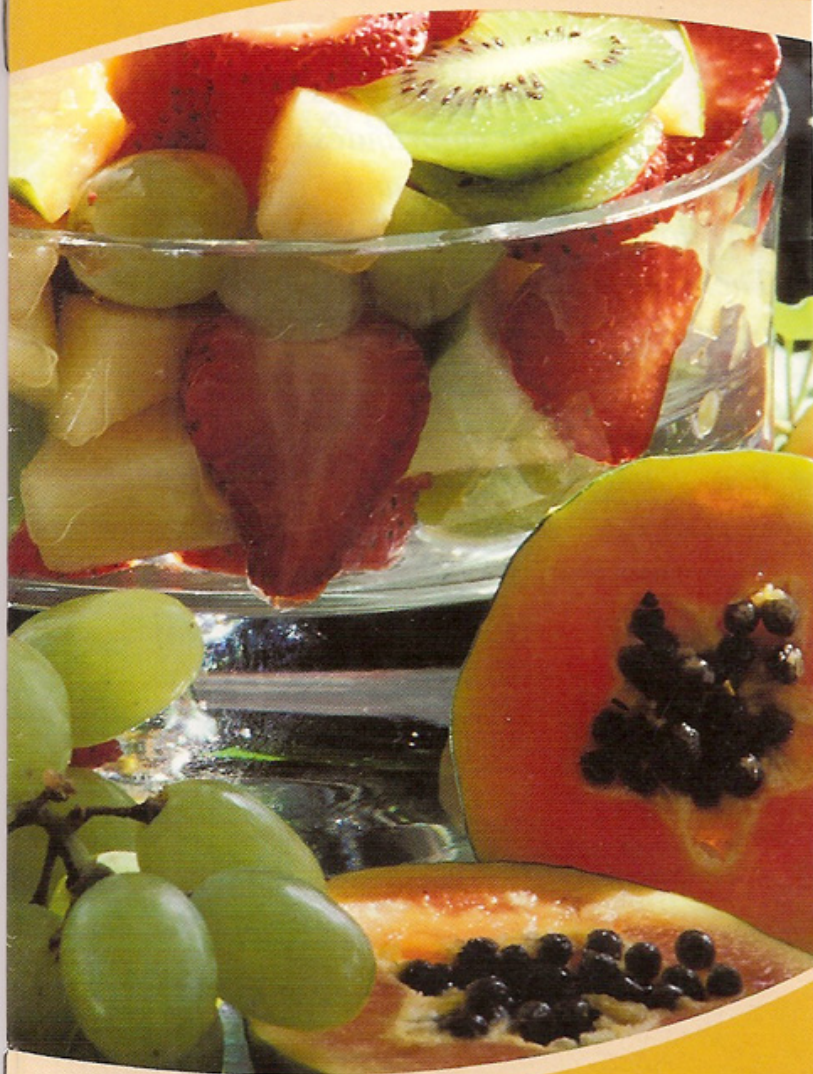


Nutrition



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Nutrition

Almost everyone knows that good nutrition contributes to good health, but it can be difficult to sort through all the available details. There are mountains of books and pamphlets. It seems that every health-related Web site has advice to offer. If you ever do finally narrow down the information, you are then faced with the challenge of interpreting all the terms and figures. The purpose of this brochure is to guide you through some of the basics of good nutrition and help you find sources of more detailed information you can trust.



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The Case For GOOD NUTRITION

There are many ways diet affects your health, but the “big picture” is your weight. In the U.S. today, the weight “picture” is getting bigger all the time. Over 30% of adult Americans—over 60 million people—are now considered obese. These numbers have been steadily increasing at a rate that many health experts consider obesity a national epidemic.

Obesity is not simply a matter of your appearance or comfort, it is associated with a list of medical conditions. We all know about the dangers of smoking, but many are surprised to learn the risks of obesity are almost as great. In fact, it is expected that obesity will soon surpass tobacco use as the leading cause of preventable deaths in the U.S.

The Risks of Obesity

Obesity has been associated with greater risk for:

- Type 2 diabetes.
- Heart disease, high blood pressure, and stroke.
- Certain cancers
 - In men – colon, rectal, prostate.
 - In women – gallbladder, breast, uterine, cervical, ovarian.
- Gallbladder disease and gallstones.
- Liver disease.
- Osteoarthritis.
- Gout.
- Breathing problems, including sleep apnea.
- Reproductive problems in women, including menstrual irregularities and infertility.

Sources: National Institutes of Health –
National Heart, Lung, and Blood Institute.

