess or boil. (6) to reduce swelling and tension. (7) To deodorize in the best way: by eliminating the cause of the odor. (8) To help treat wounds. (9) Because of the above help, to act as an effective and safe antiseptic and disinfectant.

WHAT YOU WILL NEED-You will need warm water, a bowl, a spoon, clean muslin sheeting or flannel, wool cloth, piece of plastic, pin or tape, ice or a cold wet cloth. You will also need the ingredients of the salve to be used in this poultice. This may include one or more of the following: charcoal; clay and glycerine; flaxseed; comfrey and smartweed; hops; mustard; garlic.

HOW TO APPLY IT - (See pictures on this page.) 1-Assemble everything and prepare the poultice in a warm room. 2-(Several poultice formulas are given below.) 3-Place the salve on a damp cloth; then place that on the area to be treated. Cover with the plastic, and then with the wool cloth over that. Pin or tape it in place. Leave it on overnight.

4-When removing it, be careful not to spill charcoal, etc., on the floor. Rub the part with ice, or with a very cold, wet washcloth. You may wish to renew the poultice with fresh salve and clean cloths.

POULTICE FORMULAS-A number of dif-

ferent mixtures can be prepared for use in poultices. Here are several of the more common ones:

1-Charcoal Poultice-Charcoal has an amazing absorptive (adsorptive, the experts call it) ability to pull into itself toxins and poisons, thus neutralizing them. This is due to its large chemical surface and the fact that charcoal is pure carbon. The carbon hungrily unites with other substances. Poisons, gases, chemicals, toxins, bee and insect stings and bites,-all can be adsorbed by charcoal. Charcoal can also be placed in a poultice and placed over the abdomen, in instances of diarrhea and similar intestinal problems (see "Charcoal as a non-poultice," below). Charcoal can adsorb far more than its own weight. A cube that is 2/5 of one inch square can adsorb 33 square yards of poison! Most of the major poisons known to mankind can be adsorbed, and thus neutralized, by charcoal.

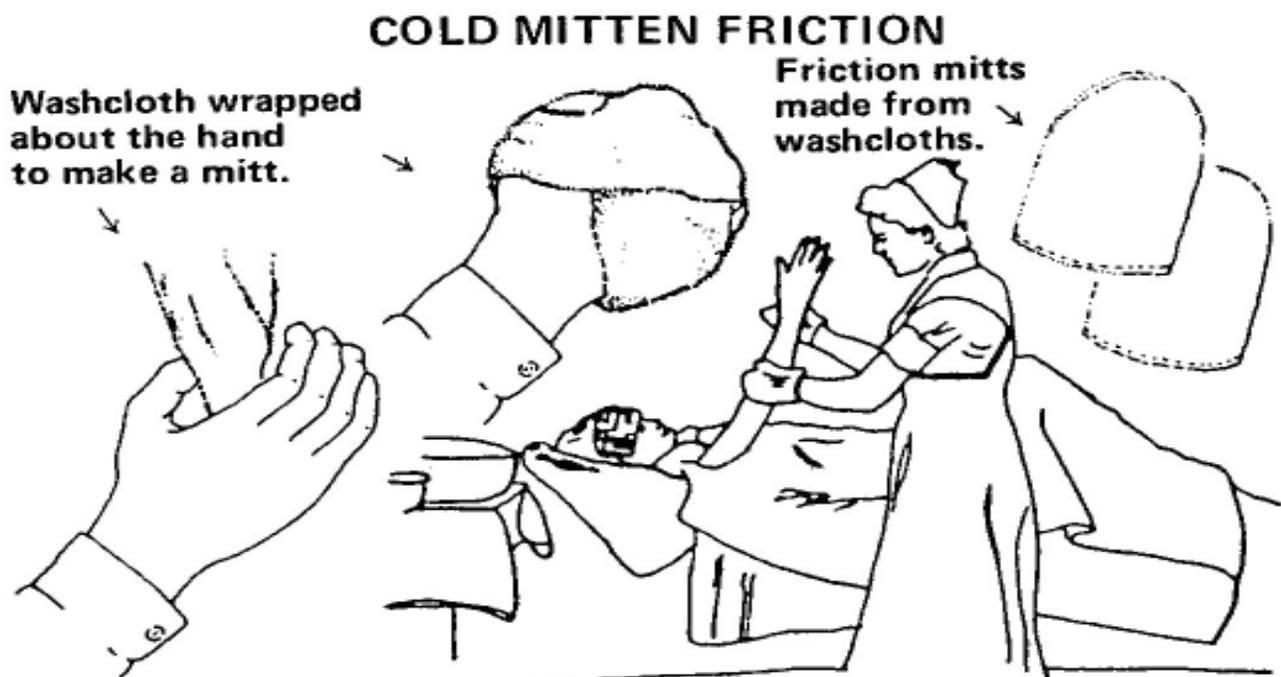
With a spoon in a bowl, mix equal parts of powdered charcoal and ground flaxseed. Add enough hot water to make a paste. Quickly place this salve on a piece of warm, damp cloth before it cools. Spread it to the desired size, and place the cloth on the afflicted area. Follow the remaining directions

as described above, under "How to Apply It."

2-Clay and Glycerine Poultice-Dig up some good-quality clay from several inches below the surface. It should be fine and with no pebbles, etc., in it. Heat and sterilize it in the oven at 350° F. Add some water to moisten it again; add several tablespoons glycerin. It is best to use this only once, after which renewing the poultice with a fresh mixture. Clay also absorbs. It is the primary ingredient in mud baths for arthritis.

3-Clay Poultice-Prepare the clay as described above, but do not mix with glycerine. Cover and keep moist with frequent applications of water (because no glycerine was used as a moisturizer).

4-Flaxseed Poultice-Obtainable from a health food store, one tablespoon of flaxseed should be ground up and mixed with a cup of water brought to a boil. This yields enough paste to cover the front of the abdomen. Spread the mixture on a strip of dampened, wrung out, old sheet, or directly on skin. Cover with a larger piece of plastic; hold in place with a 50-60 inch strip of



cloth (or an ace bandage, obtainable at the drug store). Leave it on for 30 minutes or longer (even overnight). Remove it, wash the area with a washcloth, then give a cold mitten friction to it. Shower if necessary. Dry thoroughly.

5-Garlic Poultice-This is a powerful way to neutralize certain poisons. It can help reduce abscesses, fungus skin infections, eczema, dermatitis, boils, and is used to neutralize the acids in arthritis and similar conditions. Make a pulp of raw garlic and place it on a cloth and then over the affected part. This is not a painless remedy, but the results are usually well worth the effort.

6-Comfrey and Smartweed Poultice-Fresh or dried leaves of comfrey and smartweed are whizzed in a blender with a little water and then spread on the area needing attention. Apply as for Flaxseed poultice, above.

7-Hops Poultice-Using the same methods as for Comfrey and Smartweed Poultice, and Flaxseed Poultice, above, apply the hops poultice. Hops is a plant, the dried, powdered leaves of which are obtainable from your

health food store.

8-Mustard Plaster-Mix 1 tablespoon dry mustard to 4 tablespoons wheat flour (for a child: 1 to 8; for an infant: 1 to 12). Add enough lukewarm water to make a thin paste that is not runny. Spread it on a cloth that is on a dinner plate. Place one thin cotton cloth over the affected part (use a mustard plaster for arthritic joint pain, backache, and to improve circulation). Put on the poultice, and over it place a large piece of plastic and then a towel. Over this a fomentation can be applied to increase the heat. Do not leave the plaster on for more than 20 minutes. Remove it earlier if it is burning or stinging, or the skin has become well-reddened. Wipe the area with a cloth or paper tissue dipped in vegetable oil to remove all mustard traces! Cover the area with a warm blanket; pin in place and leave on overnight.

CAUTIONS-Certain poultices (especially mustard) can cause blistering. Especially use mustard with caution, and be ready to remove it as soon as needed. A poultice applied after pus develops is sometimes a det-

COLD TOWEL RUB / DRIPPING SHEET RUB



ment, for the salve can cause bacterial development. Do not use poultices over active supuration (pus). Keep in mind that the heat in the poultice is often as important as the poultice-so keep it warm. In pneumonia, peritonitis, and other deeper inflammations, the poultice should be large enough to cover a surface area as large as the organ being treated. The poultice should be covered with plastic, and removed if it becomes cold. A cold poultice or an old poultice, do not accomplish much.

CHARCOAL AS A NON-POULTICE-Charcoal can also be used without being placed in a poultice. Here are two of the ways: (1) In case of stomach or small intestinal upset, obtain five (or so) charcoal tablets and a glassful of water. Chew up the first tablet in some of the water and swallow it. Repeat this with the remaining tablets. Be sure and include at least 3/4's of a glassful of water-for it is the water that carries the charcoal to the stomach and intestines. (2) In case of diarrhea, drink one tablespoon (or 12 tablets) of charcoal powder to one glass hot water, twice a day. An alternate method is to mix the charcoal in olive oil, and take it 3 times a day. When the stomach or bowels are very tender and irritated: some let the charcoal stand in 2 quarts of water, and only use the water off the top. This, of course, will not provide as powerful a mixture. See your doctor if the diarrhea is not promptly stopped.

SECTION SIX LOCAL AND LARGER HOT

WHAT IT IS-Hot blankets are wrapped around part of the body in order to impart heat to it. There are several types of Hot-Blanket Packs. We will here describe each of the important ones.

"HOT ABDOMINAL PACK"- That which is listed in the Kellogg Water Remedies (pages 178.252) as "Hot Abdominal Pack" should read "Wet Girdle." The Wet Girdle (a heating trunk pack) is described on page 56 of this Manual.

1 - FULL HOT-BLANKET PACK

HOW IT CAN HELP YOU-The Hot-Blanket

Pack is a vigorous sweating measure, and also is very helpful in drawing blood away from congested internal organs. (The congested internal organs are generally the ones beneath where the Hot. Blanket Pack is placed.) Any sweating treatment reduces internal congestion, but this application is much more effective when the wet blanket is placed next to the skin. In those instances in which the congestion is not localized in some particular part, but consists of a general internal congestion, a general sweating treatment is usually sufficient for its relief. And this is especially true in the first stages of many fevers, in colds, grippe, etc.

Thus, the Hot-Blanket Pack helps in two ways: (1) induce vigorous sweating, and (2) reduce congestion.

HOT BLANKET PACK

This is a "cutaway view" showing the various layers, towels, fomentations, plastic sheeting and blankets. An ice bag is on his head and a helper is taking the pulse at the temple.

PROBLEMS IT CAN HELP SOLVE- The strong sweating effect of the Hot-Blanket Pack is a decided help in uremia, eclampsia, acute Bright's disease, kidney insufficiency and congestion, pneumonia, and sometimes typhoid fever. It is especially helpful for kidney and gallstone pain.

This will help illustrate how hot-blanket packs work: When there is congestion and high blood pressure in the kidney, a Hot-Blanket Pack laid over it will reduce both of these problems. And with the alleviation of these two conditions, the kidney will soon be able to function again.

WHAT YOU WILL NEED-Two double blankets or one single and one double blanket. Four hot-water bottles half filled with hot water (160° F.). A pail, bowl or washbasin of ice water. Compresses for the head, neck, and heart (see Cold Compresses, page 45). Also needed are two Turkish towels, a tumbler, drinking tube, and a pitcher of hot water for drinking.

HOW TO APPLY IT - (See picture on page 91.)

1-Give a Hot Foot Bath (page 115), and have him drink hot water.

2-Spread a double blanket on a table or bed. Place a Cold Compress (page 45) to his head, while his feet are still in in the Hot Foot Bath.

3-Fold the single blanket (or another double blanket - for holding the heat longer) lengthwise in a convenient width for wringing them (either by hand or through a wringer).

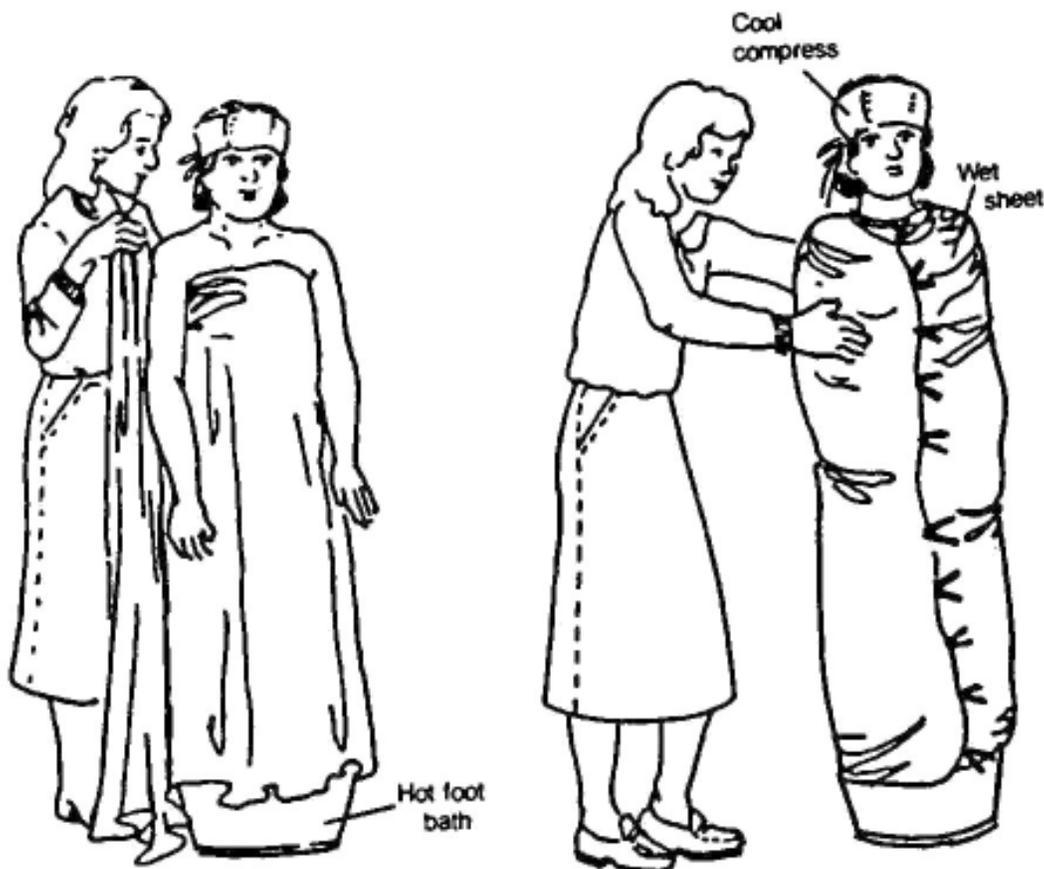
3-Dip the center of the folded blanket in boiling water, and then wring it by twisting. (See pages 71-73 of "Fomentation" for how to do this.) Too much water left in the pack will make it feel very hot at first, but it will then cool much more rapidly than if it had been wrung nearly dry. Therefore, wring it as dry as possible. (For alternate, non-wringing, method, see "Fomentation, Steamer Method" on pages 71 and 75.)

4-Quickly unfold and spread out the moist blanket over the dry blanket on the table.

5-Help him to lie on the hot blanket. If he is too weak, you may need to lift him onto it. As quickly as possible (or as rapidly as he can bear it), cover the entire body (except the head) in the hot blanket. The wet blanket should come in contact with the body over its entire surface, so that no air spaces will be left.

6-Place a hot-water between the legs with one thickness of dry blanket between it and the moist blanket. Place a second hot-water bottle at the feet. The other two hotwater bottles should be placed along the sides of the trunk. Each one should have the dry flannel between it and the moist flannel. Fomentations (page 69) may be used to reinforce the pack instead of hot-water bottles. If used, the fomentations should be changed for fresh ones about every 10 minutes. If there is not enough covering between the hot-water bottles and the skin, there is danger of burns. If he

WET SHEET RUB



complains, immediately place more covers between the bottles and his body. 7- Tuck in the wet blanket well, and then the dry blanket over it. Be sure both are tucked in well about the feet, shoulders and neck.

8-Place Cold Compresses (page 45) about the head and neck, and protect the chin from touching them with a soft, dry towel. Change the compresses to fresh ones before they are warmed very much.

9-(If the pulse becomes too rapid, also place a Cold Compress or an Ice Bag (page 49) to the heart.)

10-General, free perspiration should be induced by the pack. Important: long-continued heat without perspiration is not good for him. For general sweating purposes, a dry blanket may be placed between him and the wet blanket. But for stronger effects, the wet blanket should be next to the skin.

11-He should begin perspiring very soon-within 10 minutes. If not, give hot water to drink, or a Hot Foot Bath, or both. In giving the Hot Foot Bath, the blankets should hang down over the legs to keep air from circulating inside.

12-For sweating effects, continue the pack

for 20-30 minutes, or until it ceases to have a heating effect. (If only given to tone up the body-for tonic effect, -the pack should only last 5-10 minutes.)

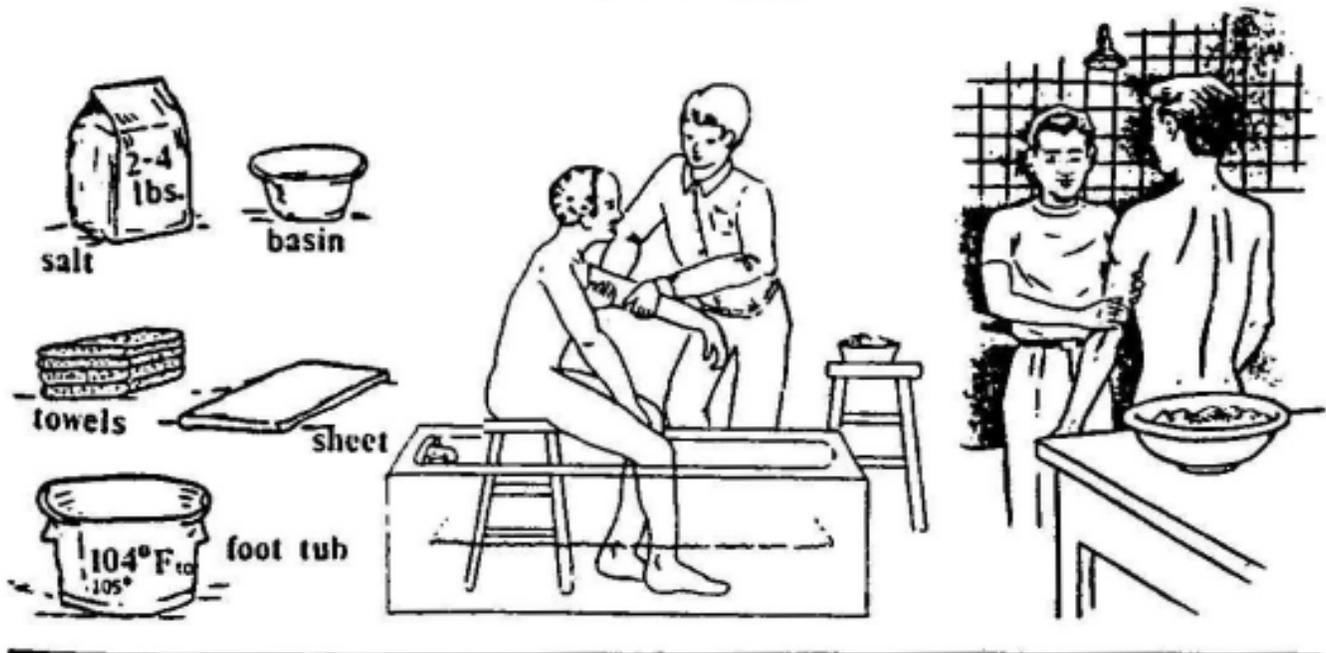
13-When finished, remove one part of the blanket at a time and give that body part a Cold Mitten Friction (page 99), or a Cold Towel Rub (page 101). Then recover it with a dry blanket or bedding.

14-Remove the blanket from another body part and repeat the process. Best: begin with the arms, then chest and abdomen, then legs. Entirely remove the wet blanket and do his back last of all.

CAUTIONS- Be careful that you not burn him with a blanket, initially too hot, next to his skin. Be equally watchful of the hot-water bottles. Give attention to his pulse, and apply cold to his heart if necessary. He must begin perspiring within 10 minutes!

When giving packs to those having paralyzed sensations, or who are unconscious, or in diabetes, or dropsy, it is safer if a thickness of dry blanket intervene between the person and the wet blanket. Hot-water bottles should be more thoroughly covered, and should contain water at a lower temperature.

SALT GLOW



2 - HOT TRUNK PACK

WHAT IT IS-The Hot Trunk Pack is a Hot-Blanket Pack applied only to the trunk of the body, and not to the limbs.

HOW IT CAN HELP YOU-Its general effects are similar to those of the Full Hot-Blanket Pack, described above. It is especially helpful in digestive disturbances, and relieving kidney, bile, and intestinal pain.

