

THE IMPORTANCE OF GOOD NUTRITION

The Importance Of Nutrition Over Calories

The importance of good nutrition is nothing new. Back in 400 B.C., Hippocrates said, "Let food be your medicine and medicine be your food." Today, good nutrition is more important than ever. At least four of the 10 leading causes of death in the U.S.--heart disease, cancer, stroke and diabetes--are directly related to way we eat; diet is also implicated in scores of other conditions. But while the wrong diet can be deadly, eating right is among the key cornerstones of health.

Of course, food alone isn't the key to a longer and healthier life. **Good nutrition should be part of an overall healthy lifestyle, which also includes regular exercise, not smoking or drinking alcohol excessively, stress management, limiting exposure to environmental hazards and other factors.** No matter how well you eat, your genes play a big part in your risk for certain health problems. But don't underestimate the influence of what you eat, and the effect it has in over coming certain gene factors.

For example, **atherosclerosis (hardening of the arteries) can begin in early childhood, but the process can be halted-even reversed-if you make healthy changes in your diet and lifestyle.**

The keys to good nutrition are balance, variety and moderation. To stay healthy, your body needs the right balance of **carbohydrates, fats, and protein** --the three main components of nutrition. Each day, you should get approximately:

25 percent of total calories from high quality protein foods

30 percent of calories from fat, primarily mono and poly unsaturated fats

45 percent from carbohydrates, concentrating on whole grain foods, vegetables and fruits

You also need vitamins, minerals and other substances from many different foods, and while some foods are better than others, no single food or food group has it all--so eating a variety of different foods is essential.

Moderation means eating neither too much nor too little of any food or nutrient. Too much food can result in excess weight and even too much of certain nutrients, while eating too little can lead to numerous nutrient deficiencies and low body mass.

The true science of eating should be thoroughly understood by all -- what elements the system requires in order to build and repair, how best to supply them, and how to prepare them in the most appetizing manner without destroying their life-giving properties.

The Human body is a finely constructed machine and transforms the food supplied to it into energy. As a car burns gasoline, the Human body burns food. All parts on every machine are constantly wearing and require renewal; just so, the body must have proper food to build new tissues and to repair worn-out ones.

Nearly 40 percent of Americans over the age of 16 regularly take some form of dietary supplement. God in his infinite wisdom neglected nothing, and if we would eat our food without trying to improve, change, or refine it, thereby destroying it's life-giving properties, it would meet all the requirements of the body.

In all the food we eat, whether it comes from plants or secondhand from animals, there are roughly 50 different nutrients -- substances necessary for life and growth. These nutrients can be conveniently arranged into 6 basic groups, as follows:

Carbohydrates, 2. Fats, 3. Proteins, 4. Minerals, 5. Vitamins, 6. Water

The first three of these six - carbohydrates, fats, proteins -- provide energy that is used by the body to perform all the functions of daily living. This energy is measured in small units called calories. **Calories are used to measure not only the energy used by the body, but also to tell us the amount of energy present in food.** Even when a person is

lying down completely relaxed with an empty stomach, a large amount of energy is necessary just to maintain life.

This energy is known as the basal metabolic rate, or simply (BMR). In the average person the BMR is 1200 to 1800 calories per day. This represents more than half of the daily output of energy. A rough estimate of your BMR can be found by multiplying your body weight in pounds by 10.

The brain is responsible for about one-fifth of our total basal metabolic rate. But, unlike most other parts of the body such as the muscles, the amount of energy used by the brain stays about the same throughout the day, even when we are mentally very active.

One factor that most doctor, dieticians or other professionals forget to take into the BMR factor is the quality of the foods we consume daily. Processed, overcooked, and animal food are very difficult to digest, and to do so usually requires a majority of the energy we receive from the foods to be used up, in the process of digesting them. Hence the reason most people eat and in a short period of time they are looking for more food.

Carbohydrates are frequently condemned as being the main culprit responsible for obesity, one of the Western World's most common and serious health problems, however, fat actually contains more than twice the number of calories. We therefore should lower our fat intake from the present level of 43 percent down to 30 percent or even less, of our energy supply.

This could easily be accomplished by giving up all animal and dairy products. Remember we know that a high animal fat diet is strongly associated with coronary artery disease, colon, breast and probably prostate cancer.