Just because it is unhealthy to be too heavy, don't assume it is good to be “as skinny as a rail.” Being underweight has also been linked to a number of health problems.

Finding Your **HEALTHY WEIGHT**

An effective and commonly used weight screening measurement is the body mass index, also called BMI. Your BMI is a number derived from a calculation of your weight relative to your height. This is considered a reliable indicator of total body fat. You can easily determine your BMI using a chart or one of several calculators that are available on the internet.

By the Numbers

According to BMI measures:

- Underweight <18.5
- Normal Weight 18.5-24.9
- Overweight 25-29.9
 - Overweight individuals who also have two or more other health risk factors are usually advised to lose some weight.
- Obesity BMI of 30 or greater
- Guidelines recommend weight loss for all persons in this category. The National Heart, Lung, and Blood Institute (NHLBI) further divides obesity into the classes:
 - Class I: BMI = 30.0 – 34.9
 - Class II: BMI = 35.0 – 39.9
 - Class III (extreme obesity) BMI = 40.0 and greater
- Disease risk for type 2 diabetes, high blood pressure, and cardiovascular disease is increased according to the class of obesity.

BMI: One Size Fits All?

The ideal healthy weight varies from one individual to another – it is definitely not “one size fits all.” BMI scores are reliable indicators and they are valid for both men and women, but they do have some limits:

- BMI may **overestimate** body fat in athletes and others who have a muscular build.
- BMI may **underestimate** body fat in older persons and others who have lost muscle mass.
- Appropriate weight gain during **pregnancy** varies and depends upon initial body weight or BMI level.

The best weight for you should take into account many of the characteristics that make you unique as an individual. Age, gender, body shape, family history, and the presence of heart disease, diabetes, or other medical conditions are some of the factors to be considered. Your doctor can help you determine what weight is best for you. Pregnant women should contact a health professional to assure appropriate weight gain during pregnancy.

Some BMI Examples:

	BMI	22 normal	28 over- weight	34 obese	40 extremely obese
	Height				
	5' 6"	136	173	210	247
	5' 10"	153	195	236	278
	6' 2"	171	218	264	311

Source: National Institutes of Health –
National Heart, Lung, and Blood Institute.

Dietary Guidelines

For Americans 2005

Dietary Guidelines for Americans 2005, published jointly by the U.S. Department of Health and Human Services (HHS) and the U.S. Department of Agriculture (USDA), is based upon what experts consider to be the best current scientific knowledge to help people lead healthier lives. Good nutrition is presented as part of a larger healthy lifestyle program – the other key ingredient is physical activity.

Key Recommendations:

Know What You Need

The word “calorie” is often misunderstood. In the area of nutrition, it refers to the amount of energy stored in food. Metabolism is the word meaning the process by which the body breaks down food to release this energy. The body uses this energy as fuel to power movement, thought, growth, and all its vital functions. Any of this energy not used by the body is stored for future use in the form of fat cells.

So, if you are consuming more calories than your body is burning, you will be building up more fat cells. When your body burns more fuel than it takes in, you lose weight by making the body burn its stored energy; the energy stored in fat cells. You make the body burn its stored energy by eating less, being more active, or both.

If you are already at a healthy weight, your goal is to maintain that weight. To do so, you need to achieve a balance of taking in only the amount of energy your body needs to fuel its activities. In other words, eat the same number of calories your body burns.

How many calories your body needs to maintain this “energy balance” depends upon your age, gender, and overall activity level. Dietary Guidelines for Americans 2005 provides a chart to help you determine the number of calories your body needs.

Nutrients Of Concern

Experts studying American eating habits discovered a number of unhealthful patterns. In addition to consuming too many calories generally while getting too little physical activity, there is evidence that Americans may not be getting enough of certain specific nutrients.

Estimated Calorie Requirements

Gender	Age (years)	Activity Level		
		Sedentary	Moderately Active	Active
Female	2-3	1,000	1,000-1,400	1,000-1,400
	4-8	1,200	1,400-1,600	1,400-1,800
	9-13	1,600	1,600-2,000	1,800-2,200
	14-18	1,800	2,000	2,400
	19-30	2,000	2,000-2,200	2,400
	31-50	1,800	2,000	2,200
Male	51+	1,600	1,800	2,000-2,200
	4-8	1,400	1,400-1,600	1,600-2,000
	9-13	1,800	1,800-2,200	2,000-2,600
	14-18	2,200	2,400-2,800	2,800-3,200
	19-30	2,400	2,600-2,800	3,000
	31-50	2,200	2,400-2,600	2,800-3,000
	51+	2,000	2,200-2,400	2,400-2,800

Source: <http://www.health.gov/dietaryguidelines/dga2005/document/pdf/Chapter2.pdf>



The “nutrients of concern” for adults:

Calcium – Calcium contributes to the functioning of your muscles, blood vessels, and nervous system. A calcium deficiency is one factor contributing to risk for osteoporosis, a disease in which the bones become fragile. Osteoporosis is associated with hip, vertebrae, and other bone fractures.