HOW TO APPLY IT

1-Begin with a Hot Foot Bath, both before and during the time that the pack is given.

2- The hot, wet blanket should cover the body from the arm pits down to the bottom of the pelvis. It should not cover the arms or legs. Under it should be a large dry Fomentation cloth (see page 69 for details on these cloths.)

3- The outside dry blanket should cover the whole body, but this is only to provide the protection of uniform warmth, so it should not be wrapped tightly about the arms and legs.

4-Place one hot-water bottle over the abdomen between the folds of the dry blanket. Put two more on either side of the trunk.

5- The Hot Trunk Pack should last 20-30 minutes, and should normally close with a cold friction treatment. But if the pack is given for the relief of pain, omit the cold friction.

6-For many more details on the giving of Hot-Blanket Packs, see Full Hot-Blanket Pack, above, on page 91.

3 - HOT HIP-AND-LEG PACK

WHAT IT IS-This is a Hot-Blanket Pack that is applied to a number of problems in the pelvis, legs, and feet. It is also one of the most efficient derivative measures used in water therapy.

HOW IT CAN HELP YOU-Not only is the Hot Hip-and-Leg Pack useful for a number of lower body conditions, but it is extremely helpful in derivation: the application of heat to one area in order to draw blood from a congested area somewhere else. For more on "derivation," see pages 22-23.

HOW TO APPLY IT - (See Illustration on

page 23.)

1- The hot, wet blanket, and the dry blanket over it, should reach from slightly above the top of the hipbone (the crests of the iliac) on down to the full covering of the feet.

2- One hot-water bottle should be placed at the feet, within the folds of the dry blanket, and another one between the legs.

3- In order to powerfully increase the derivation effects, place an ice bag over the congested part. The pack draws the blood away from this congested part (derivation), and the ice bag drives it away (depletion).

4-Conclude with a Cold Mitten Friction, applying it to one limb at a time. This will help retain the blood in the legs The Water Therapy Manual after the treatment is ended.

5-For much more detail on Hot-Blanket Packs, see page 91, above.

4 - HOT LEG PACK

WHAT IT IS-The Hot Leg Pack includes the feet, legs, and half or more of the thighs.

HOW IT CAN HELP YOU-This pack is given for the same purposes as the Hot Hip-and-Leg Pack, above, yet it is less efficient than the Hip-and-Leg Pack. Why then is it used? It is used when it is undesirable to move the pelvis.

HOW TO APPLY IT

1- It is given in the same manner as the Hot Hip-and-Leg Pack, above. You will also want to read Full Hot-Blanket Pack (on page 91) for much more complete details. 2-Except for the smaller coverage (the hips are not included), the application of the moist blanket, dry blanket, hot water bottles, and concluding cold friction are all the same.

3-A large Fomentation (page 69) may be used over the front and sides of the pelvis at the same time that the pack is given. In this way, almost as much surface is covered as in the Hot Hip-and-Leg Pack.

5 - HOT PACKS WITH ICE BAGS

WHAT IT IS-This is the most powerful and efficient means of derivation known to hydrotherapy. Blood can so concentrate in a state of congestion in a deep organ within the body,

that it is difficult to restore a normal flow of blood in and out of that organ. "Derivation" does it by pulling the excess blood away from the congested part.

HOW IT CAN HELP YOU- These packs are especially helpful in reducing internal congestions, reducing or terminating local inflammation of deep parts, and relieving the pain that accompanies the inflammation. For all of these purposes, these packs are used only in the acute stage of the inflammatory process.

PROBLEMS IT CAN HELP SOLVE-The hot pack draws the blood away from the congested area that is choked with an excess of blood. You can call this a "pull effect." The ice bag drives the blood away from the afflicted area by reflexively contracting its deep blood vessels. This is a "push effect." The Cold Mitten Friction, given at the close, causes the extremity where the packs were placed - to hold the excess blood longer than they otherwise would - thus helping the body to maintain the restored organic circulation for a longer period of time.

HOW TO APPLY IT

1-This water therapy can be used with any of the three Hot-Blanket Packs, described above (pages 91-94). Simply follow the in-

structions given under each one, while adding the ice bag over the congested area.

2-Do remember that it is best to use the Hot Packs with Ice Bags only in the acute stage of the infection.

EXAMPLES OF HOW IT CAN BE USED-Here are but a few of the many ways in which Hot Packs with Ice Bags can be employed to reduce inflammation: 1-Mastoiditis: Hot Hip-and-leg Pack, or a Full Blanket Pack lice Cravat (page 47) or Ice Bag (page 49) over the carotid artery (slightly to the right and above each ear), plus Ice Cap (page 49) to the head, and Fomentations (page 69) to the mastoid (just below the ear).

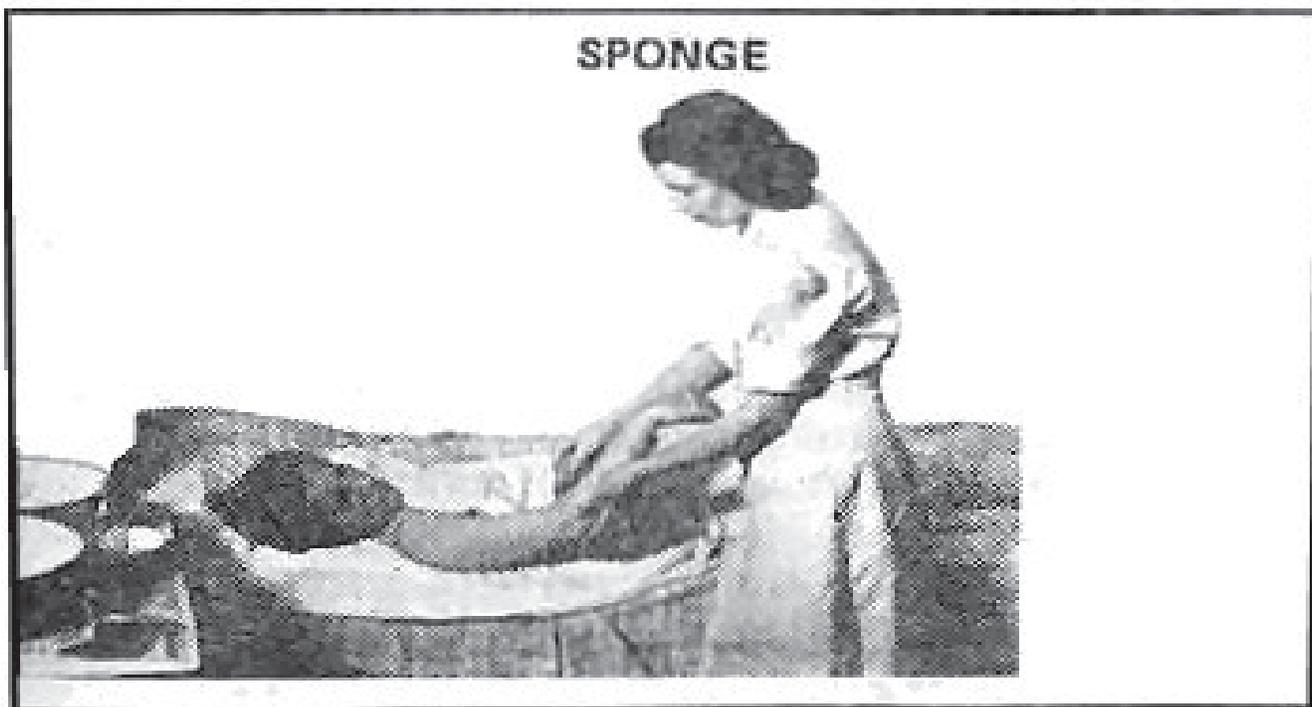
2-Alveolar Abscess: Same treatment as for Mastoiditis, except that you give a Fomentation to the jaw.

3-Kidney Congestion: Hot Trunk Pack or Full Blanket Pack lice Bag to lower third of sternum.

4-Peritonitis: Hot Hip-and-leg Pack, or leg Pack only / ice compress (see Ice Pack, page 46) or Ice cap to abdomen.

5-Appendicitis: Hot Hip-and-leg Pack lice Bag to the appendicial region.

6-Puerperal Infections and Acute Salpingitis: Full Hot Blanket Pack, or Hip-and-leg



Pack lice to pelvis (over pubic area).

SECTION SEVEN TONIC FRICTIONS

WHAT THEY ARE-These are applications of cold water that are given with friction (vigorous rubbing of the body) in order to increase body circulation and heat. From the mildest to the most vigorous, these applications are: (1) the Wet-hand Rub, (2) the Cold Mitten Friction, (3) the Cold-towel Rub, (4) the Wet-sheet Rub, (5) the Dripping-sheet Rub, and (6) the Ice Rub. In addition to this, the Salt Glow is often used on those who have a difficult time reacting well to the Cold Mitten Friction.

One or more of the first four frictions listed above, are often given in an advancing pattern aimed at building up the body. When it is able to react with sufficient heat to one tonic measure, one may wish to begin treatments with the next one that is more severe.

HOW THEY CAN HELP YOU-Each of these water treatments can produce a vigorous stimulation of the whole body, depending upon: (1) which tonic friction is used, (2) the amount of "vigor" you put into it as you give it, and (3) the body's general reaction to the vigorous cold rub. With this in mind, these tonic frictions can provide a wholesome and vigorous circulation; stimulate blood-vessel activity and circulation; heighten muscular tone and activity; increase nerve tone and sensibility; stimulate muscular, glandular and metabolic activities of internal organs; increase heat production and oxidation; increase phagocytosis and bactericidal-antibody production in infectious fevers; increase oxidation and elimination of bacterial toxins in infectious fevers.

But, more commonly, they are used to build up general body resistance, improve sluggish circulation, overcome generalized weakness, lack of endurance, and low blood pressure, and strengthen one who has frequent colds.

WHAT YOU WILL NEED-The articles needed for all of the tonic frictions are simple

enough, and depending on the treatment given, will require several of the following:

A washbasin or small tub of water. 1-3 pails. Cold water, or ice water for a more vigorous effect. Possibly ice, snow or salt. 1-3 sheets. 1-2 small washcloths, or one or two "friction mitts" made of rough Turkish toweling. (If used frequently, the mitts are well worth sewing together, for they are so much easier to use than hand-held washcloths.) Plastic sheeting and towels for the bed and bedding, if the friction is given to one who is in bed. A warm, dry towel to dry him with afterward.

Here are the seven types of tonic frictions:

1 - WET-HAND RUB

WHAT IT IS- This is the mildest of the frictions and is only given to those who are too weak or infirm for a more vigorous tonic friction.

HOW TO APPLY IT

1-The Wet-Hand Rub should be given in the same order and manner as the Cold Mitten Friction (explained just below), with the following exceptions:

2- The Body should only be rubbed with a wet hand, dipped several times in cold water. Only one part is exposed for rubbing at a time; it is rubbed, then dried, then briskly rubbed with the dry towel and with the hands

2 - COLD MITTEN FRICTION

WHAT IT IS- This is the most commonly-used tonic friction, and is applied with a washcloth or two friction mitts, rubbed on the skin.

WHAT YOU WILL NEED-Pail or wash bowl at 50-60°F. or ice water. A sheet and three Turkish towels. Two friction mitts or two washcloths. Compresses (wet cloths) for the head and neck. if he is ill or infirm. Protective bed coverings, such as plastic sheeting is laid down (or special blankets that will later be dried out).

How to make your own friction mitts: The Cold Mitten Friction is such an invaluable help, to be used so frequently, that you will

want to make your own mitts, since they are so much easier to work with than a hand-held washcloth. Have someone handy with a sewing machine make you some mittens out of rough (Turkish-type) toweling material. Simply cut apart an old pair of mittens and use it for a pattern.

HOW TO APPLY IT - (See picture on page 100.)

1- The room should be warm and without drafts. If he is ill, first bathe his face and neck with cold water, or apply cold cloths to the head and neck. If he has valvular heart disease, place an ice bag over the heart before beginning the tonic friction. (If the person is feeling better, the friction can be given to him as he stands. Many people give it to themselves each morning.)

2-Wring the washcloths or mitts from cold water, so that they are as dry as possible. Then begin quickly rubbing, drying, re-dipping, wringing, etc. Here is the order to follow:

[1] Arm and forearm: rub vigorously until the skin is pink. This should require only a few seconds. Then dry them thoroughly and cover them well.

[2] The other arm and forearm: Dip and wring the cloths and do the other arm and forearm; dry thoroughly and cover with bed covers.

[3] Chest: Repeat the dipping, wringing, rubbing, drying, and covering.

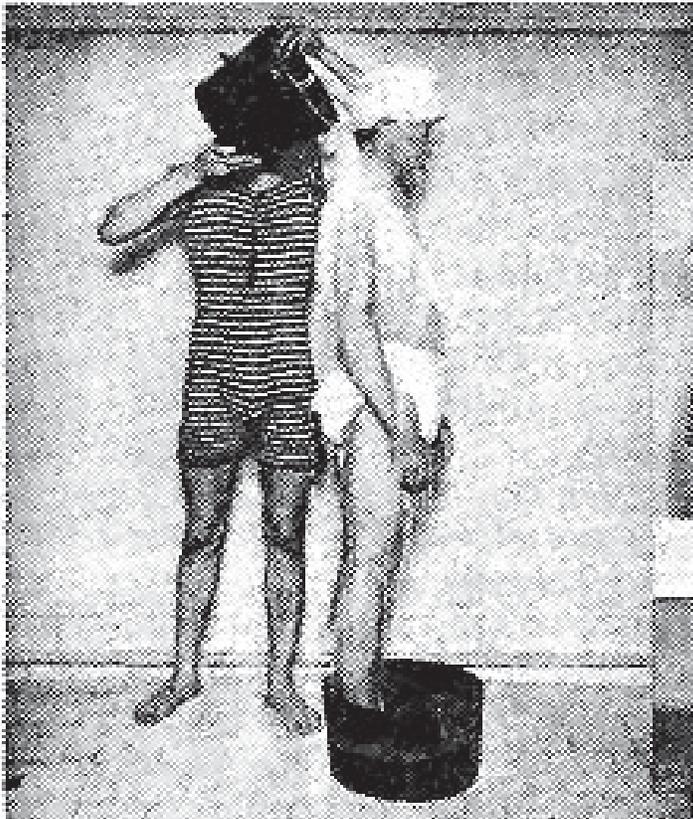
[4] Trunk, thighs, and then legs.

(When giving the treatment to one with heart disease, some prefer to begin with the chest, instead of with the arms.)

3- The entire tonic rub must be given rapidly, especially during the time that the part is barred and the cloth or mitten is in contact with the skin.

ADDITIONAL POINTS- The severity and tonic effect can be varied by the temperature of the water, frequency of dipping, amount of water left in the cloth after wringing, and the vigor with which the skin is rubbed.

PAIL POUR



Pictures from the
Battle Creek
Sanitarium.



back (behind him), and then up and over his right shoulder. From there it goes across his chest, around his neck, and over his left shoulder. The corner is then tucked under the edge of the sheet toward the back.

7- Then tuck the sheet between his legs, thus bringing the wet sheet in close contact with every part of his body.

8-Rub vigorously and give percussion (slight slapping) over the sheet. But note: do not rub him with the sheet, but over the sheet. Work quickly, covering the whole surface as quickly as possible.

9- The sheet should quickly become warm. When the treatment is finished, follow it by drying him thoroughly with a dry sheet and towels.

SPECIAL POINTS-He must be warm before it begins, and should previously have shown a good ability to react to cold towel rubs, pail pours, or cold percussion sprays. Do not expose him any more than necessary, but work quickly to avoid chilling him. If he does not obtain a decidedly warm reaction, and soon, the value of the treatment is lost. Two helpers are needed to give the best results in wet-sheet rubs.

5 - DRIPPING SHEET RUB

WHAT IT IS-This is a Wet Sheet Rub, with the addition of a second and third pail pour.

WHAT YOU WILL NEED-3 pails of cold water (70°, 65°, and 60° F, respectively), in addition to what you would use for a Wet Sheet Rub (described just above),

HOW TO APPLY IT

1-Follow the same procedure as with the Wet Sheet Rub, described just above, but with the following exceptions:

2-Use the water from the 70° pail to wring the sheet from. Give the Wet Sheet Rub treatment (as explained above), and after he and the sheet are warmed by rubbing and percussion,-then, without removing the sheet, pour the second pail of water (65°) over his shoulders, and again rub vigorously until he is warm. Then pour over him the coldest pail (60°) and again rub till warm.

3-Conclude with the usual drying.

SPECIAL POINTS-Obviously, this and the next friction are the most severe, so, when given as a tonic measure, they should only be given to those who have shown themselves able to react with sufficient heat in response to milder cold friction treatments. (Do understand that the Dripping Sheet Rub is as strong a tonic as you will normally give. The Ice Rub, below, is generally used, not as a tonic treatment, but to bring down fevers.)

6-ICE RUB

WHAT IT IS- This is a rub that uses a piece of ice, instead of a wet hand or cold mitten.

HOW IT CAN HELP YOU-The Ice Rub is not used very often for general tonic purposes. Its value lies in its powerful fever-reducing ability. When given to lower a fever, each part should be rubbed for some time and then dried without friction or percussion with the hands. Its prolonged application to the spine is more powerfully antipyretic (fever reducing) than the same length of ice rub elsewhere on the body.

HOW TO APPLY IT .

1- The Ice Rub is given in about the same manner as the Wet-hand Rub (page 99) and Cold Mitten Friction (page 99). But the Ice Rub will require much more careful covering of the bedding with plastic and towels. Tuck Turkish towels about each part so that the water will be absorbed as it runs off the skin. The cake of ice may be held in the hand, but it is better if wrapped in a thickness or two of gauze.

CAUTIONS-Cold compresses (hand towels wrung out from cold water) should be applied to the head and the neck, and also to the heart, if necessary. In cases of typhoid fever, do not apply the cold treatment to the abdomen.

7 - SALT GLOW

WHAT IT IS- This is a tonic friction that has the same general mildness as a Cold Mitten Friction in its effect,-but less body heat reaction is needed to favorably respond to it.

The Cold Mitten Friction is somewhat

easier to use, and is more often used by more people. But for those who have a difficult time reacting to cold, the Salt Glow is ideal.

HOW IT CAN HELP YOU-Since no great amount of cold water is applied to the body, the Salt Glow does not require as much ability to react to cold. This is what makes it so helpful. It is useful in building up general body resistance, improving sluggish circulation, low blood pressure, and helping those with generalized weakness, low endurance, and frequent colds.

WHAT YOU WILL NEED-Two pounds of salt {best if it is coarse salt}. Foot tub of water at 105° F. Two Turkish Towel Washcloth. Shower cap. One sheet.

HOW TO APPLY IT - (See picture on this page.)

1-Make sure the room is definitely warm, without drafts.

Moisten the salt with cold water. (Moisten it just enough that it will cling to the skin when applied. If it is too wet, it will not produce the needed friction. This is important, so test it out on your own arm ahead of time so you will know how moist to make it.)

2- The one receiving the Salt Glow can stand or sit on a stool. Either way, his feet should be in a tub of hot water.

3-Standing by his side, begin with his arm: Wet the entire skin surface of the shoulder, arm, and hand with hot water from the foot

tub. Next apply some of the wet salt, spreading it evenly over the skin. With one hand on each side of the arm, rub with back-and-forth motions until the skin is in a glow. Use less friction if his skin is sensitive.

4- Then do the next body part, in this order: right arm, left arm, right leg, left leg, front and back of trunk (both done at once), sides of trunk and hips, front and back of hips (he must stand while his hips are done).

5-Conclude with a shower or a dip in the bathtub to thoroughly wash off the salt. Then dry him with Turkish towels, rubbing briskly.

SECTION EIGHT SPONGING

1 - FEVER SPONGES INCLUDING HOT SPONGE

COLD SPONGE

TEPID SPONGE

NEUTRAL SPONGE

WHAT IT IS-Sponging a person when in fever is an oldtime remedial help that has been forgotten by many in our modern generation. For this purpose, a wet washcloth is normally used instead of a "sponge."

HOW IT CAN HELP YOU-Sponging greatly helps to reduce fevers,-and we all know how dangerous they can be if body temperatures go too high. It is important to keep in mind that a person with a fever may (1) have a hot, dry skin (because his body is not giving off heat as rapidly as it is being produced), or

SITZ BATH - FOOT BATH

SITZ BATH



PREPARATION FOR HOT SITZ BATH

Hot Foot Bath—104°-106°F (should be warmer than sitz bath)

Sitz Bath—104°F

Cold Compress—for neck and head

FOOT BATH



(2) he may have cold, clammy skin (because his temperature-regulating mechanism is not working properly, due to the infection). The sponging will be different for hot, dry skin than it will be for cold, clammy skin. And always remember: When in a fever, a person needs water to drink. As in burning buildings, water helps put out the fire.