Excess calories are mainly stored in the body as adipose tissue, more commonly known as fat. It takes 3500 calories to make one pound of fat. The reverse is also true, so that for every 3500 calories you use in excess of what you take in, there will be a loss of one pound in weight. Reference the article attached

entitled "Caloric Restriction Reverses Aging" This articles claims such action would increase a persons lifespan.

Info on Calories:

- ?? 1 pound of excess body fat = 3500 calories
- ?? Fat is higher in calories than carbohydrates
- Energy Values Per Gram 1 gram of Carbohydrates = 4 calories 1 gram of Protein = 4 calories 1 gram of Fat - 9 calories 1 gram of Alcohol = 7 calories

We should always be aware of the importance of a balanced diet, rather than just adding up fat or calories. We must remember that we need enzymes, proteins, carbohydrates, lipids, vitamins, minerals, trace elements, fibers, water, and not merely calories or fats.

This is the reason why a diversified diet, balanced for your body, in due quantities, responds to your needs, whereas we could not survive by eating only sugar, for instance, even if the energy intake were exactly the recommended one. Nor could we hope to survive long by eating 50% of an excellent nutritional food, and 50% of a high calorie food that would be hard to digest.

Remember Health = Nutrition over calories not calories over nutrition.

Also, I would like to put the stress on a significant fact, 50% of the obese persons eat less than their needs. To help them lose weight, dieticians have to tell them to eat more, although it may sound surprising! Eat more is not the answer, but eating better is! This fact attests to the importance of balancing your body with the best food for your needs, and that usually means "Live Whole Foods".

One can count fat grams or calories until the onset of world peace - and yes, they are important to total nutrition but the real answer is in the food you eat and the usable calories your body receives so that it can regenerate itself.

Good Food Gone Bad

Most of us have heard about the 'good food gone

bad' syndrome but it bears repeating. Garden salad. Sounds healthy and harmless doesn't it? But if you care to tank up that salad you may need to put away your abacus and drag out your calculator. Top those greens and tomatoes with grated cheese, low-calorie ranch dressing, croutons, bacon bits (imitation or real), sliced eggs - and the calories can really add up. And you don't even want to start frying things. It's a solid guarantee that the oil used in cooking fried mushrooms will make one's body mushroom. That's why they made spandex. Black seems to be the most popular color.

Technology has lunged us forward. Most of us have docile jobs with little activity and great stress. At quitting time we retreat to our humble abodes and spend the evening resting up, generally watching other people do massive activity via television through shows such as Survivor and Boot Camp, while eating our 2-bag allotment of lowfat potato chips.

Do you ever notice that when they reduce the number of calories on a trash food-item that most people tend to eat more rather than reap the benefits intended? **"Oh, it has half the calories so now I can eat twice as much. How ingenious! How wonderful!"** Then five years later, **"I just don't understand why I had that massive coronary. I eat so healthy - lowfat and lots of it."**

The types of fats we consume play an important role in our levels of serum or blood cholesterol. **Fats are categorized into what we most commonly refer to as saturated and unsaturated, with unsaturated fats divided into monounsaturated and polyunsaturated. One other fat that's not quite as familiar, and the unhealthiest to consume, is trans fat.**

Saturated fats come mainly from animal sources such as meat and poultry, as well as, milk, butter, and eggs, and can also be found in some vegetable oils. They stay solid or semi-solid at room temperature.

Unfortunately, those delicious fast food restaurants we frequent way too often, serve food

that is loaded with saturated fat. These artery-clogging fats are considered unhealthy and play a major role in blood cholesterol levels. **A diet high in saturated fat may increase LDL (bad) cholesterol levels, while lowering HDL (good) cholesterol levels, this resulting to an increased risk of heart disease.**

Unsaturated fat, although considered the healthier fat, in excess is not necessarily good for you. They're just not as bad as saturated or trans fats. Unsaturated fat is generally found in vegetables. Monounsaturated fat can be found in such oils as, olive and canola oil. They stay liquid at room temperature, but begin to congeal when refrigerated.