Potassium – Some estimates suggest most Americans get only half the recommended daily amount of potassium. This mineral helps control blood pressure and reduces the risk of stroke; it may also help prevent the loss of bone associated with osteoporosis.

Fiber – Your body gets the nutrients it needs by breaking down the foods you eat and then absorbing the nutrients that food contained. Dietary fiber is different. It cannot be digested; it is not absorbed; and it basically just “passes through” the body, but this process contributes to good digestive health. Fiber is also believed to help reduce the risk of heart disease, diabetes, and possibly some cancers.

Magnesium – Magnesium is involved in over 300 metabolic reactions. Metabolic reactions involve the chemistry of living cells and contribute to the body’s many vital processes.

Vitamins A, C, and E –

- Vitamin A contributes to healthy teeth, bones, skin, body tissues and also promotes good vision.
- Vitamin C is needed for the growth and repair of tissues all over the body. It helps form a protein called collagen which is used to make skin, scar tissue, tendons, and ligaments. Vitamin C also contributes to the body’s “repair work” – it helps with wound healing and the repair and maintenance of cartilage and bones.
- Vitamin E acts as an antioxidant, meaning that it serves to protect the body from particles called free

Sources of:

Vitamin A (carotenoids)

- Bright orange vegetables like carrots, sweet potatoes, and pumpkin
- Tomatoes and tomato products, red sweet peppers
- Leafy greens such as spinach, green leaf lettuce, and romaine
- Orange fruits like mango, cantaloupe, apricots, and red or pink grapefruit

Vitamin C

- Citrus fruits and juices, kiwi fruit, strawberries, papaya, and cantaloupe
- Broccoli, peppers, tomatoes, and potatoes
- Leafy greens such as romaine, turnip greens, and spinach

Potassium

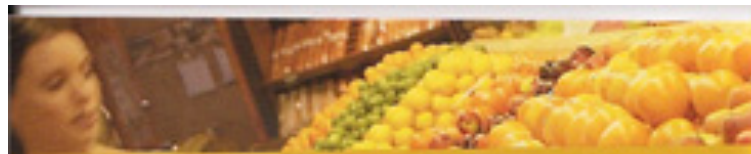
- Baked white or sweet potatoes, cooked greens (such as spinach), winter (orange) squash
- Bananas, plantains, many dried fruits, oranges and orange juice, cantaloupe, and honeydew
- Cooked dry beans
- Soybeans (green and mature)
- Tomato products (sauce, paste, puree)

radicals. Free radicals are unstable substances that cause damage to body cells and tissues; they are also believed to be associated with the degeneration that comes with aging. (Vitamin C also has antioxidant properties.)

The “Good Foods”

Fruits and Vegetables

- Two cups of fruit and 2 cups of vegetables are recommended.
- Eat a variety of fruits, rather than drinking fruit juices.
- Eat more dark green and orange vegetables; also more beans and peas.



- Consume three or more ounces of whole-grain products per day; at least half of your total daily grains should be whole grains. Whole grains are the best source of dietary fiber. Grains are plant seeds. In their natural form they have three major parts – the bran, the germ, and the endosperm. As the name suggests, a whole grain includes all of these three parts. Other grains, or refined grains, have had both the bran and germ removed.

- Get three cups per day of fat-free or low-fat milk, or equivalent products such as low-fat yogurt or cheese.

- Choose lean meats and poultry; vary protein choices with more fish, beans, peas, nuts, and seeds. Meats should be baked, broiled, or grilled.

Limit Your Intake

Saturated fats – limit to less than 10% of total daily calories. These contribute to high cholesterol, which increases risk of heart disease and several other conditions. Meat and whole milk products are the main sources.

Whole Grains in the U.S.

Whole wheat
Whole oats/oatmeal
Whole-grain corn
Popcorn
Brown rice
Whole rye
Whole-grain barley
Wild rice
Buckwheat
Triticale
Bulgur (cracked wheat)
Millet
Quinoa
Sorghum

Sources: Agriculture Research Service Database for CSFII 1994–1996.



Trans fats – keep as low as possible. Trans fats are formed as part of the processing of vegetable oils into food products such as margarine, shortening, and a large variety of processed “snack foods.”