WHAT YOU WILL NEED-You will need a blanket or extra sheet, a basin of water, two or three Turkish (rough) towels, one or two washcloths (or a soft sea sponge), a hotwater bottle, and a bath thermometer.

HOW TO APPLY IT- (See picture on this page.) (-Cover him with a cotton blanket, instead of the regular bed covers (so they will not become wet). Protect the bed with towels as each part is sponged.

2-Sponge one part at a time, in this order: arms, chest, abdomen, legs, feet, and finally the back.

3-Sponge (each part with no rubbing or friction. (The water left on the skin will evaporate, taking heat from the fevered body.)

4-When you have completed sponging each part, cover it with a dry towel and dry it lightly. The skin may be left slightly moist, unless he shows a tendency to chill. Be sure he is dry before his bedclothes are put on again.

5-Be certain that there are no drafts in the room during or after the sponging, and watch for a tendency for him to chill.

6-A hot-water bottle may be placed at his feet if he is likely to chill easily afterward. Take his temperature about 30 minutes later.

FOUR TYPES OF SPONGES-Here are the four basic types of fever sponges: Hot Sponge: The water should be as hot as he can tolerate. The Hot Sponge relaxes and helps one go to sleep. But it is primarily used to reduce fever in those instances in which chilliness exists. And if he is chilling, also give him a Hot Foot Bath (page 115) or Fomentations (page 69) to help him perspire and increase the blood supply to the skin.

When the Hot Sponge is continued for 40-45 minutes, his temperature will not rise as rapidly afterward, as it would have done af-

ter a Cold Sponge. As when giving any sponge, always do it in the following order: arms, chest, abdomen, legs, thighs, back. Bare one part at a time; then dry thoroughly and cover before doing the next. For the Hot Sponge, the cloth should be dipped several times for each part.

Cold Sponge: (70-80° F.) This is the sponging temperature most frequently used when the skin is hot and dry and there is no tendency to chilliness. Each part should be gone over several times, and/or the entire process can be repeated until the desired effect is obtained. The temperature of the water and the duration of the treatment will determine the results.

A cold compress or washcloth may be placed on the forehead or in the armpit. Friction (rubbing) is used to bring blood to the surface and to increase the rate of circulation to hasten the cooling process.

Tepid Sponge (80-92° F.) and Neutral Sponge (94-98° F.): Both of these are given to rest, relax, and help him to go to sleep. The effects are those of the Neutral Bath (see page 122). Sometimes these two sponges are used to reduce fever, but they are not very effective for that purpose. Their primary value lies in bringing relaxation to one who is unable to go to sleep.

As you apply either of these two sponges, dry the skin gently, with as little rubbing as possible. To cool him, the treatment may be prolonged to allow for more evaporation. Then, quietly cover and let him go to sleep.

PART THREE

DIRECT WATER APPLICATIONS

SECTION NINE

PAIL POURS

WHAT IT IS-This is the pouring of water from a pail over part of the body or all of it. Quick and relatively easy to do, the Pail Pour is often used with other water therapies, often to conclude them.

HOW IT CAN HELP YOU-The Pail Pour (today termed "Affusions" by the professionals) can produce an effect unequaled by that of

any other water therapy. It is a flow of a considerable amount of water over part or all of the body, and no other application has exactly this effect. Also, it is easily used in any home.

1 - GENERAL PAIL POUR

WHAT IT IS-This is a Pail Pour to the entire body.

HOW IT CAN HELP YOU-The General Pail Pour is normally used as a tonic measure to strengthen the body. For this purpose, over a period of time, these pail pours may be given at gradually lowered water temperatures.

HOW TO APPLY IT - (See picture on page 111.)

1- This may follow or conclude another water therapy, or it may be the entire treatment. It is often used after a Full Bath (page 121), Salt Glow (page 104), etc. See the Tonic Frictions for more information on many of these tonic applications: pages 97-106.)

2-He should be warm beforehand. If given in a bathtub, he may sit or stand. If standing, his feet should be in a tub of hot water. Either way, a Cold Compress (page 45) should be placed on his head.

3-Prepare three pails of water, each at a different temperature, according to the effect you wish to obtain.

4-For the first pour, use pails of water at 100°, 90°, and 85° or 80° F, respectively. This will provide a mild tonic effect. (If he has just come from a warm bath, a lower temperature may be used for each of the three pails, or only two pails may be used.)

5- in succeeding pail pours, lower the temperature of the pails until the third pail is 50-60° F.

6-Each time, after the last pail is poured, rub him vigorously, and dry him well with a sheet and towels.

2 - LOCAL PAIL POURS INCLUDING

LOCAL HOT POUR

LOCAL NEUTRAL POUR

LOCAL COLD POUR

LOCAL ALTERNATE HOT AND COLD POUR

SPECIAL APPLICATIONS

WHAT IT IS- These are “water pours” upon only part of the body.

HOW IT CAN HELP YOU-These are simple, brief water applications that are used in a number of situations. Primary among these is (1) A cold pail pour to the hips after a hot half (shallow) bath, and after a Hot Sitz Bath (page 118). In both instances, this pail pour is given to balance the circulation in the pelvis, which could afterward become chilled. (2) Smaller or larger pours to local body areas for specific physical problems. These special applications are discussed just below:

HOW TO APPLY IT - (See pictures on the next page.) (In giving local pours, the water should fall a distance of at least 3-4 inches, on up to 1-2 feet, before it strikes the body part. The condition of the part and the effect desired will determine this distance.)

Local Hot Pour: Relieves pain, wherever applied. Because the hot is so quickly given, the prompt after effect is tonic and strengthening.

Local Neutral Pour: This is relaxing, and, especially when applied to the spine, helps relax nerves and induce sound sleep.

Local Cold Pour: If very brief, is stimulating and tonic in effect; but if prolonged, it reduces congestion and inflammation, and encourages white-blood cell activity in overcoming disease. A long, cold pour to the head is strongly fever-reducing.

Local Alternate Hot and Cold Pour: This is a powerful tonic and stimulant. It produces fluxion (an increase of blood) in the part treated, and derivation (drawing of blood) from other parts. It also increases white-blood cell activity. Thus, it is very helpful in treating an infected body part, when it is impossible or impractical to immerse the part in water (as in boils or carbuncles about the trunk or thighs).

PAIL POUR

SPECIAL APPLICATIONS: Here are several special uses for these localized water pours: 1-Local Pour to the Arm, Hand, Foot, etc.: Hold the body part over a small tub while

the water is poured from a pail or large container. 2-Local Pour to the Spine: Let him sit on the edge of a bathtub, or on a stool in the bathtub. Then pour the water Over the affected part. 3-Local Pour to the Head: He should lie down on a bed or table, with his head resting over the end and a tub underneath. You may want to place a hand beneath his head to help support it.

SECTION TEN PARTIAL BATHS

1 - CONTRAST BATHS INCLUDING CONTRAST BATH TO THE HAND OR ARM CONTRAST BATH TO THE FEET CONTRAST BATH TO THE LEGS

SPECIAL APPLICATIONS

WHAT IT IS-This is the immersion of the hand, or arm and hand, or the foot, or leg and foot, into a basin or tub of water. It is both simple and effective.

HOW IT CAN HELP YOU-A Contrast Bath (also known as Alternate Hot and Cold) is an alternating plunge of part of the body into hot water and then into cold, and back again. This results in a powerful alternate contraction and then dilatation of the blood vessels, and a general improvement of body circu-

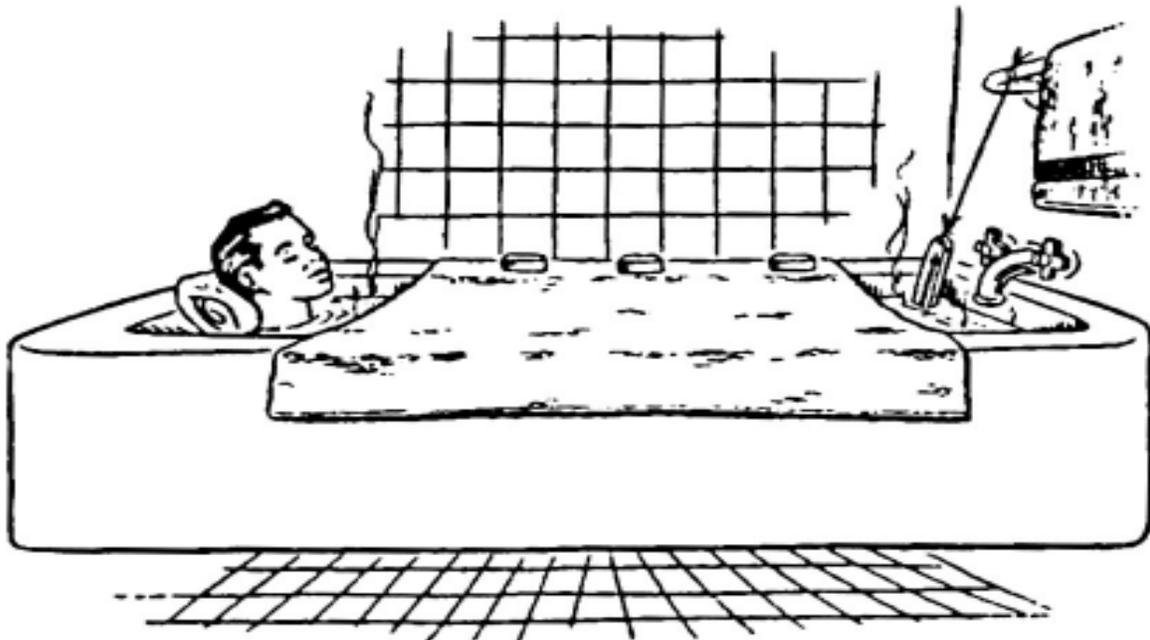
lation. For the particular body area being treated, it removes waste products, greatly improves rapidity of blood flow, and thus increases the quantity of fresh oxygen, nutrients, and white and red blood cells.

Contrast Baths to the hands, feet, arms, or legs, are very helpful for fractures, arthritis (both rheumatoid and osteoarthritis), congestive headaches, edema, sprains, strains, trauma (after 24 hours), infections, lymphangitis (2-3 times a day), impaired venous circulation, and indolent ulcers.

WHAT YOU WILL NEED-For a contrast bath, you will need two containers large enough for the water in them to come up over the extremities to be treated. If necessary, thoroughly cleaned buckets can be used. Medical personnel recommend that an antiseptic be placed in the water if there are open wounds. You will also need a bath thermometer and a bath towel. You may also need a pitcher to add more hot water from time to time, and ice cubes for the cold water bucket. Sometimes a cold compress (hand towel wrung from cold water) or ice bag is also needed.

HOW TO APPLY IT - (See pictures on this

NEUTRAL BATH and CONTINUOUS [Neutral] BATH



page.)

1-Place the limb in the hot water (105-110° F.) for 3-4 minutes. Then put it into the cold (cold tap water or ice water) for one-half to one minute.

2-Begin with the hot water and end with the cold. Change from one temperature to the other 6-8 times (34 complete cycles). Time spans are generally 34 minutes in the hot, and then one-half to one minute in the cold. Begin hot immersion at lower temperature limits, increasing the temperature as you continue on through the treatment. Add hot water by pouring it over your own hand, and add it while the limb is in the cold water. A cold compress (hand towel wrung out of cold water) or ice bag may be needed on the head or back of neck-if a large part of the body is being treated, and always if he feels faint. Place an ice bag to the heart if his pulse is over 80 beats per minute. (In serious cases, it is best to check his pulse every 5 minutes during treatment)

3-End by drying the limb thoroughly. Have him rest a halfhour afterward. .

ADDITIONAL POINTS-Do not normally use hot water temperatures above 110° F., and do not go over 105° F. in blood vessel disease of the legs and feet. Extremes of hot and cold should not be used in diabetes or in peripheral vascular disease. When working with rheumatoid arthritis, end with the hot instead of the cold.

THREE SPECIAL CONTRAST BATHS-Here are three special Contrast Baths which may prove to be of help to you:

Contrast Bath to the Hand or Arm: Two very deep pails may be used. Use the procedure described above. The hot water should be as hot as can be borne. This bath is very helpful for blood poisoning in an infected arm or hand. It is also of value in controlling nose-bleed.

Contrast Bath to the Feet: This bath, consisting of alternate hot and cold to the feet (using two tubs), is especially helpful in congestive headache, in which case it is well to apply a cold compress to the head (or head

and neck) at the same time. It is also used in treating infections of the foot, Charcot's joint at the ankle, tuberculosis of the ankle or bones of the foot, and in gangrene (to hasten the formation of the line of demarcation).

Contrast Bath to the Legs: This is an alternate hot and cold leg bath, and requires two tubs deep enough to immerse the legs to the knees, or deeper. (Galvanized garbage cans, thoroughly cleaned, can be used.) Cold head and neck compresses will be needed, and perhaps an ice bag over the heart. 2-3 minutes in the hot followed by 20-30 seconds in the cold, for 5-30 minutes. (When used for varicose ulcer, the hot should only be one minute in length-or the ulcer will become worse!) This contrast bath is especially useful in treating edema of the legs. After 2-3 treatments, pieces of ice may be added to the cold water. The treatment may be concluded with heavy friction to the feet and legs.

FIVE SPECIAL APPLICATIONS FOR CONTRAST BATHS-Here is information you may be able to use:

1-Arthritis (osteo-arthritis): Begin with a temperature of 110° F., and then after four minutes, change to tap water for one minute. Change back and forth 4-6 times, and end with the hot water. The hot water should gradually be raised to 115-120° F., and the tap water gradually lowered to that of ice water. Give this treatment once or twice a day.

2-Infections and cellulitis: The contrast of (difference between) the hot and cold should be as great as can be tolerated. Begin with 110° F., and increase temperature to tolerance. One can usually start with ice water. End with ice water. Change 5 to 6 times. Give 2-3 times daily.

3-Poor circulation caused by blood vessel disease: 105° F. for 3 minutes; change to cold for one-half minute.

4-Sprained ankle: 110° F. hot water; ice water for the cold application. End with ice water. (Note that an alternation of hot and cold is here used. When cold water alone is used, both the pain and recovery time is lengthened.)

5-Weak- pronated feet: Use the same treatment as for arthritis.

2 - HOT FOOT BATH

WHAT IT IS-This is not a contrast bath for the feet, as described in the previous therapy ("Contrasts Baths"), but a continuous bath in hot water.

HOW IT CAN HELP YOU-When the feet are placed in hot water, the excess blood which is congesting other parts of the body is brought to the legs and feet. This helps the entire blood circulation in the body, and relieves congestion in the brain, lungs, abdominal and pelvic organs. The blood is shifted from one part of the body to another, and the entire body is helped.

The Hot Foot Bath also helps to ward off infection and sickness in cold weather, when one is beginning to catch a cold, sore throat, etc. The body has become chilled, and a hot foot bath warms the entire body and stimulates the circulation.

Lastly, when an individual is nervously fatigued, the feet are generally cold and the blood circulation is poor and unequal. A hot foot bath will relieve the nervous tension, lessen congestion in the brain, and balance the circulation.

Thus, the Hot Foot Bath can prevent or shorten colds, relieve headaches, stimulate the circulation when the feet are cold, relieve pelvic cramps and chest and pelvic congestion, stop nosebleed, aid relaxation, and prepare one for a cold water treatment (such as a cold shower, etc.)

WHAT YOU WILL NEED-A foot tub or similar container large enough and deep enough,-such as a five-gallon can, large mouthed bucket, or deep dishpan. Thermometer to test the water, or test it with your elbow (103-110° F.). Bath towel. Teakettle or pan for boiling water. Basin of cold water. Pitcher or dipper to add hot water. Two blankets to wrap about him. Cold compress (hand towel wrung out of cold water), if needed for the neck. Floor or bedding protection (rubber sheeting, plastic, or newspaper).

HOW TO APPLY IT - (See picture on page 118.)

1- The room should be warm with no drafts. Place the plastic, with towel over it, on the floor under the feet. Fill the foot tub with water (about 104° F.) so that the ankles are fully covered. Test with the thermometer or your elbow.

2- Instruct him beforehand as to what you are going to do. Place his feet in the tub and cover him with the blanket. (If he is sitting up, wrap him well.) If he is lying down, do not let the calf of his leg touch the foot tub.

3-Slowly add hot water to increase the temperature up to 112° or 115° F. Pour the water against the inside of the tub, with your hand between the flowing water and his feet, stirring the water as it is added.

4-Continue the bath for 10-30 minutes, depending on the effect desired. Keep his head cool with a cold compress. A cold head compress is especially important if the foot bath is continued for any length of time, or if he is in a sitting position, and always if there is a tendency to faintness.

5-When the feet are removed from the hot water, pour a dash of cold water over them quickly. This cold water should come in contact with both the dorsal (side) and plantar (bottom) surfaces of the feet. In some cases, the cold water is omitted.

6-Quickly place the feet on the towel and remove the foot tub. Dry the feet well, especially between the toes. If he is perspiring, dry him thoroughly with a towel. CAUTION-Do not give a Hot Foot Bath to one who has hardening of the arteries of the feet, or if there is a loss of skin sensation (no sense of feeling) in the feet.

3 - (SHALLOW) COLD FOOT BATH

WHAT IT IS- This is a foot bath in a tub of shallow cold water.

HOW IT CAN HELP YOU-The shallow Cold Foot Bath causes reflex contraction of the blood vessels of the brain, pelvic organs, and liver. It also contracts the muscles of the uterus, bladder, stomach, and intestines.

HOW TO APPLY IT

1- This foot bath is given in practically the same way, with the same equipment, as for the Hot Foot Bath.

2- The water should only be about 2-4 inches deep, and its temperature should be about 45-60° F.

3-Everything should be ready beforehand. His feet should be previously warmed. During the bath the feet should be rubbed with the hands or one foot against the other.

4- The bath should last from 1-5 minutes. When completed, dry the feet well, and make sure that they are warm afterward.

CAUTION-The Cold Foot Bath should not be given during the menstrual period or in case of acute pulmonary, abdominal, or pelvic inflammation.

4 - SITZ BATHS

INCLUDING COLD SITZ BATH

COLD RUBBING SITZ BATH

PROLONGED COLD SITZ BATH

NEUTRAL SITZ BATH

VERY HOT SITZ BATH

REVULSIVE SITZ BATH

ALTERNATE HOT AND COLD SITZ BATH

WHAT IT IS-"Sitz" comes from the German word, "sitzen," and means to sit. Sitting in water is taking a sitz, or sitting, bath. Priessnitz, the Austrian who used water as a curative remedy, used the Sitz Bath in treating constipation and other abdominal and pelvic conditions.

HOW IT CAN HELP YOU-The Sitz Bath is very helpful for many different pelvic problems. These are more fully described below under "Five Different Sitz Baths."

WHAT YOU WILL NEED-Natural therapy hospitals (they are called "sanitariums") use special sitz tubs (with a second foot bath tub beside it), but you can use an ordinary wash-tub. It should be slightly tipped and set up with blocks of wood to make it immovable. A smaller tub or bath pan may be used to give the foot bath (which should always be given with the Sitz Bath). An ordinary bathtub can be used for a Hot Sitz Bath, but the water should be deep enough to reach to the navel.

(Technically, this latter is called a Hot Half Bath, not a Sitz Bath, but the effects are pretty much the same.)

HOW TO APPLY IT - (See picture on page 118.)

The temperature of the water changes the effect of the sitz Bath. First, we will explain how to give a Sitz Bath; then we will tell you about the five types of Sitz Baths and how they can help in time of need.

1-Help him into the tub and protect him from contact with it by placing towels behind his back and under his knees. Then cover him with a blanket, arranging it so that it will not become wet. Sufficient water should be used to cover the hips and reach to the abdomen- The temperature of the foot bath (see page 115 for Foot Baths) should be several degrees hotter than that of the Sitz Bath.

2- The duration of the Sitz Bath depends on the temperature used and the effect desired. It is most often 3-8 minutes.

3-Friction (rubbing) can be used with the Cold Sitz Bath if he feels chilly, or to intensify the effect. Hot Sitz Baths may be concluded by cooling the water to neutral for a minute or two, or by pouring cold water over the hips and thighs. Cold compresses (hand towels wrung out of cold water) to the head and neck must be used with the Hot Sitz.

FIVE DIFFERENT SITZ BATHS-Here are the five primary ways in which Sitz Baths are given:

Cold Sitz Bath: 55-75° F. (The foot bath is 105-110° F.) Time: 1-8 minutes. Enough water should be used to cover the hips and come up on the abdomen. Rub the hips to promote circulation. Friction mitts may be used. If the water is kept circulating (moving) in the tub, the effect will be heightened. If it is only 2-4 minutes in length, the Cold Sitz Bath greatly stimulates pelvic circulation and the muscles of the bowels, bladder, and uterus. These effects are intensified if the water is 55-65° F. and vigorous friction (rubbing) is given. This makes it the Cold Rubbing Sitz Bath, which is very helpful in constipation, sub-involution, and hastening the absorption of residual

thickening after pelvic inflammations.

