

THE PROBLEM OF FAT

HOW EXCESS FAT INJURES YOU: NEW DISCOVERIES

We are all aware that excess fat can lead to a variety of physical problems. But microbiologists have discovered new insights into why this is so.

Everyone has a certain number of *fat cells*. They help meet the body's energy needs and protect us against starvation in a crisis. But it is now known that they also secrete certain hormones and chemicals which can cause serious problems, when a person gains an excess of weight.

Fat cells in the body contain *fat*. An overweight person can have fat cells which are larger than normal. Most of a fat cell is filled with stored *triglyceride fat droplets*. These droplets push the cell nucleus and other cellular components toward the cell wall.

When a person has excess fat, the body initiates a type of immune response,—as if the fat itself were some kind of foreign invader.

Special immune-system cells, called *macrophages*, enter the fat cells. As soon as they do this, both types of cells begin producing inflammatory compounds which are damaging to the body. Researchers have found that as much as 40% of the fat tissue of an obese person can consist of macrophages.

In addition to these inflammatory compounds, fat cells also secrete certain hormones. As you may know, hormones are chemical messengers which travel to various parts of the body—affecting the brain, liver, cardiovascular system, muscles, and other structures and organs.

Most of the various hormones made in fat cells are also made in other cells. But there are two kinds of hormones which only fat cells produce: *Adiponectin* and *leptin*. In addition, when there are too many fat cells, those (along with several other hormones) are produced in excess and damage the body.

Both fat cells and macrophages produce *IL-6* and *TNF-alpha*. An excess of these two substances help produce chronic, low-grade inflammation that underlies heart disease, type 2 diabetes, and cer-

tain types of cancer.

Then there is *leptin*, which is only produced by fat cells. The more fat in a cell, the more leptin is produced. It signals the brain to reduce the amount of food intake. But when a person becomes too fat, the brain stops responding to higher levels of leptin.

Fat cells continually break down stored triglycerides and release them as free *fatty acids*. But when too many are released, the acids are stored in the liver, heart, and muscle cells and damage them.

Angiotensinogen is produced by fat cells and converts to *angiotensin 2*, which constricts blood vessels and contributes to hypertension.

Fat cells also produce *PAI-1*, which blocks the body's ability to dissolve clots in blood vessels. This is a factor in causing strokes.

Fat cells also makes *resistin*. An overweight person makes too much, causing the body to resist the important effects of insulin. An excess of resistin is a factor in causing diabetes.

A stress hormone, *cortisol*, is produced by the adrenal glands. Fat cells convert the inactive form of the hormone to the active form. Among other negative results, this encourages an excess production of fat cells in the abdomen.

An average person of normal weight has 40 billion fat cells. The problem is that those cells can multiply; and, when they do, almost nothing ever reduces their increased number. The more fat cells there are, the more they send signals throughout the body which can cause various types of damage. The best solution is to figure out ways to reduce the amount of fat in one's body. Eating less (only of good food) and exercising more is the best way.

Today, one out of three Americans is obese, twice as many as three decades ago; it is enough for the CDC to declare obesity an epidemic. Fifteen percent of children and teens are overweight, a nearly three-fold jump from 1980.

On the next three pages you will find still more facts which can help you make better decisions, in case you too have a weight problem. Living right and eating right can solve many problems.

MORE INFORMATION ON THE FAT PROBLEM

According to a government study, the nation is getting fat because people are eating a lot more than they used to. The increase mostly comes from carbohydrates. Adult men are eating 188 calories a day more than they did in 1971 while adult women are eating 335 more calories per day.

Although people are eating more vegetables now, a third of it consists of a few leaves of iceberg lettuce, a lot of french fries, and potato chips. The grains that they are eating are flour-based items like pasta, tortillas, and hamburger buns; all of which have little nutritional value. About all they contain is calories.

Then there are all the beefburgers and other meats that people are guzzling down. In 1970, the average American ate 588 lbs. of protein and 56 lbs. of fats and oils. In 2000, he ate 621 lbs. of protein and 77 lbs. of fats and oils.

As a result, weight problems and health problems are increasing: high blood pressure, varicose veins, pain and swelling of the feet and ankles, depression,—and (later on) serious trouble with the heart and blood vessels.