Cholesterol – less than 300 mg per day.

Sodium (salt) – choose and prepare foods with little salt; limit daily intake to 2,300 mg – approximately 1 teaspoon. Most Americans consume nearly three times the recommended daily limit. Perhaps surprisingly, the salt shaker on your table is not the greatest sodium culprit; over three-quarters of dietary sodium comes from processed foods.

Physical Activity

Physical activity is an important part of the guideline recommendations on diet and nutrition. Exercise burns calories and can help you maintain that “energy balance” discussed earlier in this brochure. How important are these excess calories? Eating only 100 food calories more per day than your body burns means that you will gain about one pound in a month, or more than 10 pounds in a year.

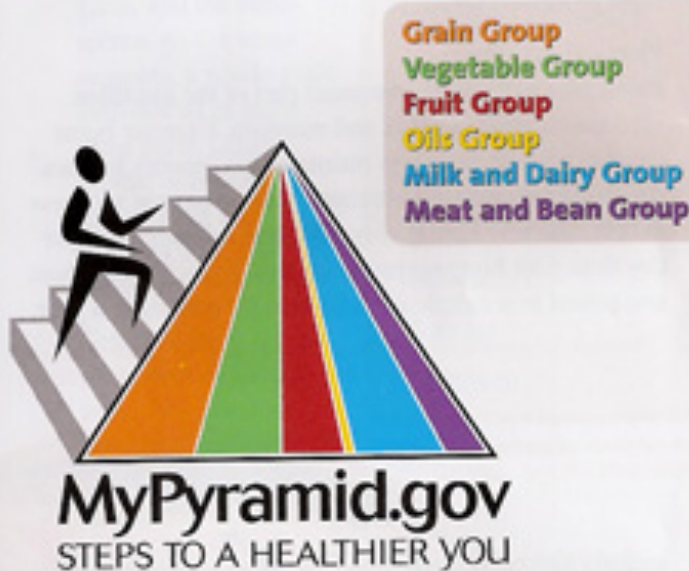
Sources: U.S. Department of Health and Human Services; U.S. Department of Agriculture. Dietary Guidelines for Americans 2005.



Tools You Can Use

The Food Guide Pyramid

The Food Guide Pyramid is not a rigid diet of specific foods and certain amounts you **MUST** eat every day. Instead, it is a general guide to a healthful diet that allows many choices within different food groups. It emphasizes eating a variety of foods and balancing your intake with physical activity.



The DASH Eating Plan

DASH is an acronym for Dietary Approaches to Stop Hypertension (high blood pressure). The DASH plan provides a guide to healthful eating that is beneficial to anyone, but it is especially suited to those with high blood pressure. The DASH plan emphasizes reducing the amount of fats and sodium in your diet while promoting fruits, vegetables, lowfat dairy products, and whole grains.

For Special Needs

The presence or risk of certain medical conditions may affect your diet. You certainly want to avoid foods to which you are allergic. And dietary needs are affected by age, activity level, and other considerations. Whether you think you may have specialized needs or not, ask your doctor about nutrition, exercise, and what kind of healthy lifestyle plan is best for you.

For More on Nutrition, Physical Activity, and Healthful Living...

The United States Department of Health and Human Services (HHS) has a free Web site where you can find clear and accurate information on a variety of subjects to help you lead a healthier and more active life. Go to the site's home page at www.healthierus.gov and click on any of these headings to find detailed information on a variety of subjects:

- **Nutrition**
- **Physical Fitness**
- **Prevention** (*preventive screening*)
- **Make Healthy Choices** (*avoid risky behaviors*)

Dietary Guidelines for Americans 2005

The Food Guide Pyramid

The DASH Eating Plan

The complete guidelines and plans listed above can also be accessed at www.healthierus.gov. From the home page, click on the box in the upper right labeled Dietary Guidelines for Americans 2005 and you will be taken to a page where you can view or print free copies. That page also provides access to information on food safety, labeling, adult energy needs, calculating BMI, determining your activity level, and more.

To Learn More About Nutrition ...

Do you have more questions about Nutrition, Physical Activity, and Healthful Living? Go to www.patienteducationcenter.org for over 50 different entries for high blood pressure providing information on:

- Medications • Tests • Management
- Diet, Exercise, and Healthy Living
- Risks, Symptoms, and Complications ... *and More.*

- > Go to www.patienteducationcenter.org.
- > Click on *Search Health Information*.
- > Enter *Nutrition* in the text box.
- > Click on *SEARCH* or hit *ENTER*.
- > Scroll down list of topics; click on topic of choice for more information.

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