If it is 15-40 minutes in length, the Cold Sitz Bath is called the Prolonged Cold Sitz Bath. This sitz bath is 70-85° F. and the foot bath is 105-110° F., but it may be started at a higher temperature and slowly lowered to that point. This bath should not at any time cause chilliness, and rubbing is not desirable. If needed to give a sensation of warmth, a fomentation or wrapped hot-water bottle can be placed to the spine. This Prolonged Cold Sitz Bath causes powerful and lasting contraction of the pelvic blood vessels and of the muscular wall of the uterus. It is used in sub-involution.

Neutral Sitz Bath: 92-97° F. (with 102-106° F. for the foot bath). This bath is 20 minutes to 1-2 hours in length. It relaxes and helps one go to sleep.

Very Hot Sitz: Begin at 100° and rapidly go up to 106-115° F. (Foot bath: 110-120° F. As usual, always keep the foot bath two degrees hotter than the Sitz bath it accompanies). 3-8 minutes is the normal length. Keep the head cool. End by cooling the bath to neutral for 1-3 minutes. If sweating has been produced, pour cold water over the shoulders and chest. Very helpful for dysmenorrhea and pelvic pain from various causes. In dysmenorrhea the bath should not be cooled.

Revulsive Sitz Bath: Begin at 100° and increase rapidly to 106-115° F. (Foot bath: 110-120° F.), for 3-8 minutes. Keep the head cool with cold cloths over the forehead or around the back of the neck. Finish with a cold (55-65° F.) pail pour on the hips. The Revulsive Sitz is a powerful help in Heating chronic inflammatory pelvic problems (salpingitis, parametritis, cellulitis, prostatic hypertrophic nocturia, etc.)

Alternate Hot and Cold Sitz Bath: For this bath you will need two sitz tubs, side by side. Fill one with hot (106-115° F.) water, and the other with cold (55-65° F.) water. (Foot baths for both: 105-115° F.) Apply cold compresses to the head and neck.

SECTION ELEVEN FULL BATHS

WHAT IT IS-Full Tub Baths (also called Full Immersion Baths) just tub baths, with most of the body immersed in the water. The difference between these and regular tub baths lies in the careful control of the water temperature, and a careful observation to see that the desired effects are obtained.

Many different kinds of full immersion baths can be used, but there are only six that you will probably need in your home. Here they are:

1 - HOT TUB BATH (HOT FULL BATH)
AND

MODERATE HOT BATH

HOW IT CAN HELP YOU-The temperature and duration of the tub bath will determine the effect produced. The temperature of this bath is generally 100-106° F. The time is usually 2-30 minutes. It may be used as a preparation for a cold treatment. If it is much prolonged (or the temperature is quite high), profuse sweating will be produced.

The Hot Bath can induce perspiration; relieve the pain of muscular rheumatism; reduce the muscular spasm of arthritis and its pain as well; help induce mild fever effects when needed, as in undulant fever. It can also help increase metabolism and peripheral circulation. It can elevate body temperature, and relieve pain, fatigue, and congestion of the internal organs.

If it is only a Moderate Hot Bath (100-102° F.), it will be helpful in relieving opisthotonos in tuberculosis meningitis, and also be beneficial in other diseases associated with spasticity of the muscles.

HOW TO APPLY IT

1-Place him in a full hot bath at about 98° F., and then gradually raise it to 100-106° F. The bath should normally continue for two minutes onward, and not over 20 minutes. Give him cold water to drink freely and keep his head cool. You may need to apply an ice bag to the heart and the back of the neck. Watch him closely.

2- The bath may be finished by gradually cooling it, or by a cold pour (if he is vigorous enough for it) or a shower immediately after he rises from the bath.

CAUTIONS-Do not give this bath where there is heart and valvular diseases, diabetes, vascular disorders, high blood pressure, or malignancies.

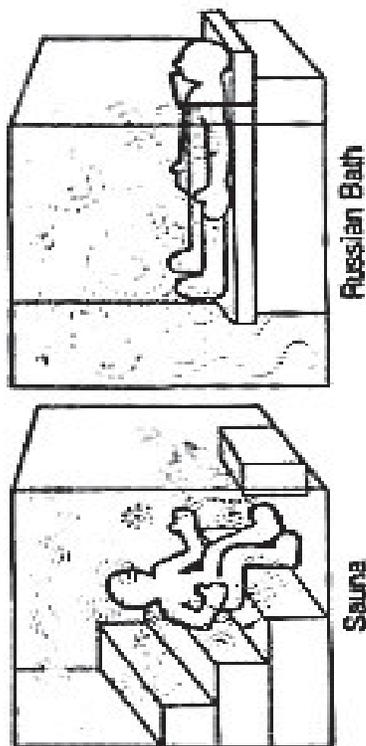
2 - NEUTRAL BATH (NEUTRAL FULL BATH) AND CONTINUOUS BATH HOW IT CAN HELP YOU-The Neutral Bath (94-97° F.) is given to relax people and help them go to sleep. It does this by equalizing the circula-

tion and thus reducing the amount of blood in the brain and spinal chord. When used for insomnia, give it just before retiring for the night.

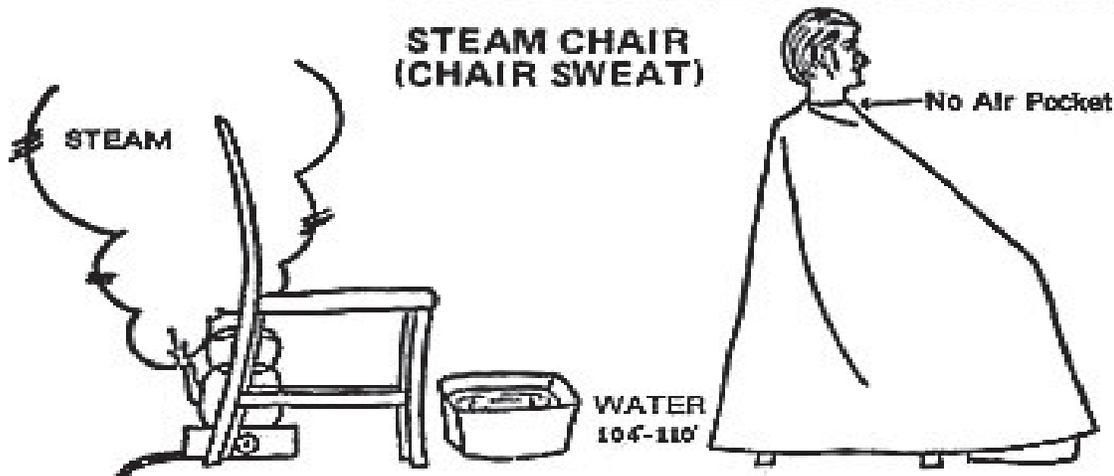
It is also excellent for relaxing nervous tension. Try it on yourself when you are full of nervous tension and see how nicely it relaxes you!

The Neutral Tub Bath is also used for anxiety, chronic diarrhea, multiple neuritis, burns (only the area burned need be in the water), nervous exhaustion or irritability, and diseases of the blood and blood

STEAM BATH



STEAM CHAIR (CHAIR SWEAT)



vessels (when more extreme hot or cold cannot be used, as in diabetes and arteriosclerosis).

Last but not least, the Neutral Tub Bath has been successfully used by experts in treating insanity. In this condition, there is an excess of blood in the brain (because of the highly tense and excited state of the mind). The Neutral Bath quietly but inexorably equalizes the blood circulation throughout the body. Experts have placed a person in a Neutral Tub for days at a time. Proper circulation removes the fevered state of the brain and brings better nourishment to it, thus helping to restore him to a normal condition.

“As this bath is used chiefly in maniacal cases, the patient must be watched constantly. Very excited or violent patients should be wrapped in a sheet or blanket pack, which must be securely pinned about them, before they are placed in the tub. The duration of the bath depends upon the degree of sedative [quieting] effect obtained. It [the neutral bath] may last for hours or days. In the latter case the patient must be removed once or twice in the twenty-four hours, the bowels given proper attention, and the skin anointed with oil to prevent too great maceration. The continuous-flowing bath is perhaps the most useful treatment in excited cases of insanity. It, together with the wet-sheet pack, has revolutionized the treatment of mania.”-Abbott,

et. al.

HOW TO APPLY IT

1-Place him in a full bath tub with the water temperature at 94-97° F. The water should, if possible, cover his shoulders. Place a folded towel on the edge of the bathtub under his head for a pillow, and cover his body with a bath towel. Keep his face cool, and evenly maintain the temperature of the bath water. Wet his forehead and face in cool water.

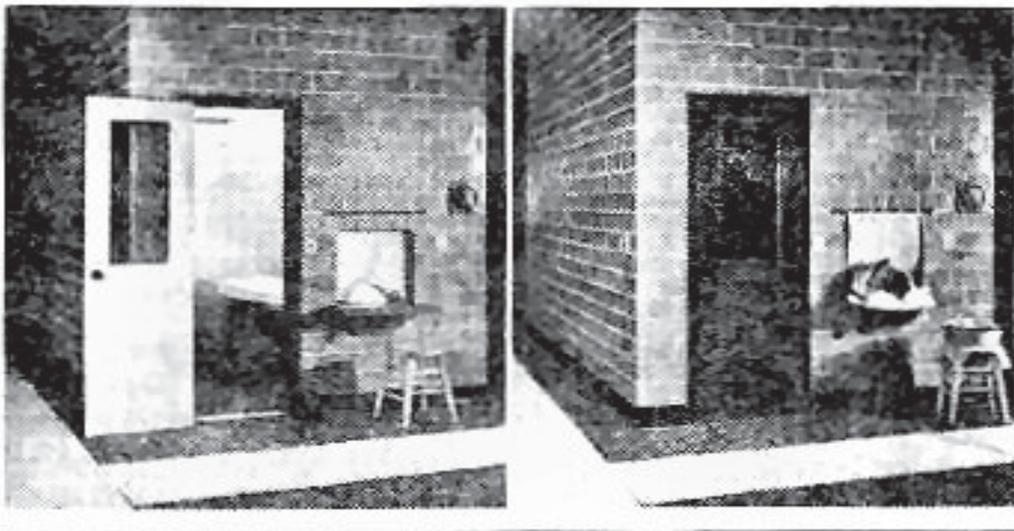
2- The bath is usually 15-30 minutes in length, but it can go on for 34 hours.

3-End the bath by cooling the water 2-3° F. at the close. Dry him with no unnecessary rubbing, and avoid unnecessary conversation. Dim the lights, if possible, and help him into bed so that he can go to sleep.

ADDITIONAL POINTS-A bath thermometer is needed to keep the temperature constant. He should be warm before beginning, and should be warm during the bath and afterward. If necessary, give a Hot Foot Bath (page 115) before the Neutral Tub Bath begins. He should be comfortable in the tub. An invalid rubber ring may be placed under his buttocks if he is very thin. A rolled bath towel under his knees is also helpful. And be sure to place the folded towel on the edge of the bathtub under his head.

CAUTIONS-Certain cases of eczema, and great weakness of the heart should not re-

RUSSIAN (STEAM) BATH



ceive Neutral Tub Baths.

CONTINUOUS BATH-Here is some additional information on the Neutral Bath, when it is continued for a lengthy period of time: Suspend a hammock or sheet within the bath tub. It should not touch the bottom when a person is in it. Place a rubber pillow beneath the head and heels. Some authorities recommend keeping the feet out of the water.

Once a day, help him out of the tub and give him a cleansing bath with soap, and soft brush or cloth. He should then exercise somewhat, to be followed by having Vaseline or lanolin rubbed on him. During the time out of the continuous tub, it should be cleaned with soap and water. Some suggest placing an antiseptic on it also if infection is a problem. After thorough (thorough!) rinsing, fresh water is run into the tub and he again enters

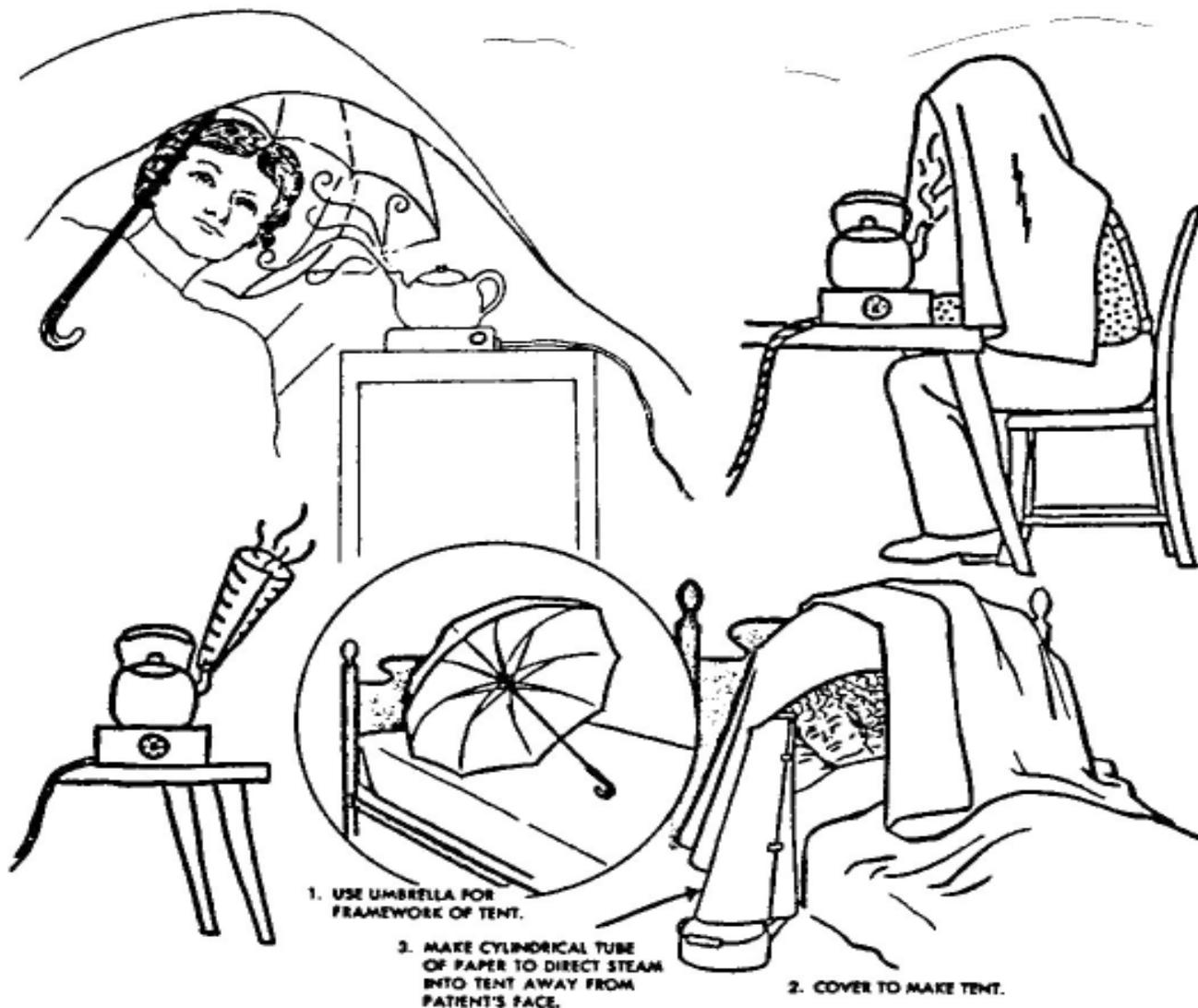
it.

The Continuous Bath has been successfully used to aid in very difficult problems, such as extensive burns, pain, paresthesias, spasms, itching, pemphigus, extensive gangrene, profuse or offensive pus from various open abscesses, foul-smelling fistulas, and to bring quiet and rest to agitated mental problems, mania, or alcoholic delirium tremens.

3 - COLD TUB BATH (COLD FULL BATH) AND COLD RUBBING BATH

HOW IT CAN HELP YOU-When given for only a few minutes, the Cold Tub Bath is a stimulant and tonic. But when it is used for a longer time, it becomes antipyretic (fever reducing). And, thirdly, when it is given as a Cold Rubbing Bath, it becomes a most excel-

VAPOR INHALATION



lent method of treating typhoid fever.

This bath is most frequently used for colds, flu, and fevers.

HOW TO APPLY IT

1- The temperature of the water will be 55-90° F., and the length of time will be a plunge only, on up to 20 minutes or more (depending on the temperature, the effect desired, and the robustness of the one receiving it).

2-His face should be bathed in cold water before he enters the bath, and his skin must be warm before it begins.

3- Throughout this tub bath, it will be necessary to rub him constantly or at frequent intervals.

CAUTION-He must be warm before the bath begins. Test by feeling the warmth of his skin. Afterward, place him in bed and make sure he is warm. The short cold bath is very helpful in cases of diabetes, obesity, skin diseases, infections, chronic diseases where the body functions are below normal, scarlet fever, and poor blood circulation.

But the short cold bath should not be used on those who are cold, or have excessive fatigue, poor kidney function, heart or blood vessel disease, or hyperthyroidism (overactive thyroid).

4 - COLD SHALLOW BATH (COLD SHALLOW RUBBING BATH)

HOW IT CAN HELP YOU-The Cold Shallow Bath is one of the most powerful tonics used in water therapy.

HOW TO APPLY IT

1-Fill the tub only 4-6 inches deep with water at 65-75° F.

His feet should be warm before entering the tub, and his head should be kept warm by cold wet towels.

2-He sits down in the cold water and rubs his arms, legs, and chest vigorously while you rub his hips and back. Cold water dipped from the tub is splashed over his shoulders and back, and they are rubbed again. Then he lies down in the tub and rubs his chest and abdomen while you rub his legs. This

can be repeated once or twice, as desired.

3- It should last from 24 minutes, and he should leave the tub with a definite glow to his skin. -If not, the desired effect has not been obtained. He should be warm afterward, with no tendency to chilliness.

5 - PLUNGE BATH

WHAT IT IS- This is a quick dip into a bathtub of cold water. It can be a shallow or full tub of water. In some respects, the shallow tub is better for most people, for it involves more splashing and less actual coldness on the body. But those built up to it may desire a fuller tub of water.

HOW IT CAN HELP YOU-The effects of the Plunge Bath would be those of any of the other tonic baths and frictions. Actually, this bath is very similar to the Cold Shallow Bath (page 125). The primary difference is that the Plunge Bath is more of a quick-in-and-quick-out, and thus a less powerful tonic than the Cold Shallow Bath.

6- GRADUATED BATH

WHAT IT IS-This is a prolonged bath that begins with warm water that is gradually lowered to a fairly cool temperature.

HOW IT CAN HELP YOU-The Graduated Bath is especially designed to lower fever temperature in a manner that is easier to take than a prolonged cool bath would be. Most often used to lower fevers, such as in typhoid, this bath can also be used for tonic purposes on someone who is well.

HOW TO APPLY IT

1- The initial temperature of the tub water should be about 98° F., or higher. His body temperature will determine this. The water temperature should be about 3-5 degrees lower than his mouth temperature. His skin should be warm before the bath is begun.

2-Help him into the tub, where he can be laid on an airpillow and a hammock (made by tying a sheet across the tub, and then fastening the corners and sides underneath).

3-Apply cold compresses (cloths wrung out of cold water) to his head. Begin to re-

duce the bath temperature. Gradually lower it to about 85° F.

4-When it is below 90° F., or as soon as he feels chilly or shows goose flesh, he should be rubbed constantly to keep the blood in the skin. This will prevent or overcome chilling. A spine bag (a long-narrow hot-water bottle) may be laid along his spine for the same purpose. Both his pulse and temperature should be closely watched throughout the bath. His temperature should be taken every 12-15 minutes.

5-As soon as he is taken out of the bath, wrap him in a sheet and dry him briskly. If there is any tendency to goose flesh or chilliness, rub him briskly with your hands until the blood returns to the skin. If he very cyanotic (bluish), put him into a Hot-Blanket Pack (page 91) for a few minutes, and then, upon removing it, give him a Cold Mitten Friction (page 99).

SECTION TWELVE SHOWER BATHS

WHAT IT IS-Special showers are used in natural-healing sanitariums, but the shower in the average home can give similar results.

1 - HOT SHOWER

HOW IT CAN HELP YOU-The Hot Shower is mainly used as a preparation for a Cold Shower (page 128), or a Cold spray Douche (page 156).

HOW TO APPLY IT

1-Begin the Hot Shower with very warm water (100-105° F.), and gradually raise the temperature to 110-115° F., or slightly higher. Time: thirty seconds to two minutes. 2-A Cold Compress (page 45) to the head may be needed during the shower.