Nuts and avocados also contain monounsaturated fat. Polyunsaturated fat can be found in corn, soybean and sunflower oils. Both at room temperature and in the refrigerator, these oils remain liquid. Polyunsaturated fats are the main fats in seafood.

Trans fats are formed when liquid vegetable oils are mixed with tiny metal particles, usually nickel oxide, and subjected to hydrogen gas in a high-pressure, high-temperature reactor. Then, soap-like emulsifiers and starch are squeezed into the mixture to give it a better consistency.

Unpleasant odor is then removed by steam-cleaning the oil at high temperatures. At this point, any natural color is removed by bleach, dyes and flavors are added, and finally, the result is hardened vegetable oils that remain solid at room temperature. Sounds unreal doesn't it? This process is called **hydrogenation.** **Trans fats are added to processed foods for a longer shelf life and enhancement of flavor.**

When eating those tasty fried foods from your neighborhood restaurant, know that they tend to use a lot of trans fats (hydrogenated vegetable oil) to cook with.

The bad news is, these fats are worse for the cardiovascular system and result in a higher risk of heart disease and stroke than the

already unhealthy saturated fat.

A lot of foods we eat contain hidden trans fats but Americans remain clueless as to how much because most food labels do not list this information. While they list the total grams of fat, it does not include trans fat.

The FDA is in the process of changing guidelines to have food manufacturers include trans fat on their labels.

Think about this, when that cookie you are eating lists only two grams of saturated fat per serving, know that it actually contains double that amount when trans fat is taken into account. This goes for a lot of other items, such as, margarine, crackers, baked apple pie, fish sticks, salad dressing, and of course, french fries and doughnuts.

Until these guidelines are changed, we can only render a guess as to how much trans fat processed food contains. **If you see partially hydrogenated oils or fats listed in the ingredients, that food contains trans fat. Although foods containing trans fat are great tasting, it is the worst fat you can eat.** This phantom fat raises LDL cholesterol and lowers HDL cholesterol, increasing the risk of premature heart disease.

When it comes to cancer saturated fats that comes from animal sources such as meat and poultry, as well as, milk, butter, and eggs, and some vegetable oils plus hydrogenated (trans fats) put you at greater risk. Such diets have been linked with an increased risk of breast, lung, colon and prostate cancers. Good enough reason to eat less of these fats!

Remember the body needs certain fats and oils and to satisfy those needs always turn to unsaturated fats found in vegetables and monounsaturated fats found in such oils as, olive and canola oil.

If I'm Good Will I Live Longer?

When one ponders longevity many things go into play. Our bodies are a bit like a car; if you run it

fast and hard and never change the oil, grease the axles or change the fluids you can just about bank that this car will face an early destination to the auto bone yard. The valves will clog (i.e. arteries), the tires will wear out (i.e. heart) and the engine will eventually freeze up (massive coronary).

So yes, if we pamper our bodies it's definitely worth the payoff. This translates into nutritious eating live whole food, exercise and avoiding habitual substances such as alcohol, drugs, and tobacco.

However, other things that influence our final outcome include genetics, mental stability, disease and stress levels (good or bad). Of these we have little control, but again technology is making tremendous strides (ha ha). Toss in Mad Cow and StarLink corn and the formula gets a bit interesting.

Water -- Essential to Life

Water is a fundamental part of our lives. It is easy to forget how completely we depend on it. Human survival is dependent on water -- water has been ranked by experts as second only to oxygen as essential for life. The average adult body is 55 to 75% water. 2/3 of your body weight is water (40 to 50 quarts). A human embryo is more than 80% water. A newborn baby is 74% water.

Everyday your body must replace 2 1/2 quarts of water. The Water you drink literally becomes you! Since such a large percentage of our bodies is water, water must obviously figure heavily in how our bodies function. We need lots of fresh water to stay healthy.

Aside from aiding in digestion and absorption of food, water regulates body temperature and blood circulation, carries nutrients and oxygen to cells, and removes toxins and other wastes. This "body water" also cushions joints and protects tissues and organs, including the spinal cord, from shock and damage. Conversely, lack of water (dehydration) can be the cause of many ailments. In his book, Your Body's Many Cries for Water, Dr. Fereydoon Batmanghelidj noted that

chronic dehydration may cause certain problems for the body, including hypertension, asthma, allergies, and migraine headaches.