Being overweight is associated with 400,000 deaths a year. This includes an increased risk of heart disease, type 2 diabetes, and cancer of the colon, breast, and endometrium. Here is a closer look at some of these problems:

First, there is type 2 diabetes. People with excess body fat (especially in the abdominal area) often become resistant to insulin, a substance that helps the body store glucose. When glucose levels soar, diabetes results. One side effect is damage to blood vessels in the retina, which can lead to blindness.

Then there is liver disease. Many overweight people develop deposits of fat inside the liver. About 10% of the time, this develops into cirrhosis and, occasionally, into liver failure.

Osteoarthritis is another difficulty. The excess weight places additional strain on the knee joints, hip, and spine, resulting in a loss of cartilage. As deterioration intensifies, joint space narrows and bones begin to grind together.

We do not want to forget heart disease. Obese people tend to have higher levels of cholesterol, which can lead to plaque buildup in the arteries. They are twice as likely to have hypertension.

And there is the danger of stroke, which occurs when a blood vessel ruptures or a blood clot blocks

an artery to the brain. The risk of experiencing this is two to four times higher in people with type 2 diabetes, 90% of whom are overweight.

Every year, the average child or adult will watch nearly 10,000 commercials that tell him to eat junk food or drink something he should avoid. In order to help defray expenses, a majority of public schools in America have junk food and drink vending machines on campus.

Bad food is cheap, readily accessible, and requires no food preparation. Working moms love it; and everybody in the family puts on weight. There is always a McDonald's nearby. Step inside and order a "Happy Meal." When you have finished, you will have consumed 77% of your daily caloric requirement in one meal.

Here are some high-calorie junk foods which people just love to eat:

One McDonald's or Burger King beefburger: 310 calories (yet only 4.3 oz). One of their sacks of french fries: 610 calories (yet only 7 oz).

One 16 fluid oz Coke: 194 calories. One sizeable movie popcorn sack: 1,700 calories. One bar of 7 oz Hershey's chocolate: 1,000 calories.

In 1950, the average woman's dress size was 8; in 2002 it is 14. The percentage of children who were overweight in 1980: 5. Percentage today: 15. The number of Americans with diabetes in 1980: 5.8 million. In 2002: 13.3 million.

One in four Americans gets essentially no exercise at all. Less than a third get the recommended minimum of 30 minutes a day, most days a week. That is enough to reduce the likelihood of chronic disease, but not enough to lose weight. In order to lose weight without reducing calorie intake, a person must exercise far more.

If a person (who tends to gain weight) consumes a mere 5% over a 2,000-calorie-day average (which is only 100 calories, or the amount in a glass of apple juice), he can still significantly add pounds.

Because one pound of body weight is roughly equivalent to 3,500 calories, that glass of juice adds up to an extra 10 pounds over a year.

Some people are exceptionally efficient in their intake and use of calories. Once that food is converted to fat, the body seems to want to keep it.

Overweight is becoming a worldwide problem, as people in other nations discover the delights of junk food, soft drinks, and ways to exercise less and watch TV more.

HOW TO ELIMINATE EXCESS FAT

The following is an excerpt from the Fourth Edition of our new 840-page Natural Remedies Encyclopedia

OVERWEIGHT (Obesity)

SYMPTOMS—The person is heavier by at least 20% than the average for his height and weight.

CAUSES—Obesity is an excess of body fat; too much is being stored. It is also consuming more calories than one can use.

The average human body has 30-40 million fat cells. That is too many for some of us. It has been said that when a person makes an extra fat cell, in order to store some extra fat, he will keep that extra cell for the rest of his life—even though he may remove the fat from it.

Poor diet, fatty foods, and a lack of exercise are common causes of overweight. Other factors include **diabetes (547), hypoglycemia (544), and endocrine glands (543-552)** which do not function properly. **Boredom, tension, and love of food** are other causes. Another factor is **inadequate intake or absorption of key nutrients**, which causes fat to be stored instead of used.

Each year in America, over \$30 billion is spent on foods or equipment to help lose weight.

Obesity can be involved with hormonal imbalances in the **hypothalamus, pituitary, pineal, thyroid, adrenals, or pancreas**.

Obese people tend to store fat in muscle tissue, not only in regular fat cells. Then, when they try to lose weight (via a weight loss diet), they lose both fat from the fat cells and protein from the muscles—before they lose fat from the muscles. The best solution is to keep fit, so you do not store fat in your muscle tissue.