3-If no other treatment is to follow the Hot Shower, then conclude by rapidly cooling the water to 90° or 85° F.

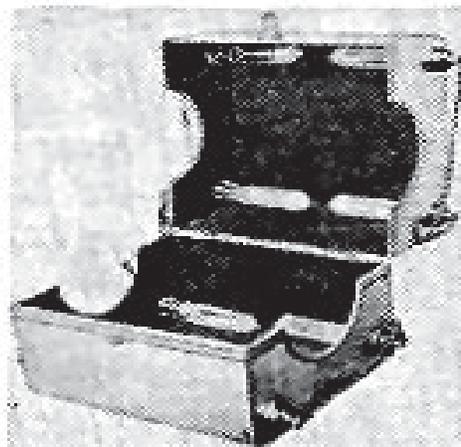
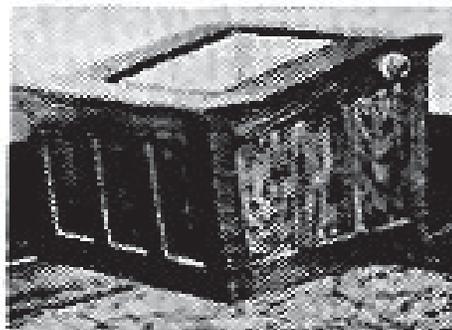
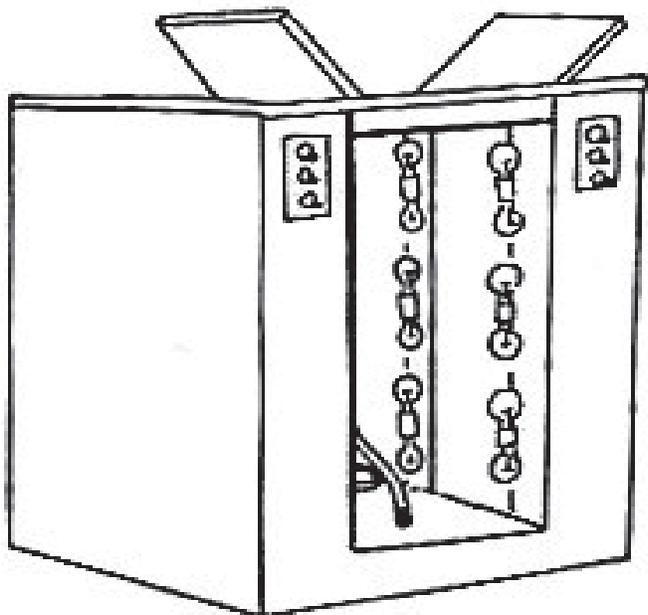
4-Dry quickly with towels and a sheet. You may wish to finish by fanning the patient cool with a dry sheet.

2 - CONTINUOUS HOT SHOWER

WHAT IT IS- This is a continuous fine

ELECTRIC LIGHT BATH

On the RIGHT is the Kollogg Electric Light Bath (ELB) for the feet. BOTTOM RIGHT is his ELB for joints. LEFT is a sample of the trunk-and-limb ELB used in homes today.



stream of hot water for several hours to a body part.

HOW IT CAN HELP YOU- This shower is used for sciatica, brachial neuritis, refractory lumbago, and similar conditions. It is also used with good success on limbs that have painful edema. It does not matter if open ulcers and unhealed wounds are present.

HOW TO APPLY IT

1-Make him comfortable on a chair, couch or mat. Over it, a special shower head produces a fine (not coarse) stream of water. Special precautions must be taken that the water will not appreciably change in temperature throughout the shower (particularly that it cannot burn him).

2- The temperature is kept at the upper limit of comfort, and the shower will continue for 24 hours.

3-Conclude by drying him. Sometimes a dash of cold water from the shower is used before drying.

3 - COLD OR COOL SHOWER

HOW IT CAN HELP YOU- This shower is used for its tonic effect of strengthening the body.

HOW TO APPLY IT

1-Give him a Hot Shower (page 127). When he is sufficiently warmed, lower the

temperature rapidly from hot to as much cold as he can take. This will be about 70-90° F. for a cool shower, and 55-70° F. for a cold one.

SPECIAL POINTS-A series of cool or cold showers are often given. When this is done, the first one should only be cool, and then, in subsequent showers, gradually lower the final temperature.

4 - NEUTRAL SHOWER

HOW IT CAN HELP YOU- This shower is given at a lukewarm temperature, and is chiefly used to calm, relax, and help one go to sleep.

HOW TO APPLY IT

1-Begin the shower at 100° F., and very slowly lower it to 97 to 94° F.

2- The shower should normally last about 3-5 minutes.

3-Dry him quickly, without any percussion or unnecessary friction. You may then wish to place him in a warm bed so that he can go to sleep.

5 - GRADUATED SHOWER

WHAT IT IS- This is a shower bath that employs a greater variety of temperature changes.

HOW IT CAN HELP YOU- The objective is

OATMEAL AND OTHER MEDICINAL BATHS



to gradually lower the temperature of the body, with as little shock effect as possible.

HOW TO APPLY IT

1-Give a prolonged or vigorous sweating bath. Place a Cold Compress (page 45) on his head before he leaves.

2-Begin the Graduated Shower with very warm water (108-110° F.), and then quickly raise it to a hot shower (115-118° F.).

3-Maintain this temperature until he feels warm and is ready for the cold. Then, slowly lower the temperature until it is fairly cool (80-90° F.)

4-Conclude the shower in 2-6 minutes, and then quickly dry with sheets and towels.

5-Do not let him be exposed to cold air or drafts for at least one hour afterward.

6 - REVULSIVE SHOWER

WHAT IT IS- This shower is like the Graduated Shower, described just above, in that the water temperature is first raised and then lowered. It is different, in that the temperature IS not slowly, but quickly, lowered to cold.

HOW IT CAN HELP YOU-The purpose is to cool and stimulate the body. Thus, a mild tonic effect is the result. The Revulsive Shower is also used in order to build up the body so that it can take an alternate hot and cold shower, in order to help build resistance.

HOW TO APPLY IT

1-Begin the shower at 105-108° F. Then gradually raise it to 110-115° F., or slightly higher. Continue at this temperature for two minutes.

2-When he is fully warm, turn the valve quickly to a cold temperature of about 60-85° F.

3-After 5-10 seconds, turn the mixer valve back to the earlier temperature (110-115° F.) for 1-2 minutes.

4-Do this cycle three complete times (three complete changes from hot to cold). 5-Dry quickly with sheets and towels. SPECIAL POINTS-As a preparation for beginning to take Alternate Hot and Cold Showers, one should become accustomed to Revulsive Showers first. And, gradually, the cold part

of the Revulsive Shower should become longer.

7 - ALTERNATE HOT AND COLD

WHAT IT IS-Abrupt changes back and forth from hot to cold.

HOW IT CAN HELP YOU-This is a vigorous tonic and physical stimulant. It should not be taken without much preliminary taking of less intense showers.

HOW TO APPLY IT

1-Begin with the hot water at a temperature of 106-110° F., then quickly raise the temperature to the upper limit of tolerance. Hold it there about one minute.

2-Turn the valve quickly to full cold. Hold it there for 15-30 seconds.

3-Reverse again to hot for about one minute; then back to cold for 15-30 seconds again.

4-Do three complete cycles of hot and cold, finishing with the cold.

5-Dry well with sheet and towels, and fan dry with a sheet.

SECTION THIRTEEN MISCELLANEOUS BATHS

1 - STEAM BATHS INCLUDING RUSSIAN BATH SAUNA

WHAT IT IS-This is an application of hot water vapor to the skin. It is not an application of steam, for the temperature of steam is so high that it would immediately cause severe burns.

HOW IT CAN HELP YOU-The so-called "steam" bath produces vigorous sweating. This greatly increases the breakdown of excess fats and carbohydrates-and thus aids in taking off extra weight. Thus, the Steam Bath is very helpful in obesity. But it is also used in chronic rheumatism with obesity, gout, Bright's disease, chronic alcoholism, tobacco addictions, and in arteriosclerosis unless that condition is extreme.

CAUTIONS-Unless enough water is drunk before, during and afterward, there is a "washed out" effect that can cause a feeling of weakness. It should be noted that a 20-

minute steam bath will raise the body temperature about two degrees F., and produce a definite rise in blood pressure.

Do not use the Steam Bath in diabetes, valvular heart disease, extreme arteriosclerosis, and all conditions associated with emaciation.

HOW TO MAKE YOUR OWN-Most homes do not have access to steam-bath rooms, but it is possible to make your own:

1-A room can be made for this purpose. The walls should be of non-porous material, with wooden benches and a floor drain. A source of heat should be provided outside the room. In addition, a shower or bathtub should be an adjacent room.

2-A small, but very functional, steam bath can be made out of second-hand sheet metal. An arc welder and some welding skill can turn it out in a day or two. If you are a handyman, you will have no trouble with it.

3-Set an old chair on the floor. Have the one needing a steam bath sit on it. Place a heavy blanket around him, that should cover him from the neck on down to the floor. Under the chair, place an electric tea kettle. It should be three-quarter's full of hot water and already steaming. Place a cold cloth to the head and put the feet in hot water. End about 20-30 minutes later with a cold friction (page 99) or a cold shower. Be sure that the spout of the tea kettle is turned toward back of chair. Always stay by a person receiving a steam bath.

HOW TO APPLY IT - (See pictures on pages 132, 133.)

1-Give a preliminary Hot Foot Bath (page 115) as he drinks several glasses of water.

2- The steam room should be ready for usage. If the bench is not warm, throw several pails of hot water on it. Warm the room to about 100° F., and cover the bench with a folded cotton sheet.

3-Help him lie down on the bench on his back

Many homes do not have facilities for steam baths. But some will have home-made steam cabinets, steam rooms, or sheet-metal

steam units. Therefore, we will here give directions for steam baths. These directions can be used for a steam cabinet, or in a steam room with a small window in it for the head.

1-Give a preliminary Hot Foot Bath (page 115) as he drinks several glasses of water.

RUSSIAN (STEAM) BATH

2- The steam room or cabinet should be warm and ready for usage. If it is a steam room and the bench is not warm, throw several pails of hot water on it. Warm the room to about 1000 F., and cover the bench with a folded cotton sheet.

3-Assist him to the bench and help him lie on his back, with his head on an air pillow just outside the opening.

4- The head opening is lowered, and a towel wrung from ice water is placed about the neck, or hung across the end of the neck window and tucked about the neck.

5-A second cold, wet cloth is placed to the head, covering the temporal arteries (which are slightly in front of and above the ears). A third one should be placed above the heart. (Sometimes an ice bag over the heart is necessary).

6- Turn on the heated vapor, gradually raising the temperature to 115-120° F. A small amount of vapor must constantly escape to maintain this high temperature.

7-Closely watch him, and frequently change the cold, wet cloths on the head and neck. Keep him drinking water before, and frequently during, the steam bath.

8-The steam bath should continue for 10-30 minutes. A fresh ice-water cloth should be placed on his head just before he rises.

9-End with a Graduated Shower: Begin with a warm shower (108-119° F.), quickly raising it to a hot one (115-118° F.). When he feels warm and is ready for the cold, gradually lower the temperature till it is quite cool (80-90° F.). This shower should be located close to the steam bath and should take about 2-6 minutes.

DEFINING TERMS-What is a "Russian Bath" and what is a "Sauna," and are they the same? To take a Sauna, one sits on a

bench in a room containing hot water vapor ("steam"). His entire body is in that room. For a Russian Bath, he instead lays on a wooden "slab" or bench, with his head protruding from a small opening in the side of the room. In this way, his body receives the benefit of the hot vapor, but his head can remain outside. Obviously, since the Russian Bath keeps the head cooler and the lungs filled with fresher air, it has definite advantages over the Sauna. A Chair Steam Bath (Chair Sweat) combines some of both advantages. The head is vertical and outside the area of vapor, and in addition, the entire unit is both inexpensive and portable.

2 - STEAM CHAIR (STEAM SWEAT)

WHAT IT IS-This is a steam bath "in a chair." As such, it is probably the simplest way of giving a "steam bath" to a person. And it has the advantage of keeping his head out of the hot vapor, which a sauna-type steam bath cannot do.

HOW IT CAN HELP YOU-This is a simply-erected, very portable steam bath that can provide the help of a regular steam bath. See "Steam Bath, How It Can Help You" on page 131 for further information on these benefits.

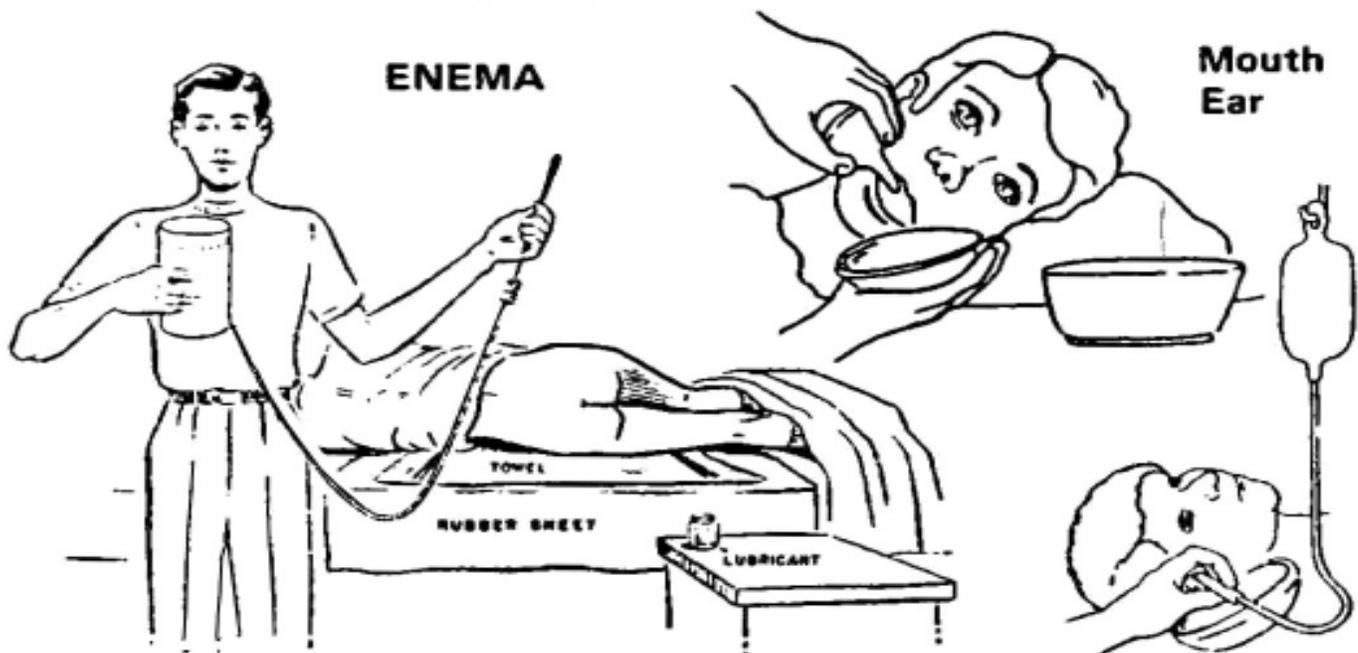
WHAT YOU WILL NEED-Hot plate. Kettle or pot filled with hot water. Sheet or blanket. three towels. Ice bag. Cup of hot water (for drinking). Basin for hot foot bath. If medicated steam bath: Oil of eucalyptus or mint.

HOW TO APPLY IT - (See picture on page 132.)

1-Set the chair in position where you want it (not far from an electric outlet for the hot plate, and arranged so no one will trip over the cord and spill the hot water under the chair). Place the hot plate under the chair and carefully put the kettle or pot on it. The spout should face toward the rear; neither the pot nor hot plate should be able to burn him or set the blanket on fire. The water in the kettle should already be boiling hot. Fold a towel and place it on the seat of the chair. Set a basin or tub of hot water in place for the hot foot bath. (If medication is added to the kettle water: add about 1 teaspoon of Eucalyptus oil, or 2 tablespoons of dried mint leaves, to each potful of water.)

2-Wrap the second towel as a turbine around the head of the one to receive the steam bath. Undressed, he should now be seated on the chair and begin the hot foot bath.

ENEMA and IRRIGATIONS



3-Wrap the blanket or sheet (a blanket would be best) around him. Do this by wrapping it about his back and shoulders, covering his body below the neck to the floor.

Fold a towel lengthwise and place it as a snug collar about his neck, thus holding the blanket or sheet in place. When he begins to sweat or his oral temperature goes past 100° F., apply the cold compress (cold, wet cloth) to his head. You will need to keep renewing the cold cloth, and adding hot water to the hot foot bath (instructions under "Hot Foot Bath" [page 115] will explain how to add this water without burning him).

4-Every 5-10 minutes he should be encouraged to drink some of the hot water. Offer it to him in a cup or glass with a flexible straw in it.

5-A very frequent check on temperature and pulse is crucial. Oral (mouth) temperature should be kept under 104° F. Check it every 10 minutes until it is above 103° F, and then every 5 minutes until it is again below 103° F. Pulse should be checked at the large artery in his temple or the one at the front side of the neck, and should not go over 140. Air temperature inside the "tent" should be kept between 120-130° F. until his oral temperature goes up to 102-104° F., at which point the tent temperature should be brought down to 105-110° F.

6-At the conclusion of the steam bath, carefully remove the basin, kettle, and hot plate. Then dry the feet. If it seems best to prolong the effects, place him in bed with the tent blanket or sheet still wrapped about him. He should be covered well to continue the sweating.

7-. Finally, terminate the treatment with a shower or cold mitten friction. Then place him in bed for 30-60 minutes so that he will have enough time to react well to the concluding cold tonic. If he sweats during this time, give him an ordinary shower when he leaves the bed. He should receive large amounts of water during the treatment-and afterward.

CAUTION-Only give this chair steam bath

to one who is basically healthy, and not feeble or debilitated.

3 - VAPOR INHALATION (STEAM INHALATION)

WHAT IT IS- This is a means of supplying warm, moist air to the congested membranes of the nose and sinuses during a head cold.

HOW IT CAN HELP YOU-After being chilled, the temperature of the respiratory tract is lowered. A cold in the head is the result, that soon may go into bronchitis or chest cold with its harsh, dry cough.

Vapor inhalation warms and soothes the respiratory tract, relieves inflammation and congestion in nasal membranes, relieves "throat tickle" by moistening the air, loosens secretions and stimulates expectoration (spitting)-although water drinking will help solve this problem, relieve spasmodic breathing, lessen coughing by relaxing the affected muscles, increase blood flow to this area, and prevent excessive dryness of the mucous membranes.

WHAT YOU WILL NEED-A vaporizer or a kettle with a spout. Boiling water. A chair or bedside stand. Hot plate (if continuous inhalation is desired). An umbrella. A newspaper rolled into a cone-shape. Medication, such as Oil of eucalyptus (1 teaspoon to a pint of water), Vick's VapoRub, Oil of Wintergreen, etc. Some use 1-2 tablespoons of fresh or dried mint leaves per pint of water.

HOW TO APPLY IT - (See pictures on page 137.)

1-Fill the vaporizer or kettle with the boiling water. Add the Eucalyptus oil, etc., either to the kettle water - or to the newspaper of the cone (to avoid putting the heavy odor of the oil into the kettle). Place it on the stand by the bed, or on the floor (according to the arrangement which works best for you).

4 - RADIANT HEAT BATH (ELECTRIC LIGHT BATH)

2-Arrange an umbrella on the bed, covered partly with a sheet, Place the paper cone over the kettle spout, with its upper, narrower opening, into the umbrella in such a manner that it will not point into the face. (See pic-

ture on page 139.) Understand that this procedure may work best for you with the kettle on a nightstand without the cone, or on the floor or low chair with it. Or, in a smaller room, the kettle can be placed on the floor without the cone.

3-Lying on one side of the bed, he can place his head into the "tent" and breathe the vapors.

CAUTIONS-Check the water level in the kettle frequently. Avoid all possibility of burning him. Avoid drafts in the room while the vaporizer is operating. Be especially careful when children are receiving the treatment. Be on guard lest they knock over the kettle and burn themselves. Do not let the hot plate (electric burner) come in contact with the bedding, cone, etc., and start a fire. Individuals with cardiovascular or heart problems may find difficulty in breathing amid the vapors.

WHAT IT IS- This is a heating of the body, not with an immersion bath in water, but an immersion in radiant heat. The heat source can be electric space heaters, but the original Kellogg arrangement was a box with incandescent bulbs.

HOW IT CAN HELP YOU-Kellogg found that these radiant heat baths could provide an intensity of dry heat not to be obtained in any other way.