Every process in our body occurs in a water medium. We can exist without food for 2 months or more, but we can only survive for a few days without water.

Most people don't drink enough water. The body responds to this water deficiency in a variety of ways, which we frequently see as illnesses. When, many symptoms decrease. Ongoing dehydration may cause actual disease as the body struggles to maintain itself with insufficient water.

How much water should you drink?

A non active person needs a half ounce of water per pound of body weight per day. That is ten 8 ounce glasses a day if your weight is 160 pounds. For every 25 pounds you exceed your ideal weight, increase it by one 8 ounce glass.

An active, athletic person needs 2/3 ounce per pound which is 13-14 8 ounce glasses a day if you're 160 pounds. The more you exercise the more water you need. Spread out your water intake throughout the day. Do not drink more than 4 glasses within any given hour. After a few weeks your bladder calms down & you will urinate less frequently, but in larger amounts.

Short-Term Caloric Restriction Reverses Expression Of Genes Altered By Aging

In old mice, long-term caloric restriction alters genomic expression toward a slow-aging profile, according a report in the early edition of the *Proceedings of the National Academy of Sciences* released on Monday. In addition, short-term caloric restriction also reversed close to 70% of the genome changes induced by age, Dr. Stephen R. Spindler told Reuters Health. Dr. Spindler and colleagues of the University of California at Riverside manipulated the diets of female mice, then conducted genome-wide microarray expression analysis of 11,000 genes in the murine liver tissue.

In control mice fed a normal diet, the expression of 20 genes increased with age. These included genes

associated with inflammation, stress response proteins, and proteins called "chaperones" associated with normal protein conformation.

Twenty-six genes exhibited decreased expression with age, including some involved in DNA replication and the cell cycle, indicating a general loss of negative cell growth control with age. Aging also decreased expression of a group of genes with antineoplastic potential.

The treatment mice were fed a reduced calorie diet beginning at 28 days of age. After 27 months, the restricted diet appeared to prevent 70% of the age-related increases in gene expression seen in control mice. Calorie restriction partially restored hepatic drug-metabolizing and detoxifying functions of the liver. Four weeks of caloric restriction in 34-month-old mice appeared to rapidly reverse many age-related changes in gene expression, reproducing 55% of the effects of long-term restriction.

"These results suggest that caloric restriction may rapidly ameliorate inflammation and other stresses, even in very old animals," the investigators write, as well as "rapidly reproducing the antineoplastic effects of long-term caloric restriction."

This study lays the groundwork for animal studies to identify drugs that can induce the rapid genomic effects of calorie restriction, Dr. Spindler told Reuters Health. He suggested that short studies in humans may also be warranted. The goal would be "to see if we can change biomarkers of aging in accessible tissues back to more useful patterns of gene expression," he said. Caloric restriction may thus represent "a treatment for healthy people to prevent the onset of age-related diseases and to reduce their severity."

Dr. Spindler emphasized, however, that "calorie restriction is not a treatment for people who are already ill." Also, because a critical aspect of caloric restriction is provision of all essential nutrients, he said it will not reverse the aging process in those who are anorexic or bulimic, or in those suffering from starvation.

Dieting May Slow Aging, Study Suggests

After only a month on a very low-calorie diet, the gene activity of mice in a scientific study was altered nearly as significantly as that of animals who follow such a diet on a long-term basis. The study suggests that the effects of a low-calorie diet may be enjoyed even by people starting late in life, says Stephen R. Spindler, senior author of the study, scheduled for publication

next week in the *Proceedings of the National Academy of Sciences*.

Dr. Spindler linked the effects of cutting calories to quitting smoking, which confers benefits soon after the habit is kicked, although those who quit earlier in life experience the benefits longer.

For many years, researchers have been showing that mice live longer when fed a diet 30% to 40% lower in calories than what would normally be considered adequate. The reasons for the life extension remain poorly understood, however. Several studies have shown that the activity of dozens of genes are altered during such diets, suggesting a complex biochemical mechanism may be at work. No one knows yet if the results extend to humans.