It is said that 90% of obese people overeat and binge because they are eating **meals with too many empty calories**, which do not supply enough minerals (especially trace minerals) and vitamins.

NATURAL REMEDIES

FOOD AND NUTRITION

People try to cut down on the calories, when they should make sure they steadily obtain **good basic nutrition, day after day**. Without adequate nourishment, they will generally binge or go off their special diets. It is now known that steady eating is better than losing weight and regaining it, losing it and regaining it. The up and down program damages the body and makes it more susceptible to disease. The 14-year Framingham Study established that repeated crash diets increase the risk of heart disease.

- To maintain a **program of weight loss** (that is, an ongoing program of gradually losing a little weight), calculate how many calories you need each day, in this way: **Multiply your weight by 10. Then add 30% (about**

a third) to the total. This total is the amount of calories you can consume daily, without gaining the weight back which you have already lost. Assuming that you are moderately active, eating anything less than that total amount should cause you to lose weight. (*Example:* 150 lbs. x 10 = 1,500 + 30% (450) = 1,950 calories.)

- **Crash diets** are useless. Quick weight loss tends to come back quickly, resulting in elevated cholesterol.

- Test for **food allergies** and eliminate them. See *Food Allergies (576) and Pulse Test (575)*.

- Consistently eat a **lighter, but more nourishing, diet**. Do not eat food for fun; eat for health.

- Avoid **junk food, fatty food, fried food, processed food, caffeine, nicotine, and soft drinks**. Do not drink **alcohol** in any form. It has calories without giving nourishment. It inhibits the burning of fat deposits.

- Drink at least 8-10 glasses of **water** each day.

- **Do not skip breakfast and lunch**. Make breakfast the largest, lunch a moderate meal, and supper the lightest. Or skip the evening meal entirely. Do not eat before bedtime or at night. Best: Eat nothing after 3 p.m.

- Include Nova Scotia **dulse** or Norwegian **kelp** in your diet, to supply trace minerals.

- Include a good **vitamin-mineral supplement**. Be sure to obtain enough **fiber** in your diet. It fills you up, without adding body weight. **Phenylalanine**, an amino acid, helps in reducing weight because of its effect on the thyroid. It increases endorphins in the brain.

- Powdered **barley malt** sweetener is quite sweet, yet contains fewer calories than other sweets. Use it to sweeten your food. Do not end a meal with sweets.

- Here is an **all-in-one food drink** which, because it is so nourishing, can help you lose weight—if you will let it be your only nourishment at a meal. It is filled with nutrition! Mix the following ingredients in a blender and drink: 1 cup rice milk, 1 cup soy milk, 1 cup fruit juice (apple, orange, or other), 1 banana, 4 fresh strawberries (if available), 1 tsp. blackstrap molasses, 1 Tbsp. black cherry concentrate, 1 Tbsp. powdered “green” (Barley Green, etc.), 1-2 Tbsp. powdered nutritional yeast, and 1 Tbsp. flaxseed oil. Drink it slowly, leave the table, and eat nothing more until the next meal.

A BASIC DIET

Go on a good basic diet and stay on it. Here is an example of one:

- Eat moderate amounts of **raw citrus and subacid fruits, but no sweet fruits** (such as grapes or dried fruits). **No fruit juices, except diluted grape juice** taken a half hour before the meal, to reduce appetite. No bananas.

- Eat as much **raw vegetables** as you want. The only cooked ones should be **fresh and conservatively**

cooked vegetables. Do not use frozen, fried, or canned vegetables.

- Primarily eat vegetarian protein foods with some moderation: **beans, sprouted beans, seeds, nuts,** etc.
- All **refined carbohydrates** are forbidden. This includes **sugar, alcohol, white-flour products, quick oats, most packaged cereals, and processed starch.**
- Eat only well-cooked, unrefined **brown rice, barley, rye, millet, buckwheat, wheat berries, bulgur, corn,** and other whole grains. Do not grind them; but cook and eat them in their natural state.
- Use **cold-pressed unsaturated oils,** plus **lemon juice,** and possibly some herbs for flavoring. **Flaxseed oil** (2 tsp. daily) will help you burn excess calories. Use no other oil. Put the raw oil on your food at the table.
- Eat **spirulina** 30 minutes before meals. It is very nourishing, adds energy, and will reduce your appetite.