The Electric Light Cabinet is a very efficient way to treat acute or chronic conditions requiring fever therapy. (Fever therapy is an artificial raising of body temperature in order to increase white blood cell action, and eliminate toxins and bacteria.) A person with an inflammation, or already with a fever, will have a temperature drop of 1-2° F. within 15 minutes or so after the bath is completed. Thus, the use of this cabinet is very helpful in mild fevers, inflammations, colds, flu, or any condition in which sweating is helpful. It helps in withdrawal from addicting drugs (including tobacco and alcohol), and will lower blood pressure.

WHAT YOU WILL NEED-In order to achieve the full effects of this, you would need

to construct a cabinet with these dimensions: 5 x 5 feet square x about 4½ feet high. This will hold 80 bare-filament incandescent light bulbs of about 60-100 watts each. These are arranged in four vertical strips, one on each corner of the cabinet. The four strips are designed on several different switches. In this way a varying amount of heat can be provided, according to how many are switched on. Six switches are recommended. (Avoid circuit overload by placing half the bulbs on one circuit and the other half on a different one.

One vertical side of the box is missing. This is the "door" to the cabinet. After entering and being seated in a chair, a blanket, canvas or heavy sheet is placed over the doorway. At the top, there are two small hinged "doors" with semicircular openings in them. These are now folded down, thus providing a circular opening in the middle, for the head to project through.

HOW TO APPLY IT - (See picture on page 139.)

1-After entering the cabinet and seating himself, the front and top is closed and a towel is placed about his neck. Be certain that the bulbs cannot touch him, lest he be burned.

2- The light switches are turned on and the air in the cabinet will go from about 70° F. to 125-130° F. within a few minutes. Why so high? -Because the body can tolerate a higher dry heat temperature than it can a vapor or water temperature. The body temperature will rise to 101-102° F. in approximately 20 minutes. This artificial fever effect will help increase white blood cell number and activity, thus hastening the elimination of bacteria and toxins.

3-Sweating will begin in 5-8 minutes, at which time facial sponging with a cool, wet cloth should begin. Lay a cold, wet cloth over the forehead, eyes, nose and checks.

4-Always know how he is feeling. Control the heat with the switches. Conclude the bath either when the desired temperature is achieved, or after a total of 10-20 minutes.

5-Follow up with a Cold Mitten Friction,

or cool shower.

5 - OATMEAL BATH

WHAT IT IS- This is a full warm tub bath with oatmeal liquid in it.

HOW IT CAN HELP YOU-The oatmeal bath can help reduce the itching and burning from skin rashes of various kinds.

WHAT YOU WILL NEED-Three bath towels. Washcloth. Cloth for head compress. Bath mat. Basin of cool water for the compress. Shower cap to keep the hair dry. 1-2 pounds of quick-cooking oatmeal.

HOW TO DO IT - (See picture on this page.)

1-Put the oatmeal in a thin cloth bag, and then place it in the tub so that the inflowing water will run over the bag into the tub. Fill the tub about two-thirds full with water at 96° F. The water should be the correct temperature and not too warm or too cool. The water should be deep enough for the one taking the bath to be immersed to the neck. When full, squeeze the oatmeal bag into the water. The water should by now be milky and very soft.

2-Help him into the tub (and out again afterward). This is because the oatmeal water is slippery. Make him comfortable with a folded towel under his neck. The wash. cloth can be used to bath the parts not immersed.

3-When finished, help him out of the tub and dry him by patting (do not rub).

CAUTION-Some types of skin conditions are made worse by water.

6 - SODA ALKALINE BATH

WHAT IT IS- This is a full bath to which baking soda has been added.

HOW IT CAN HELP YOU- The partially anesthetic aspect of baking soda, when applied to the skin, provides help in dealing with poison ivy, itching, hives, heat rash, sunburns, eczema, drug reaction rashes, ant and bee stings, and plant sensitivity. The alkaline factor helps to counteract acidity in the rashes, stings, poison ivy, etc.

WHAT YOU WILL NEED-Baking soda or

commercial grade sodium bicarbonate.

HOW TO APPLY IT - (See picture on page 141.)

1-Fill a bath tub with water at 95-98° F. Add about a cup of baking soda (or an equivalent amount of sodium bicarbonate).

2-Sitting in the tub, he should dip and pour the alkaline water onto his body, continually covering it. After 30-60 minutes, he stands in the tub and partially “drips dry,” and then pats the skin dry.

7 - STARCH ALKALINE BATH

WHAT IT IS- This is shallow tub bath with a solution of corn starch in it.

HOW IT CAN HELP YOU-This is another type of alkaline bath, and is used for the same purposes as the Soda Bath, described just above. Many may prefer the starch bath, since it is even more of a natural substance on the skin than is baking soda.

WHAT YOU WILL NEED-Dry starch, such as corn starch.

HOW TO APPLY IT - (See picture on page 141.)

1-Into a shallow tub of water (at 95-98° F.) add about one cup of a dry starch.

2- The remainder of the directions are the same as for the Soda Bath, above. Length of time in the bath can be 20-35 minutes or longer.

8 - SUN BATH

WHAT IT IS- This is simply exposing part or all of the body to the sunlight.

HOW IT CAN HELP YOU-Direct sunlight has a wide range of wave energies, among which the ultraviolet are the most important for both healing and maintaining good health. The longer heat waves (infrared) are also helpful for their heating effect

Ultraviolet rays stimulate various life processes, destroy bacteria, and aid in the manufacture of Vitamin D by the body. Ergosterol is a fat found in the skin that has the capacity for absorbing certain ultra-violet radiations,-and in the process, becoming changed into Vitamin D. Without adequate Vitamin D, the human body cannot utilize calcium in the

diet to make strong bones.

It has been found that the treatment of pulmonary tuberculosis has been greatly helped by extensive sun bathing. And it has been discovered that sun bathing at higher altitudes (in mountain country) greatly improves the likelihood of healing from this disease. These "higher altitudes" need be only 1,000 feet above sea level, but can be as high as 6,000 feet.

In addition to pulmonary tuberculosis, sun baths are also of great help in tuberculosis of the bones and joints, and in Pott's disease (tuberculosis of the spine).

Both the red blood cells and blood hemoglobin increase in sun bathing, and the increase is proportional to the altitude. In the higher Alps and on Pikes Peak, this amounts to a 30-40 percent increase in both of these very important blood factors. Mountain sun bathing also increases lymphocytes, blood alkalinity, respiratory volume, energy and a feeling of well-being. It also lowers blood pressure, significantly increases muscular strength, and definitely improves the feeling of hope, courage and cheerfulness. All these effects will, to a lesser extent, be achieved by sun baths at lower altitudes or at sea level. Smog in the air at lower altitudes greatly hin-

ders the values of sun bathing.

HOW TO APPLY IT

1-At a mountain altitude, 7-10 days of rest may be needed to adjust to the physical adaptation needed at higher altitudes. At lower altitudes (3,000 feet or below) this is not necessary.

2-For normal people, begin with 5 minutes of sunlight a day, and increase 5 minutes each day. In hotter climates, only increase 2-3 minutes a day. For invalids, begin with the feet, and give them 5 minutes a day, and gradually increase the exposure and the amount of the body exposed.

3-Ultimately, never go beyond 3-4 hours a day. Blonde people especially lack the "sunscreen" factor in the skin, and therefore must be more careful.

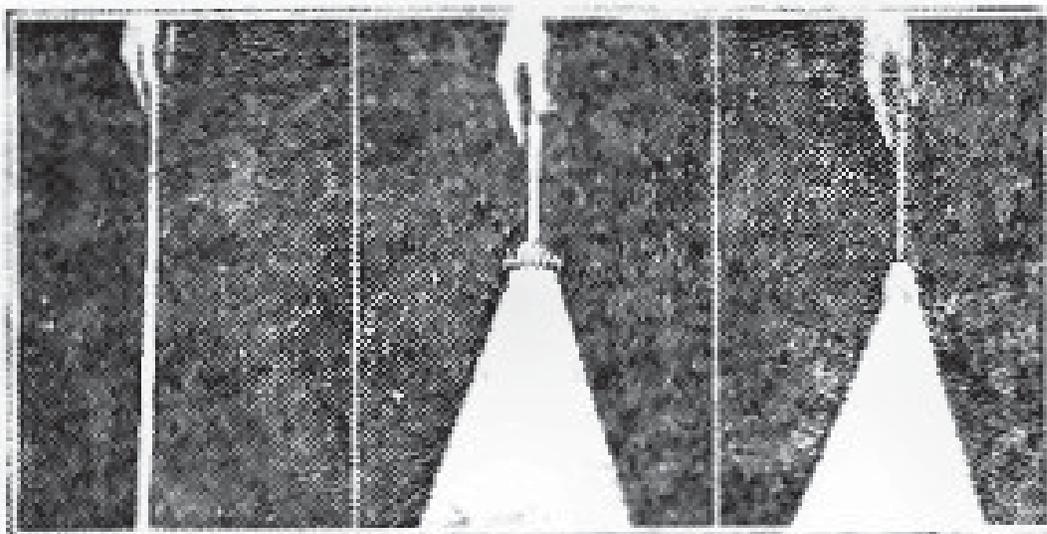
4-The sun bath should produce a feeling of warmth, but should be given in relatively cool surroundings, for a heat bath is depressing.

9 - SEA BATHING

WHAT IT IS-This is bathing in the ocean.

HOW IT CAN HELP YOU-Sea bathing strengthens and builds the body in several ways: The percussion of the moving, cool water invigorates the body, and the ocean water contains trace minerals that are needed

THREE DOUCHE NOZZLES



TOP: Jet Douche
CENTER: Spray Douche
BOTTOM: Fan Douche

by the body. The eating of Nova Scotia Dulse or Norwegian Kelp can help to supply these trace minerals, but sea bathing is also helpful.

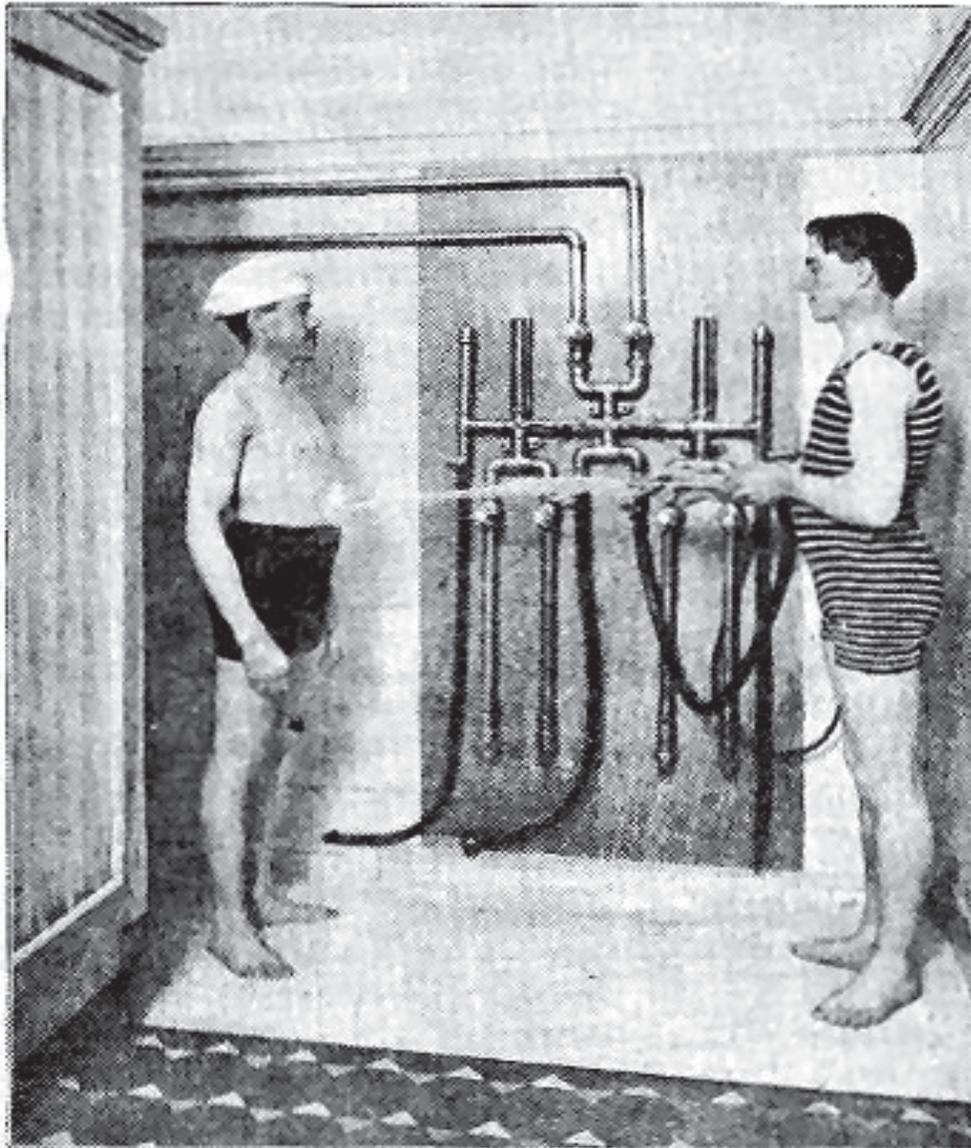
(It is interesting to note that if all the water in your body could somehow be squeezed out, there would be about 11 gallons of sea water. For the mixture would be found to contain the same salts that are dissolved in the ocean, and in almost the same proportions (about 80 percent sodium, 4 percent calcium, 4 percent potassium, etc. The exception is that blood has 2 percent magnesium, while

sea water has 10 percent.)

10 - SUN, AIR, AND WATER BATH

WHAT IT IS-In northern Mexico, there are natural healing centers which have shallow out-of-door depressions with water in them. Patients sit or lay in them and splash the water over their bodies. The effect of the combined sunlight, fresh air, and water upon the skin provides a pleasant tonic to the body. Try it in your own back yard on a warm summer day. Use a galvanized or plastic tub, or something similar.

GIVING A DOUCHE



**Abdominal Jet Douche
being given in the Battle Creek Sanitarium a hundred years ago.**

11 - WET GRASS WALK

WHAT IT IS-This early-morning tonic is to be found in some natural healing centers. Try it in the privacy of your own back yard: Walk barefoot on the lawn in the early morning while the dew is still on the grass. This is such a nice tonic, that you will thoroughly enjoy it. One of the effects, of course, is a strengthening of the feet.

12 - SUMMER SPRAY

WHAT IT IS-Children enjoy it every summer; why not join them? Go out in your back yard on a hot summer day and turn the water hose on each other. The water percussion, cool water on a warm day, the air upon the skin, and the light exercise will all combine to bring a vigorous tonic effect to your body.

SECTION FOURTEEN IRRIGATIONS

WHAT IS AN IRRIGATION?-In hydrotherapy, an "irrigation" is when we put water onto or into the body through a tube. There are irrigations of the ear, nose, eye, throat, etc., but the most common is the rectal irrigation: the enema and the colonic. We will give the most attention to enemas and colonics, but in the third sub-section will discuss several other types of irrigations (pages 150-152).

WHAT IS AN ENEMA AND A COLONIC? - Water is placed in the large bowel (the large intestine) in order to remove impacted wastes and toxic substances. Either an enema bag or a colonic apparatus can be used for this purpose.

WHAT YOU WILL NEED-An enema bag is a hot-water bottle with rubber tube and plastic tip, that is obtainable at your local drug store. For more thorough cleansing and removal of toxic substances from the bowel, a colonic is given. Whereas an enema bag can provide cleansing for a minute or two, before renewal, a colonic can do it for twenty minutes or more. Directions for making your own colonic apparatus will be found on pages 256,261.

HOW IT CAN HELP YOU-The body primarily eliminates waste through the bowel, blad-

der, skin, and lungs. When a person is ill, he has far more toxic waste than normal, and the kidneys (cleansed by drinking pure water), the bowel (cleansed by enemas or colonics), the skin (cleansed by bathing), and the lungs (cleansed by fresh air) are very important in the disposing of that waste matter. Of these, the largest amount of wastes will be discharged through the urine (kidneys and bladder) and feces (bowel, or large intestine). An enema or colonic can be of great help in aiding the body in throwing off these excess body wastes.

1 - ENEMAS INCLUDING: HOT, WARM, TEPID, and COLD WHAT YOU WILL NEED-In order to give an enema, you will need the following items: A bedpan and cover (if the one who is ill cannot easily leave the bed). An enema bag, hardrubber or plastic enema tip (small rectal tube). Lubricant (such as vasoline), toilet paper, and newspapers or plastic sheeting.

HOW TO APPLY IT - (See picture on page 147.)

1-Place the enema bag under the faucet and pour into it water that is lukewarm or slightly cool to the touch. Fill it to the top, press down to expel air, and then screw on the cap (which is attached to about 5-6 feet of tubing).

2-(In the following directions we will assume that the one receiving the enema is in bed. If he is able to receive the enema in the bathroom, the entire procedure will, understandably, be much simpler.)

3-Set up the equipment so that is ready to flow. Fold the bed covers back and cover him with a cotton blanket. He should be warm throughout the treatment, especially his feet. All clothing that is not removed should be loose. He can lay on his back, on his side with knees partially or fully raised, or he can sit up during the treatment.

4-Place a rubber or plastic sheet (or newspapers) on the bed under him. Turn him on his left side, with knees flexed. Allow the solution to flow through the tubing so that it just begins to come out, and then pinch it

off. This removes the air from the tubing.

5-Release the cut-off clamp and let some of the water flow until the stream is the same temperature as that in the bag. Close the cut-off and place a little lubricant (Vaseline, etc.) on the tip (which you have earlier cleaned), and then let him insert the tip; or, if he is unable to, gently do it for him.

6- Instruct him to take as much water as possible. To make it easier to do this, stop the flow by pinching the tube two or three times during the taking of the enema. Ask him if it is coming in too fast; if so, lower the enema bag or pinch off the tube more frequently.

7-Give the solution slowly, and pinch it off for a few seconds when asked. (If he cannot retain the solution, place him on the bedpan while giving it.) When he feels that it is time to terminate the enema, close the tubing clamp, remove the tip gently and wrap it in toilet tissue. Small amounts of water given several times, are better than a large amount

all at once.

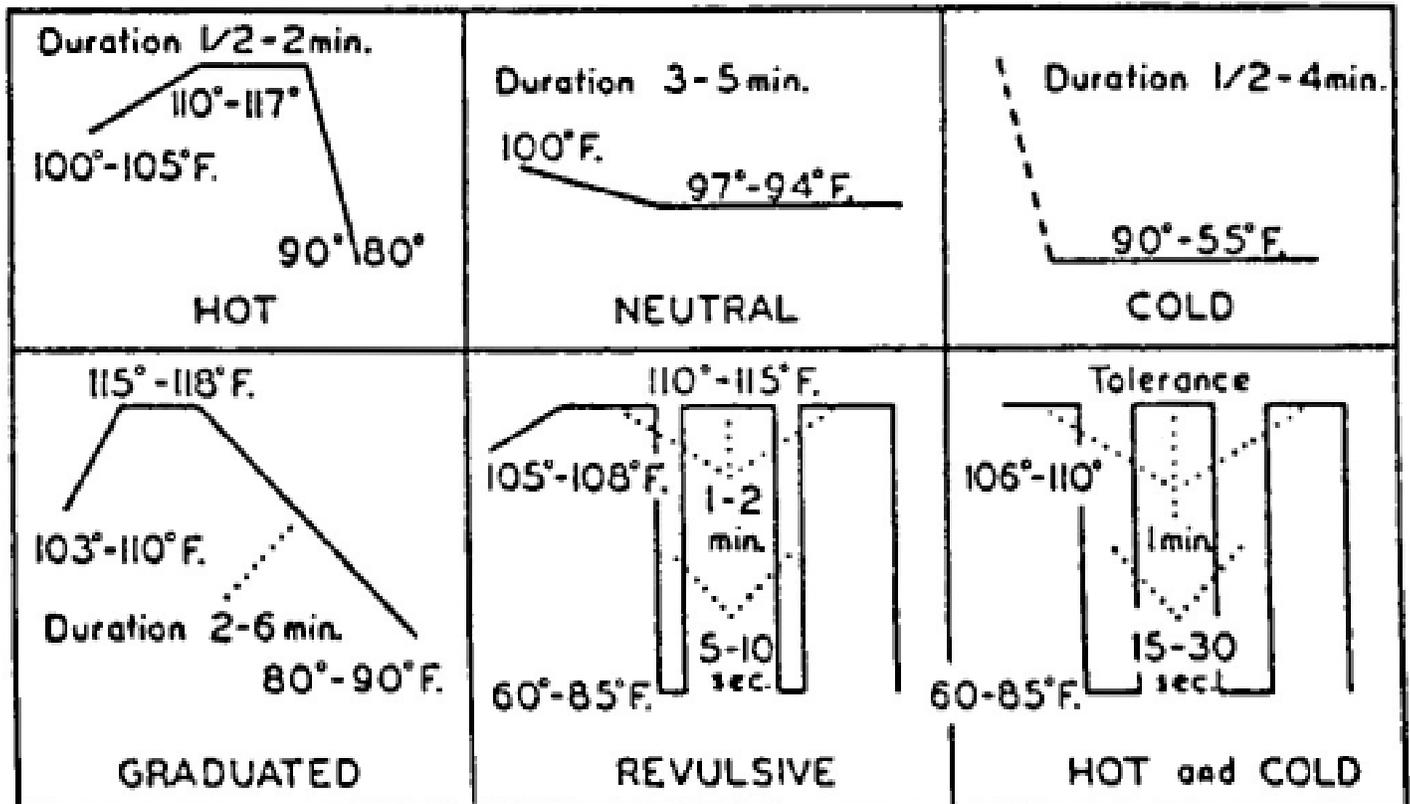
8-If possible, he should retain the water a few minutes before expelling it. Place him on the bedpan and stay within call. If he is unable to relax enough to take sufficient fluid, instruct him to breathe deeply or to bring his knees upward. Stay with him if he is very ill so that you can assist him. Note his condition and the results of the enema.