In the current study, researchers observed the genetic "expression profile," a measure of whether genes are active at any given time, in mouse livers. Forty-six liver genes showed drastically different levels of activity in normal, aging mice, than they did in younger mice; some were more active, others were less active. That suggests they play some role in aging.

Of the 46 genes, 27 reverted to a more youthful activity profile in mice who ate the low-calorie diet for more than a year. But only four weeks on the diet was enough to create the youthful profile in 19 of those 27 genes, or about 70% of them.

Mark Lane, an antiaging researcher at the National Institutes of Health, says the study is potentially important. But he adds that its implications are unclear because scientists haven't yet shown that mouse genes that grow more or less active during aging are really the cause of the process. "You have to study each one, and determine whether it is really related to aging," Dr. Lane says. Dr. Spindler agrees that the role of the genes in aging is unproven, but says that many are linked to known functions, such as cell death in response to damage, which could be linked to aging. A major plus of the finding, he adds, is that it should give scientists a quicker way to screen drugs that mimic the purported antiaging effects of low-calorie diets. Dr. Spindler has founded a company, LifeSpan Genetics Inc. of San Jose, Calif., to market such a screen to drug companies.

Low-Calorie Diet Given To Mice May Be



Key To Longevity In Humans



Putting elderly mice on a very low-calorie diet for as little as four weeks reversed many of the changes in the activity of various genes that had accumulated during normal aging, according to a new study.

Such research, which used a new technology to point which genes are active in mice at different ages, may help scientists understand how calorie restriction extends animals' lifespan and, eventually, to develop longevity therapies for humans.

"My work shows that calorie restriction not only prevents [age-related] changes" in gene activity, "but very quickly reverses the majority of the changes that take place with age," said Stephen R. Spindler, a professor of biochemistry at UC Riverside and an author of the study.

Huber Warner, associate director of the biology of aging program at the National Institute on Aging, said the results were interesting but needed to be confirmed. Until recently, he said, scientists have been able to examine aging's effects on relatively few genes, but the new technology enables a "vast number of genes [to] be looked at" simultaneously.

Severe calorie restriction is the only treatment that consistently has been shown to extend mammals' lifespan, although its effectiveness in people is unproven. In animals, it lowers the incidence of cancer and delays the onset of other age-related diseases. Although scientists have theorized that low-calorie diets may reduce age-related cell damage and decrease levels of cancer-promoting growth factors, they have only recently been able to examine how such diets affect many of the approximately 30,000 genes in a mouse or human.

Spindler and colleagues used a method called microarray technology to analyze which of 11,000 genes were expressed-or used to provide instructions

for making proteins-in the livers of young and old mice. They also tested the effect of calorie restriction on gene expression. Some mice were fed a low-calorie diet-just enough to prevent starvation-from the time they were weaned; others were switched from a normal to a low-calorie diet for four weeks starting when they were 34 months old.

The scientists found 20 genes whose expression increased with age. Several were associated with inflammation, a process that in the liver can contribute to the development of cirrhosis or cancer. In 14 of the 20 genes, long-term calorie restriction completely or partially prevented the age-related changes. Switching mice to the low-calorie diet at 34 weeks of age reproduced about 70% of the effect of keeping animals on a low-calorie diet lifelong, Spindler said. That suggests that if there are health benefits of calorie restriction in humans, some of those benefits could be obtained by reducing calories even in old age. The Washington Post, by Susan Okie. Copyright 2001. Reprinted with permission.

To Sum It Up!

Remember when we talk about restricting your calories please do so with the "live whole foods and not overheated, processed, animal, or dairy food. You will need a lot more of the so-called "bad foods" to actually match or absorb anything near what your body will absorb from the good foods. This is the main problem with our society being so overweight.

If you are 20 years of age or older and wish to participate in a high nutrition lower calorie diet without going hungry, determine your weight and times it by 8.5. This will give you a ball park figure on how many calories per day you need to maintain your energy and at the same time to restrict your calorie intake.

If you just want to lose weight down to your "set point", maintain your present weight, or improve your health, then times your weight by 10. This will determine the average number of calories per day you want to maintain. As long as you eat the "Live Whole Food Diet" that we suggest you will also receive a high amount of nutrition's in your diet **Ok where can I get the live whole foods that will supplement my diet and give me the energy I need to regenerate health?**

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