ADDITIONAL SUGGESTIONS

- **Do not overeat,** ever. It is a very, very bad habit to get into. But it is a habit which can be stopped.
- When you end a meal, make a determined habit to **eat nothing until the next meal.**
- When eating, concentrate on **quietly eating and thinking about when you should stop.** Do not just relax, talk, socialize, and eat and eat. Do not listen to the radio, read a book, or watch television. Stick to your work of eating lightly of nourishing food and quitting when you should.
- **You will not be harmed** by finishing the meal a little hungry. Keep that in mind. Frankly, you will be greatly helped; for your stomach will gradually shrink to the size it ought to be.
- People who are overweight do best to eat as much **food raw** as possible rather than cooked food. If cooked, the food should be baked, steamed, or boiled; never fried.
- Go on a cleansing **juice fast** once a week.
- A regular exercise program is needed. Aerobic exercises are better than other kinds. This simply means **exercise done out in the open air.** It helps lose weight and build strength. It strengthens the heart, arteries, and veins. It also invigorates the vital organs and endocrine glands.
- **Walking** uses up to 120 calories per hour while actual jogging burns 440 calories per hour. But walking remains the best exercise.
- **Swimming** is usually done in cold water; and this triggers the body to store extra fat as protection against the cold. So swimming does not help one lose weight.
- Regular **bowel movements** are important. Reduce **salt** intake. **Gum chewing** gets the stomach moving and makes you hungry.
- **Do not overfeed children** with an excess of starches and cow's milk. Most infants receive starches by four months; but that is far too early and only leads to later allergies or celiac disease (382). Children who

are overweight by the age of 2 turn into fat adults more frequently than others.

- If you are only moderately overweight, do not worry about the comments of your thin friends; they probably wish they could gain a little.

HERBS

- Take 3 grams of **plantain** leaves (or 3 grams of **psyllium,** the seed of that plant) in water 30 minutes before meals. In an Italian research study, women who were 60% over their proper weight did this; and they lost more weight than another group of women who ate less. What to do? Simply mix 1 tsp. **psyllium seed** with juice or water and eat it before each meal. (But some are allergic to psyllium; if so, stop using it.)
- **Astragalus** improves nutrient absorption, thus adding energy. **Green tea** helps you reduce weight.
- Adding fresh **chickweed** (a common weed) to your salad each day will help you lose weight. Eating one whole, fresh **pineapple** daily also helps do it.
- **Ginger** and **butcher's broom** improves fat metabolism. **Fenugreek** helps dissolve fat in the liver.
- A study of 25,000 Seventh-day Adventists found that those who ate the most **nuts** were the slimmest. Nuts are rich in serotonin, which helps make us feel full. Adventists are vegetarians. But **meat eaters** would have a harder time losing weight; since their diet is heavy in grease and saturated fat.

J.H. KELLOGG, M.D., PRESCRIPTIONS FOR OVERWEIGHT AND ITS COMPLICATIONS (*how to give these water therapies: pp. 153-208 / list of treatments: pp. 153-154 / Hydrotherapy Disease Index: pp. 209-211*)

INCREASE OXIDATION OF HYDROCARBONS—Moderately prolonged cold baths, especially **Wet Sheet Pack, Shallow Bath, Cold Shower,** Dripping Sheet Rub, Plunge Bath, and **moderate exercise** several times daily. The Cold Bath may be advantageously preceded by the Radiant Heat Bath or some other form of **sweating bath** that is not too prolonged. Exercise should always be preceded by a cold bath of sufficient duration to lower the temperature a few tenths of a degree.

CARDIAC WEAKNESS—**Cold Compress** over the heart (except in fatty degeneration of the heart) 15-30 minutes, 3 times daily; **graduated exercises outdoors** when possible.

CONTRAINDICATIONS—Avoid prolonged Hot Baths unless immediately followed by a cold bath.

GENERAL METHOD—The general plan of treatment must be prolonged cold baths and vigorous exercise while reducing the daily ration of food to the lowest point consistent with the maintenance of his strength. The treatment must never be conducted in such a way as to diminish his muscular or nervous energy. If he complains of feeling weak or debilitated, the vigor of the treatment must be diminished. There should be a steady gain in muscular strength accompanying the loss of flesh. His strength should be tested weekly. Do not use Hot Baths; for they are especially debilitating.

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