9-Remove the bed protector, replace the bed covers, and make him comfortable. Then clean all the equipment well and put it away.

WATER TEMPERATURE: What should be the temperature of the water? 104° F. is frequently recommended, but other temperatures can also be used, and, actually, a temperature of 96-100° F. (just below body temperature) is the ideal, as you will see below.

Hot Enema: (103-110° F.) The temperature will vary according to his condition and the desired results. The Hot Enema helps relieve irritation, the pain of inflammation in

SUGGESTED DOUCHE TEMPERATURE CHANGES



the rectum or prostate, and pain of hemorrhoids. It also aids in expelling gas, and helps to check diarrhea by decreasing rectal tenesmus. It may be used as a preliminary measure in the treatment of dysmenorrhea. It is also used to warm and stimulate the body in shock.

Warm Enema and Tepid Enema: (95-100° F.) The Warm Enema is the ordinary enema for cleansing purposes. It is at, or slightly below, body temperature. If slightly less, it helps facilitate bowel action during the enema. But if the enema is prolonged, or repeated frequently, it is better to use a still cooler enema, -the Tepid Enema (80-92° F.), to avoid the relaxing effects that the warm water has. (For when the bowel becomes too relaxed, it does not want to move. And thus can begin, what is called the "enema habit")

Cold Enema: (55-80° F.) 55-70° F. is considered cold, whereas 70-80° F. is considered cool. The Cold Enema is a powerful stimulant to bowel movements, and should be more generally used for this purpose instead of the warm enema. It is thus the best for overcoming both the enema habit and the cathartic habit. If retained 10-15 minutes or frequently

repeated, it is useful in shrinking hemorrhoids. It may also be used in fever, but for this purpose a prolonged colonic would be much more convenient and effective.

2 - COLONICS

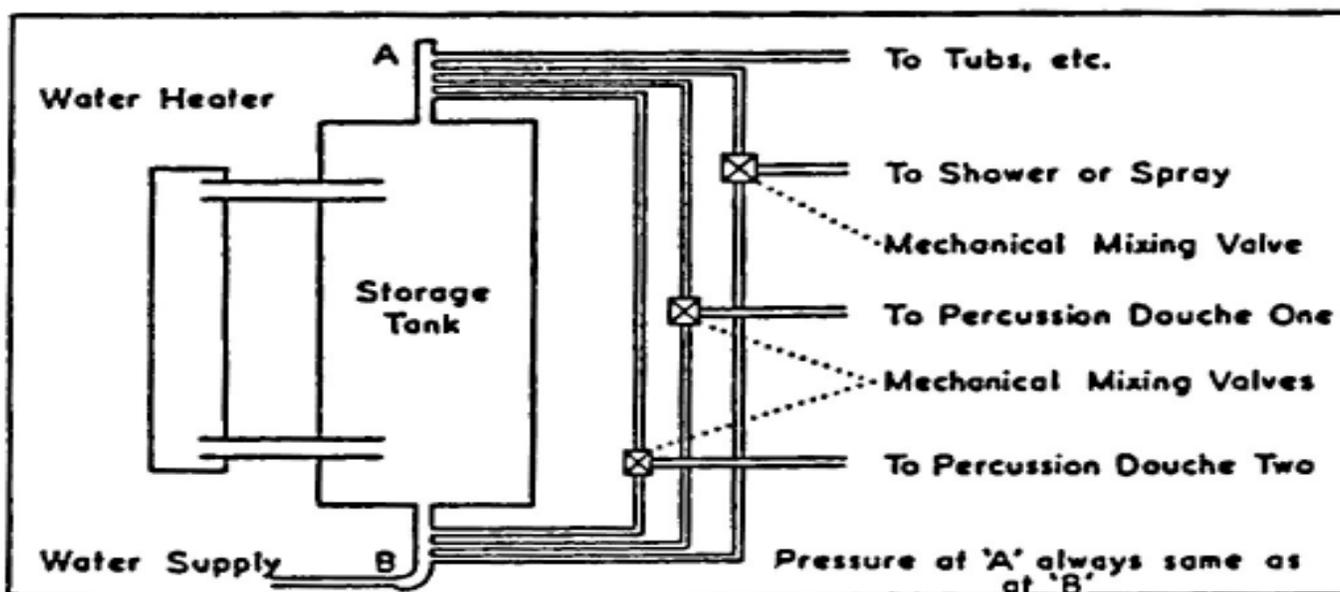
WHAT IT IS-A colonic apparatus is an arrangement for taking water into colon, expelling it into a toilet, taking in more and expelling it, for about twenty minutes or so. It is much more practical and helpful than an enema bag.

WHAT YOU WILL NEED-Fairly complete information on how to prepare a colonic board, colonic tip, and tubing for a colonic arrangement for your own home, will be found on pages 256-261 of this book.

HOW TO APPLY IT - (See picture on page 258.)

1-Set up the colonic board so that its head rests on a chair, and its foot rests over a toilet bowl (with the toilet lid raised). Over the board, place a folded blanket wrapped in plastic (or two black-plastic garbage can bags: one covering each end and thus overlapping each other in the middle). Above this blanket, at the head place a pillow and at the foot place a bath towel, laid crosswise, and then

DOUCHE SPRAY DIAGRAM



Suggested diagram for spray controls (employing mechanical mixing valves) for those who wish more sophisticated sprays.

tucked underneath on each side.

2-Set up the colonic bucket near the toilet. (The ideal height for it would be: bottom of the bucket about 15-20 inches above the tip.) Connect all the plastic and metal tubing together, so that water from the bucket can flow through the tubing to the colonic tip. Snap the tube clamp closed.

3-Fill the bucket with warm water and open the clamp. As soon as the water begins to come out, snap the clamp closed. Make sure the room is warm, and have a bath towel and a blanket or two ready.

4-Help the one about to receive the colonic to the board, and assist him in lying down on it, with his head on the pillow and his feet flexed and straddling the opening at foot of the board that is just above the mouth of the toilet.

5-He should be suitably clothed with both tops and bottoms, and you now drape the bath towel crosswise over his lower pelvic and pubic area, and then cover him with the blanket (unless he is warm enough without it). You may need an electric space heater in the bathroom to provide additional heat.

6-Lubricate the colonic tip and, if necessary, assist him in inserting it. Then, loosen the clamp and let the water begin flowing. Ask him whether it is too warm or too cool. (It is best if he is able to take it very slightly on the cool side.)

7-Either remain nearby or give him a bell to ring (and have tested it to be certain you can hear it where you are elsewhere in the home). If it is a one-gallon bucket, you will want to check it about every 10 minutes (it is best not refill it more than twice at the most). If it is a five-gallon bucket, place about 3 1/2 gallons in it and you will probably not need to refill it.

8-When he is finished, clamp off the tubing, and remove towel and blanket. Help him arise, and into the shower or bath.

9-Clean up everything and put all the equipment away.

3 - OTHER IRRIGATIONS INCLUDING

IRRIGATION OF THE EAR NASAL IRRIGATION IRRIGATION OF THE EYE THROAT IRRIGATION

WHAT IT IS-Both enemas and colonies are methods of bringing water into the body through a tube. In hydrotherapy, these are classified as "irrigations." There are several other types of irrigations used in water therapy. While not taking the space to explain them in detail, we will here briefly consider several of them:

1-Irrigation of the Ear: A clean rubber tube is used to gently (gently!) introduce a flow of water onto the outer ear. The water is never applied with any pressure! It flows to the ear, and thence out, to the side. The temperature may be from 100° to 120° F., depending upon the effect desired. The source of water should be on a level with the top of the head. Never use force, because perforation of the ear often exists, and serious injury could result from introduction of water into the middle ear with any degree of force. The head should be inclined to the side as the water is applied.

The canal of the ear should afterward be carefully dried and covered with a napkin or a warm hand for a few minutes. In cold weather, the ear should not be exposed out-of-doors for at least an hour after warm ear irrigation is applied, and even after that a small piece of cotton should be placed in the outer passageway.

"This measure affords great relief in the pain of acute otitis media, and earache due to other causes. In chronic suppurative disease of the ear, this measure is indispensable as a means of cleansing and disinfection."-Kellogg.

2-Nasal Irrigation: An ordinary hard-rubber syringe is attached to a rubber tube which has been carefully inserted into one nostril. The water is allowed to gentle flow into one and out the other, as the head is held forward. Kellogg says that he has concluded that it is best NOT to use the Nasal irrigation, because it might cause ear problems (through the eustachian tubes). He suggests using va-

porizers or atomizers instead.

3-Irrigation of the Eye: For this, the eyes are closed, and water is allowed to fall on the lids, and also the forehead above the brow. Kellogg considers the hot eye irrigation to be "very valuable in cases of chronic inflammation of the mucous lining of the eyelids." But he does not tell us what temperature to use. Obviously, you would want to proceed with caution in irrigating over the closed eye.

"Hot irrigation of the eye has been proved to be more useful as a means of relieving even acute inflammatory troubles of the eye than cold applications."-Kellogg.

4- Throat Irrigation: This is the same as "gargling."

"The application of very hot water by this means may be recommended in cases of chronic pharyngitis with tickling of the mucous membrane and dryness of the throat, irritation, hacking cough, and rawness, giving rise to frequent clearing of the throat or a tickling cough."-Kellogg.

In each of the above irrigations, it is important that it be done with great care,-especially as hotter water is used.

SECTION FIFTEEN DOUCHES (HAND-HELD SPRAYS)

WHAT IT IS- This is a spray or jet of water coming out of a flexible hose. Body parts needing a water therapy treatment are sprayed with water by another person who is standing nearby. The person receiving them must be ambulatory (able to walk about).

EQUIPMENT NEEDED-There are three types of professional spray nozzles:

1- The Jet Douche: A straight (or jet) nozzle lets the water flow out in a hard, solid jet of water. There is no spray to it.

2- The Spray Douche: This nozzle is round like the sprinkler on a garden watering pot. It produces a circular spray of water that is similar to the shower-head in your bathroom shower.

3- The Fan Douche: This nozzle also sprays, but because it has a flattened head, the spray comes out in a fan, or linear, pat-

tern.

You may be able to substitute a good garden hose changeable nozzle for the first two of the above three nozzles. Other equipment needed for the douches is a stool with an open seat (similar to a toilet seat).

HOW TO APPLY IT - (Picture of another douche: p. 153.) The Jet Nozzle: When percussion (a definite hitting or. the skin) is wanted, the jet nozzle is used. Both cold water, and percussion impact on the skin, produce a strong thermic reaction in the body. This increases the vigor and permanency of entire circulatory reaction. The Spray Nozzle: This nozzle is used whenever percussion is not wanted. It can apply hot and cold to body parts just as well as the jet nozzle, but it does it without percussion.

The Fan Nozzle: This produces the lightest striking effect on the skin. It is best-used when the tonic effects of the hot or cold water are not wanted. For example: when applying very cold water to sensitive surfaces, over painful nerves, and painful, inflamed body parts. A spray nozzle, turned on very low, would come the nearest to approximating the fan nozzle.

1-Have everything ready before bringing the ill person to the shower area. When he first arrives, have him dip his hands in cold water and bathe his face with his wet hands.

SUGGESTED DOUCHE TEMPERATURE CHANGES

1-Always begin and end a douche by spraying the feet. This helps equalize the blood circulation in the head.

3-Give the douche in a clearly-understood pattern, and only deviate from it because of special problems or needs of the one receiving it. As you give it, keep the index (first) finger of the hand holding the nozzle - in touch with the water. This is done so you will always know what temperature of water is coming out. You must be careful that you not burn him. Practice giving a douche to a well person before you give it to one who is ill or infirm.

TYPES OF DOUCHES-There are three ways to classify a douche: (1) The type of nozzle that is used. The three types of nozzles have been described, above. (2) The pattern of hot and/or cold that is applied. This will be described next. (3) The body part that is being treated. This will be described last.

DOUCHES: PART ONE

THE FIVE BASIC DOUCHES There are five basic ways to give the hand-held sprays. These are the Basic Douches, and are five different water-temperature patterns. These five are used to give thirteen Localized Douches, and twelve Reflexive Douches. First, we shall discuss the five Basic Douches; then we shall learn how to use the Localized Douches.

(In order to avoid making this section on Douches too long, we have decided not to include the twelve Reflexive Douches Those wishing facsimile copies of ten pages by J. H. Kellogg M.D., describing these twelve Douches, may write this publisher for a copy. For information on the cost of this write-in offer, and all that you will receive in it, please turn to page 37.)

Here are the five Basic Douches: [1] Hot Douche, [2] Neutral (lukewarm) Douche, [3] Cold Douche, [4] Revulsive (hot and very brief cold) Douche, and [5] Alternate Hot and Cold (hot and longer cold) Douche.

1 - HOT DOUCHE

HOW IT CAN HELP YOU-When applied to a larger area of the body, the Hot Douche can produce derivation-or pull blood away-from a congested organ. When applied to a small area, the Hot Douche reflexively relieves the congestion of the deeper organ beneath the surface-by bringing blood to the surface. Percussion, when it can be applied, intensifies this reflex effect of pulling blood to the surface.

The Hot Douche relieves pain, neuralgia, sciatica, and similar conditions. But for this, you would not want percussion.

HOW TO APPLY IT - (Picture of another douche: p. 153.)

1-When used alone (without any cool or

cold), it is given for about 2-5 minutes, at 105-125° F.

2-Conclude it with a very brief application of cold (60-90° F.) for 5-15 seconds (just long enough to remove the heat from the skin, placed there by the Hot Douche).

2 - NEUTRAL DOUCHE

HOW IT CAN HELP YOU-This is used to relax and prepare for sleep. When sprayed onto the spine, this effect is intensified the most. Percussion should not be used.

HOW TO APPLY IT - (Picture of another douche: p. 153.) 1-Give it with a spray or fan jet at 94-97° F. for 3-6 minutes. He should sit on a stool with his back to the spray.

3 - COLD DOUCHE

HOW IT CAN HELP YOU-This produces vigorous fluxion (an increase of blood) in the body part receiving it. At the same time, by derivation, blood will be pulled from distant congested organs.

HOW TO APPLY IT - (Picture of another douche: p. 153.) 1-In most cases, the Cold Douche is not given alone. But when it is given alone (55-70° F.), to produce the fluxion described above, it is given with a jet nozzle for percussion.

4 - REVULSIVE DOUCHE

HOW IT CAN HELP YOU-The effect is a quickening of the blood circulation, and thus gives a strong tonic effect. Interestingly enough, experts recommend that no percussion be used in order to give this tonic effect in a Revulsive Douche.

The Revulsive Douche is different than the Alternate Hot and Cold Douche (described just below), in that it makes use of a very brief cold application (5-10 seconds) in relation to the length of the hot (30 seconds to 2 minutes). This is what produces the very strong circulatory increase.

This douche is especially used on the chest, abdomen, and over the liver and spleen; also to the spine, pelvis, and perineum.

HOW TO APPLY IT - (Picture of another douche: p. 153.) 1- The Revulsive Douche is comprised of three quick change cycles from

hot to cold: First, hot (112-115° F.) for 30 seconds to 2 minutes; then, cold (55-70° F.) for 5-10 seconds. Each temperature change is abrupt, not gradual.

5 - ALTERNATE HOT AND COLD DOUCHE

WHAT IT IS- The same in every way to the Revulsive Douche (described just above), except that, since the cold application is longer and percussion is used, the effects are slightly different.

HOW IT CAN HELP YOU-Very strong fluxion (increase in blood) occurs in the area receiving this douche. This makes it excellent for derivation: pulling blood from a distant congestion. But when percussion is also used (via a jet nozzle), the reflex effects are stronger: so that the jet applied to an area above the deeper organ, will bring blood from that organ to the surface.

When applied to the feet: powerful derivation takes place from distant organs. (Precede this with a Hot Foot Bath.) When applied to the spine and legs: powerful tonic and stimulant effects result.

HOW TO APPLY IT - (Picture of another douche: p. 153.)

1-Give three cycles (or sets) of three abrupt hot and cold applications. The cold applications should last from one-third the length of the hot, on up to being equal with it. Thus, when the hot is given for one minute, the cold will last 20 seconds to one minute. (The duration of the cold is dependent upon how well the one receiving it can tolerate cold.) Percussion (via the jet nozzle) increases the vigor and permanency of the reaction.

DOUCHES: PART TWO THE THIRTEEN LOCAL DOUCHES The above five Basic Douches taught us the basic patterns of water temperature needed to give the various types of douches. Now we shall look at the thirteen Localized Douches. The Localized Douches are applications of water to one surface area in order to affect a deeper organ; the Reflexive Douches are applications to several surfaces areas in order to more fully affect a deeper organ. Here, we shall learn about

the thirteen Localized Douches: [1] Ascending Douche (perineum and anal - to affect pelvic organs), [2] Head Douche, [3] Spinal or Dorsal Douche (upper back - to affect upper trunk organs), [4] Lumbar Douche (lower back - to affect lower trunk organs), [5] Shoulder (shoulder - to affect shoulder joints), [6] Thoracic Douche (upper front and back trunk - to affect upper trunk organs), [7] Epigastric Douche (stomach area - to affect stomach), [8] Hypogastric Douche (lower front and back trunk - to affect lower trunk organs), [9] Abdominal Douche (lower front trunk - to affect lower frontal organs), [10] Foot Douche (top of feet - to affect feet and brain), [11] Plantar Douche (soles of feet - to affect head, feet, and certain pelvic organs), [12] Perineal Douche (perineum - to affect certain pelvic organs), [13] Anal Douche (anus - to affect hemorrhoids).

1 - ASCENDING DOUCHE INCLUDING: COLD, SHORT COLD, WARM, HOT, ALTERNATE, and REVULSIVE

WHAT IT IS- This is a jet or spray directed upward, and is applied to the soles (plantar surface) of the feet, the perineum, and the anal region.

HOW IT CAN HELP YOU-The Ascending Douche is used for several conditions: Cold Ascending Douche: Give it for atony of the bladder, or genital weakness where there is no irritation or pain. Also use it for hemorrhoids, constipation, and uterine and rectal prolapse.

Short Cold Ascending Douche: Rectal prolapse, anal insufficiency, and flatulence due to constipation. Warm Ascending Douche: Relieving the pain of anal fissure and irritable rectum.

Hot Ascending Douche: One of the best helps for pruritus ani and pruritus vulva. The temperature should be as hot as can be borne. Alternate (hot and cold)

Ascending Douche: Vesical paresis, chronic hypertrophy of the prostate, inflammation of the testicles.

Revulsive Ascending Douche: most affections of the genitourinary organs and rectum-

whenever accompanied by pain.

HOW TO APPLY IT-The information given on pages 152-758 will explain how to apply each of the above douches.

2 - HEAD DOUCHE INCLUDING: COLD and NEUTRAL

WHAT IT IS- This is a hand-held spray of water to the head or part of the head.

HOW IT CAN HELP YOU-Here are the various types of Head Douche: Cold Head Douche: There is some value to this, but only if given very, very briefly. Because of the dangers of mental depression, we suggest you use the Pail Pour (page 109), an ice compress (Ice Bag [page 49]), or an evaporating Cold Compress (page 45) for melancholia, cerebral anemia, and sunstroke with pallor.

Neutral Fan Douche to the occipital region (the bump on the back of your head) and the back of the neck: A remarkably useful measure in procuring sleep in insomnia.

HOW TO APPLY IT -How to give douches is explained on pages 152-158.

3 - SPINAL (DORSAL) DOUCHE INCLUDING: TEPID and COLD

WHAT IT IS-This is a hand-held hosing of water to the dorsal (upper and central) part of the spine. Either the jet, spray or fan nozzles may be used. The skin of the back is less sensitive than most other portions of the body, so more intense applications can be made to it.

SPECIAL POINTS- The stream of water should be allowed to play rapidly up and down over a surface extending 3-4 inches on either side of the spinal column. Normally, give as much pressure as he can bear. The jet nozzle is best for this purpose.

HOW IT CAN HELP YOU-Here are the most useful Spinal Douches:

Tepid (lukewarm) Spinal Douche: calms nervous excitability of spinal origin, as in hysteria, spinal irritation, irritability of the bladder (when of spinal origin), irritability of the genito-urinary center, and relieves incontinence (bed-wetting) in children.

Cold Spinal Douche: spinal anemia, functional locomotor ataxia, motor insufficiency of the bladder resulting in urinary inconti-

nence (bed-wetting) or retention (unable to urinate), nervous vomiting, diminished kidney activity, melancholia. Very helpful for chronic neurasthenia.

HOW TO APPLY IT -Information on how to give douches is to be found on pages 152-158.

Cold Spinal Douche CAUTIONS-Do not use it in cases of insanity of organic origin, or for all forms of structural disease of the spine (such as injured vertebra). Avoid overdoing each application: the result of doing so will be headache, depression, and nervousness following an initial feeling of buoyancy. "The daily application of this procedure. . . [will result in] his mental and nervous tone improving, the trembling, languor, mental confusion, and indecision disappearing; indeed, the effect of a single application is . . . pronounced."-Kellogg.

Very Hot Spinal Douche: for gastralgia (with a hot douche to the hypogastrium).

Warm Spinal Douche: (92-98° F.) for locomotor ataxia with lightning pains, and in spinal sclerosis.

Revulsive Douche (page 157) to the spine: for lumbago, diabetes insipidus, kidney neuralgia. HOW TO APPLY IT -Basic information on how to apply the various types of douches is given on pages 152-158.

4 - LUMBAR DOUCHE

INCLUDING: COLD and REVULSIVE

WHAT IT IS-A hand-held douche (jet, fan or spray) to the lower spinal area of the back. If there is no pain present, full pressure may be used.

HOW IT CAN HELP YOU-The Lumbar Douche produces powerful reflex effects upon the organs of the lower abdomen, pelvic viscera, and lower extremities. Cold Lumbar Douche: constipation, motor insufficiency of the bladder resulting in incontinence or retention, in amenorrhea, renal insufficiency, infantile uterus, delayed development of the pelvic viscera or functions. This douche should be given with considerable pressure, at a low temperature, and be very short.

Revulsive Douche (page 157) to lumbar:

"[It is] a most excellent remedy in neuralgia of the uterus and ovaries, in renal [kidney] congestion, in urinary retention due to spasm of the neck of the bladder, and especially in lumbago. It is a sovereign remedy also for the backache so common in women suffering from pelvic displacements, although of course in these cases its effects are chiefly palliative [pain removing]." Kellogg. When giving the Revulsive Lumbar Douche, also give revulsive (hot, then very brief cold) sprays to the feet and legs. Sometimes a better effect is obtained by giving the Revulsive -Douche to the shoulders and upper part of the back.

HOW TO APPLY IT-Information on how to give revulsive, and other douches will be found on pages 152-158. 5 -

SHOULDER DOUCHE

INCLUDING: SHORT COLD, HOT, and REVULSIVE

WHAT IT IS-A full or jet spray to the shoulders.

HOW IT CAN HELP YOU-It has two special usages: Short Cold Shoulder Douche: This should be very short, and given to the shoulders and arms, followed by a hot application (113-120° F.) to them. This powerfully draws blood from congestions in the pelvic organs. Use a jet nozzle.

Hot or Revulsive Shoulder Douche: Given with a fan, either the Hot Douche or the Revulsive Douche will bring prompt relief in cases of rheumatic pains in the shoulder joints,

HOW TO APPLY IT-Information on how to give the various douches will be found on pages 152-158.

6 - THORACIC DOUCHE INCLUDING: SHORT COLD, PROLONGED COLD, SHORT VERY COLD, PROLONGED COLD, TEPID, and REVULSIVE

WHAT IT IS-This is a hand-held spraying (only with spray or fan nozzles) to the front and back of the upper trunk (that portion that is above the diaphragm, thus equaling the area over the ribs, sternum, and vertebrae. The portion sprayed is the front, sides and back of the chest, and also the throat

and tops of the shoulders.

HOW IT CAN HELP YOU-Here are five ways to apply the Thoracic Douche: Short Cold Thoracic Douche: Given with high pressure (use the jet for this), to increase the amount of blood in the skin, lungs, and pleura. Prolonged Cold Thoracic Douche: 65-80° F., given with little pressure, to contract the blood vessels, and thus lessen the amount of blood in the lungs and other chest organs. Short, Very Cold Thoracic Douche: given to the breasts to stimulate the blood circulation in the pelvic organs, also to cause contraction of the uterine muscle seconds).

Prolonged Cold Thoracic Douche: given to the breasts with little pressure to cause contraction of the blood vessels of the uterus, and thus relieve uterine congestion (75-65° F., 1-3 minutes). Given to the lower third of the sternum, causes contraction of the vessels of the kidney, and increases the flow of urine. Applied over the heart, the douche powerfully excites cardiac activity. (Be cautious about the use of this last application.) Prolonged cold, with little pressure, to the heart will slow and energize it.

Tepid (lukewarm) Thoracic Douche: given without pressure, it relieves nervous asthma when applied to the back and sides of the chest, and quiets palpitation from irritability of the heart when applied over the cardiac region. Gradually lower the temperature of the water in later applications, if he is able to tolerate colder water.

Revulsive Thoracic Douche: to relieve intercostal neuralgia, pleurodynia from chronic pleuritic adhesions, brachial neuralgia, and reflex irritations arise from hyperesthesia of the solar plexus.

HOW TO APPLY IT -Information on how to give douches is to be found on pages 152-158.

7 - EPIGASTRIC DOUCHE INCLUDING: COLD, VERY HOT, and REVULSIVE

WHAT IT IS-A hand-held spray of water to the stomach area. Only the spray or fan nozzle should be used; not the jet nozzle.

HOW IT CAN HELP YOU-Here are several

helpful applications of the Epigastric Douche: Cold Epigastric Douche: "The cold epigastric douche is of the greatest value in treating hypopepsia, apepsia, gastroptosis, dilatation and atony of the stomach, and in gastric flatulence. It stimulates both the glandular and the muscular activities of the stomach."-Kellogg.

Very Hot Epigastric Douche: (115-122° F.) for hyperpepsia, gastrorhea, gastric crises, gastralgia, subacute gastritis, gastro-duodenitis (or gastric and duodenal catarrh), infectious jaundice, and the pain accompanying chronic stomach ulcer.

Revulsive Epigastric Douche: helpful in all painful stomach problems ("marvelous relief," says Kellogg). The hot applications should be at as high a temperature as can be borne (120-125° F.), and the cold application should be very cold (50-60°) and very short (6-12 seconds). If the touch of the hand upon the skin above stomach causes pain, then give this douche with the least pressure possible. Also use this douche for hyperesthesia of the solar plexus (a fundamental cause of intercostal neuralgia), pain between the shoulders, spinal irritation, so-called painful dyspepsia, and nervous asthma.

HOW TO APPLY IT -Information on how to give revulsive and other douches will be found on pages 152-158.

8 - HYPOGRASTRIC DOUCHE INCLUDING: COLD and REVULSIVE

WHAT IT IS- The "epigastric" area (for the treatments, described above) is the skin above the pit of the stomach; but the "hypogastric" area is the body surface that is above the lower middle of the abdomen. It is below the navel and between the right and left inguinal regions.

The "hypogastric douche" is a hand-held spray to both the front and back of the lower trunk; whereas the "abdominal douche," (described after this one) is a spray to the front of the lower trunk only.

HOW IT CAN HELP YOU-Douches to this area can, through reflex effects, powerfully effect the organs of the lower abdomen and

pelvis, and especially the bladder, uterus, and ovaries.

Cold Hypogastric Douche: with little pressure, and continued for one-half to one minute, causes contraction of the bladder and the uterus, the vessels of all the pelvic organs. Hence, this douche greatly helps reduce active and passive congestion in these organs, such as chronic inflammation of the uterus, endometritis, etc. It is also helpful in subinvolution, displacements, atony of the bladder, and enteroptosis due to abdominal muscle weakness.

Revulsive Hypogastric Douche: bring prompt relief in neuralgia of the uterus, the bladder, or the ovaries, in uterine pain due to contraction of the cervix, in vaginismus, and vesicle tenesmus.

HOW TO APPLY IT -Information on how to give the various types of douches will be found on pages 152-158.

9 - ABDOMINAL DOUCHE INCLUDING: COLD, WARM or HOT, and REVULSIVE

WHAT IT IS- This is a spray to the front of the abdomen only. It does not include both the front and back, as does the Hypogastric Douche, above.

HOW IT CAN HELP YOU-The frontal organs of the pelvic are affected by this douche. These are, especially, the small intestines, the colon, and the lumbar ganglia of the abdominal sympathetic nerves.

Cold Abdominal Douche: applied to the abdomen is highly useful in constipation, especially when it is due to dilatation of the colon, and enteroptosis. It is also helpful in atony of the bladder, in interoptosis due to relaxation of the abdominal muscles, and in pelvic displacements due to atony, when not accompanied by uterine or ovarian congestions.

Warm or Hot Abdominal Douche: for pain or irritability in the bladder, uterus, ovaries, or other pelvic viscera.

Revulsive Abdominal Douche: especially helpful for relief of pain due to irritation of the splanchnic nerves, or of the lumbar ganglia of the abdominal sympathetic nerves. It

is also useful in chronic diarrhea, chronic dysentery, and enteralgia.

HOW TO APPLY IT-Information on how to give the various douches will be found on pages 152-158.

10 - FOOT DOUCHE

INCLUDING: PROLONGED COLD, REVULSIVE, and VERY HOT

WHAT IT IS- This is a stream of water to the feet. For this purpose, the spray nozzle is best used since the fleshy covering of the feet is so thin. Direct the spray toward the feet and ankles as he sits in such a way that you can easily spray their largest surface.

HOW IT CAN HELP YOU-In the information given at the beginning of this section on douches, we mentioned that it is best to always give a cold douche to the feet at the beginning and end of each douche treatment. With those that are more delicate (including those with cerebral hyperemia, nervous asthma, palpitation of the heart of sympathetic origin, pulmonary congestion, exophthalmic goiter, and chronic migraine),-it is best to begin douches by giving cold to the feet only, and then stopping. This will help prepare them for more general douche treatments later.

Prolonged Cold Foot Douche: When prolonged until the skin is reddened, this douche will produce contraction of the cerebral vessels (drain blood from the head) and thus exert a most useful derivative effect in cerebral hyperemia.

Revulsive Foot Douche, and Very Hot Foot Douche: to relieve cerebral congestion.

HOW TO APPLY IT-Information on how to give these various douches will be found on pages 152-158.

11- PLANTAR DOUCHE INCLUDING: COLD

WHAT IT IS- This is a spray of water, under strong pressure, to the soles of the feet. Use either the jet or spray douche for the purpose.

HOW IT CAN HELP YOU-The Plantar Douche, as you will see below, is primarily used to affect the head, feet, bladder, and cer-

tain other pelvic organs. Cold Plantar Douche: continued for one-half to 2 minutes, or until a strong reaction occurs, will produce a powerful effect upon the abdominal and pelvic organs. Both the blood vessels and muscular walls of the hollow organs of the pelvis and abdomen are brought into strong contraction by this procedure. This douche will also contract blood vessels in the brain, thus greatly helping in chronic congestive headache. (For this purpose, only give the cold for 1 ½ -2 minutes.). It will also relieve brain anemia (give the cold only 4-10 seconds), and is one of the best means of overcoming habitual coldness of the feet when due to certain pelvic problems. (It will not remove this coldness when an overall feebleness of the circulation is the problem. In such cases, use general cold Frictions (pages 97-106) and the general Revulsive Douche (157), The Cold Plantar Douche is also helpful in hematuria, atony of the bladder, in incontinence of urine in old men, spermatorrhea from relaxation of the ejaculatory ducts, in neurasthenia resulting from excessive cerebral activity, in cases in which the urinary secretion is scanty, and in chronic epistaxis (nosebleed) not due to nasal mucous membrane ulceration.

HOW TO APPLY IT-Information on how to give the various douches will be found on pages 152-158.

12 - PERINEAL DOUCHE INCLUDING: VERY COLD and VERY HOT

WHAT IT IS- This is a spray of water to the perineum. The perineum is that portion of the body that lies between the anus and the genital organs. In modern hydrotherapy, this, along with certain similar douches, is called an "up spray."

HOW IT CAN HELP YOU-The purpose of this douche is to affect the organs of the pelvis, especially the rectum, prostate, vesiculae seminales, deep urethra, ejaculatory ducts, testicles, and bladder in men; and the rectum, uterus, ovaries, Fallopian tubes, and bladder in women. As much pressure is used as is possible without causing pain.

Very Cold Perineal Douche: in constipa-

tion, atony of the bladder, chronic urethritis, prostatorrhea, prostatitis, hypertrophy of the prostate in induration, spermatorrhea with atony of the ejaculatory ducts, and especially the diurnal (daily) form of the disease, inflammation of the uterus, subinvolution of the uterus, and displacements, as well as other chronic disorders of the pelvic region. Duration: 2-3 minutes.

Very Cold Perineal Douche CAUTIONS- Never give the Very Cold Perineal Douche when there is a significant amount of pain. This is because the powerful thermic reaction may temporarily increase that pain. Also do not use it for vesical, rectal, or vaginal tenesmus.

Very Hot Perineal Douche: for most conditions of the prostate, rectum, uterus, bladder, and associated organs. It is especially helpful in cases of spermatorrhea when there is great irritability of the deep urethra and related hyperesthesia. It should be noted that this douche is also useful in relaxing a rigid perineum in preparation for childbirth - when rigidity of the perineum is known to be present. Little pressure should be applied in such cases. Use this douche with moderate pressure for vaginal, rectal, and vesical tenesmus. The Very Hot Perineal Douche should be 1-3 minutes hot (115-122° F.), concluded with cold for 2-3 seconds.

HOW TO APPLY IT-The basic principles for the giving of douches is explained on pages 152-158.

13 - ANAL DOUCHE INCLUDING: COLD, VERY COLD, and VERY HOT

WHAT IT IS- This is the "up spray" applied not to the perineum, but to the anus (the rectal opening).

HOW IT CAN HELP YOU-It is very helpful for hemorrhoids, especially external hemorrhoids but also the mixed variety, in which both internal and external structures are involved.

Cold Anal Douche: very helpful in constipation by reflexively exciting normal peristaltic movements; especially useful in restoring normal sensibility of the rectum which has

become lost by neglect to answer promptly the urge to defecate; also helpful to strengthen anal muscles that have been weakened (or almost entirely cut away) by unwise surgical operations. This douche can also be used for inflamed and prolapsed internal hemorrhoids.

Very Cold Anal Douche: will contract hemorrhoids to such an extent that they may be easily replaced.

Very Hot Anal Douche: in rectal ulcer and fissure, vaginismus, and spasm of the sphincter muscles. But do not use it in cases of ovarian neuralgia, enteralgia, vesical irritability, and other painful pelvic and abdominal problems.

DOUCHES: PART THREE THE TWELVE REFLEXIVE DOUCHES

We have considered the five Basic Douches (which explain the five basic temperature patterns to use), and the thirteen Localized Douches (which concern douches applied to a single area in order to affect an internal organ). In addition, there are also twelve Reflexive Douches, which are hand-held sprays of water applied to several surface areas in order to affect certain internal organs.

The Reflexive Douche "operates through the sympathetic or vasomotor centers and nerves upon internal associate organs. There are good grounds for believing that in many instances the good effects experienced are the result of a collateral anemia or hyperemia produced in the affected parts by retrostasis or the opposite as, as the case may be. The active fluxion in internal parts set up by exciting applications of the douche upon the surface is also a powerful factor in the therapeutic results produced by these simple but wonderfully potent procedures." -Kellogg.

In order not to make this section on Douches too large and unwieldy, we are not including the twelve Reflexive Douches in this book. But a facsimile copy of ten pages describing them, written by John Harvey Kellogg M.D., may be obtained from the publisher of this present Manual. For information on how

to obtain this material, please turn to page 37.

Here are the twelve Reflexive Douches: [1] Cerebral (frontal brain) Douche, [2] Cerebrospinal (brain and spine) Douche, [3] Pulmonary (lung) Douche, [4] Cardiac (heart) Douche, [5] Gastric (stomach) Douche, [6] Enteric (small intestines) Douche, [7] Hepatic (Liver) Douche, [8] Splenic (spleen) Douche, [9] Renal (kidney) Douche, [10] Genitourinary (bladder and genital organs), Douche, [11] Articular (body joints) Douche, and [12] Muscle (body muscles) Douche.

INDEXES

These Water Therapy Manual indexes have been designed to make this book far more helpful than it otherwise could have been. For this reason you will find that even the arrangement of some of the indexes are different than that of others. In addition, the two that will be the most frequently used (the Therapy Index and the Disease Index) have been placed in a larger type face.

One very unusual feature of these indexes is that when two or more references to the same item appear on a page, this is indicated in the more important indexes (Principles, Therapy, and Disease). Regular indexes provide only one listing to a page, and the reader finding the first one may think there are no more on that page. But because the indexes are so important in this Manual, we want you to be able to locate every reference. An example of this would be "Brain, reduce blood in, 51, 51." Turn to page 51 and you will quickly see why we have listed page 51 twice. Another example would be "Fever, childhood, 64, 64." The second reference provides valuable information you would have overlooked if you had stopped at the first reference. Yet a third example: "Pneumonia, 60, 60, 60." The first reference to pneumonia on page 60 is to the Partial Chest Pack, but the second two (which might otherwise have been overlooked) are to the Dry Chest Pack.

Here are the five indexes to this Manual:

First is the GENERAL INDEX. Covering topics not found in the other indexes, this small index primarily deals with names and places. Second is the ILLUSTRATION INDEX, which locates every picture and illustration found in the Manual. Third is the PRINCIPLES INDEX. This very helpful index will help you find all of the basic principles that the use of water treatments is based upon. Fourth is the THERAPY INDEX. This is an index to the water

treatment explanations, and is multi-referenced. Thus, you will find "Cold Mitten Friction" indexed under "Cold," "Mitten," and "Friction." This was done so that you might have no difficulty in quickly locating any particular water therapy. In certain instances, the Kellogg Remedies section (pages 178-252) used terms that need "translating" to the therapy names used in this present Manual. We have indicated this, and certain other information, within parentheses in the Therapy Index.

Fifth and last, is the DISEASE INDEX. This very important index should be used in close conjunction with the Therapy Index. Some special features are to be found in the Disease Index that you will appreciate. These are discussed at the beginning of the Disease Index.

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DISEASE INDEX

Indexes

HOW TO USE THIS DISEASE INDEX

This Disease Index covers all references to disease in the entire Manual. We seriously considered preparing two disease indexes, but instead have placed everything in one index, while indicating both aspects:

ST = SINGLE WATER THERAPY-Each page number that comes after this code (ST) is where you will find a single water therapy that may help alleviate the particular physical problem listed under that index heading. The single therapies will be found primarily in the Water Therapy chapter (pages 45-169).

MT = MULTI-THERAPY-Each page number that follows this code (MT) refers you to several water therapies to be used separately Or in combination to help lessen the specific problem referenced there. These groups of therapies will be found in the Kellogg Remedies sections of this book (pages 39-44 and 178-252).

Please remember that many physical problems cannot be solved with water therapy alone; nutritional and other changes are also necessary. For example, a chronic or repetitive problem is signalling you to change your way of life.

Before using the water therapies in this book, you should first read the basic principles and cautions given on pages 9-37. And before using a specific therapy, you should read all that is written in that section about it, including the cautions. Frequently, the therapies just before and after it are similar and are used for similar purposes. You may decide to check on them also. And, of course, see your doctor.

God is the Great Physician; only He can

bring healing and restoration to your body, mind and soul. Come to Him in faith. Confess your sins and ask His forgiveness. Think through your life situation and decide that you will make the necessary changes needed for better, healthier living. Determine that God will henceforth be the center of your life. Immediately begin a life of prayer and thankfulness, and, during and after convalescence, begin a regular schedule of morning and evening prayer and study of the Bible.

In all things, pray: "Thy will be done," and yield your life to Him. If He sees that it is best to grant you partial or complete healing, so that your life is lengthened, then gratefully dedicate the remainder of your days on earth to His service.

And if, at any time, you fall from your dedication, come back with tears and in His strength begin again. He loves you and wants you to come.

Remember: The closer you stay to Jesus, the brighter will be your future. And that is what you really want, is it not: the best life you can have-and this is it-a life with Christ!

Begin reading the first part of this book ("The Ministry of Healing"). You will find that which can lead you into a better, happier life.

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