

Food For Thought

Vitamins and minerals play a key role in chemical reactions of the body. There are two classes of vitamins: water soluble (B vitamins and C) and fat soluble (vitamins A, D, E, & K). Water soluble vitamins circulate freely throughout your body and excesses are excreted in the urine, so that overdoses rarely occur. Fat soluble vitamins are absorbed and stored in the body. Due to this storage, consuming too much of a fat-soluble vitamin can be harmful!

Minerals form structural components in the body and participate in key chemical reactions. There are approximately 25 minerals that are important for good nutrition. And like fat soluble vitamins, some minerals are toxic if taken in excess (e.g. iron, copper, chlorine, magnesium, manganese, iodine, fluoride).

Although all the vitamins and minerals are important to your health, some nutrients have recently received special attention.

THE ANTIOXIDANT VITAMINS

Scientists have shown that with the help of antioxidant nutrients (vitamins C, E, beta carotene and selenium), our bodies are better equipped to prevent the development of certain chronic medical conditions including cancer, cardiovascular and immune diseases, cataracts and perhaps aging itself.

Our bodies can produce and take in from the environment substances called "free radicals." These substances can damage important body tissues resulting in development of the medical conditions listed above. Studies have shown that the body defends against such damage with the help of antioxidant nutrients. It is believed that meeting the Daily Value or RDA for these nutrients is sufficient to provide these benefits. Food sources of antioxidants include fruits and vegetables, whole grain products and cereals, as well as fish and other seafood.

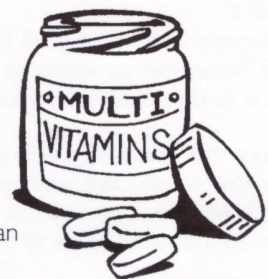
CALCIUM

It is critical that you consume adequate amounts of the mineral calcium to reduce your risk of developing osteoporosis, a disease which causes bones to become fragile, porous and more susceptible to fractures. In addition to helping to build strong bones and teeth, calcium also aids in muscle contraction and regulation of heart rhythm, the functioning of the nervous system, the activation of enzymes and blood clotting. A National Institute of Health Consensus Panel recommends 1000mg of Calcium or more per day for adults over the age of 25. Milk, yogurt and many of the **Advanced Health Systems®** Nutritional Food Products are excellent sources of calcium. Vegetables (such as broccoli and kale), canned salmon, sardines, and calcium fortified orange juice are also good ways to increase your calcium intake.

CHOOSING HEALTHY ALTERNATIVES

Eating a wide variety of foods is the best way to satisfy your body's nutritional needs; however, it is difficult to consume all needed vitamins and minerals with a reduced calorie diet. Therefore, a multivitamin supplement is recommended. Here are some guidelines to help you overcome the challenge of choosing a daily multivitamin:

- ▶ Select a supplement which provides several vitamins and minerals rather than one pill for each vitamin and mineral you want to take. It's not only easier to remember to take 1 daily pill, but also more economical.
- ▶ Be sure to include fat soluble vitamins (A, D, E), B vitamins (thiamin, riboflavin, niacin, B6, B12, folate, pantothenic acid), Vitamin C and minerals (copper, iron, zinc).
- ▶ Look for a multivitamin 200% - that provides 100% of the US RDA or Daily Value for the major vitamins and minerals. However, remember that doses that are 5-10 times higher than the RDA may be harmful to you.



Body Basics

DETERMINING YOUR HEART RATE

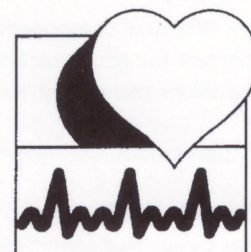
Aerobic activities can strengthen your heart. For an activity to be considered 'aerobic', it must be performed at an intensity that makes your heart work harder than it normally does. The intensity of an activity can be estimated using your heart rate. Calculate your heart rate in the space provided.

1. Subtract your age in years from 220 to estimate your maximum heart rate.

$$220 - \text{My Age} = \text{Max HR}$$
$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

2. Multiply your maximum heart rate by 60% to find the lower limit of your aerobic intensity and by 90% to find the upper limit.

$$\text{Maximum heart rate } \underline{\quad\quad} \times .60 = \underline{\quad\quad} \text{ beats/minute}$$
$$\text{Maximum heart rate } \underline{\quad\quad} \times .90 = \underline{\quad\quad} \text{ beats/minute}$$



For the best heart-strengthening effects, your heart rate during an aerobic activity should be between these two numbers. Exercising continuously for 20 minutes, 3 days per week is the best way to improve your heart fitness. Exercising longer (30 - 60 minutes) is more helpful for weight reduction.

WHEN INJURIES OCCUR

1. If an injury causes radiating or severe pain and makes moving the affected body part difficult, and/or if swelling or numbness occur, see your physician as soon as you can.
2. For pain that develops gradually, REST. Stop exercising for a few days to let your muscles recover. Remember the following tips for treating minor pain and injuries:

ICE: Cold reduces swelling and relieves pain. Keep ice on an injured area for: 10 - 20 minutes. (Ice left on longer than 20 minutes can damage the skin and nerves.) Reapply every few hours for 48 hours.

COMPRESSION: A towel/elastic bandage wrapped around the injured area helps reduce swelling and bruising.

ELEVATION: If you injure a limb, prop up the leg or arm to reduce swelling. Do not use heat! Heat increases blood flow and makes swelling worse. When swelling decreases (usually within 48 hours), use heat (20 - 30 minutes, a few times a day, to relieve pain, relax the muscles, and reduce stiffness).

3. Once you're pain free, resume exercising lightly, include flexibility exercises in your program and gradually increase your activity level over the course of 2 - 3 weeks. To prevent reinjury, determine what originally caused your injury and correct the problem, if possible.

ACTIVITY

Increase your walking program to a 15 minute walk, 4 times per week. If you're already at this level, try a 20 minute walk, 4 times weekly. Remember to warm up and cool down. On the days you don't plan to walk, do at least two stretching exercises and continue to do the activities you started during Lesson # 1.

To assure that you are benefiting from the walking program, take your heart rate before, during and after your walking routine. Here's how to calculate your heart rate. Count your pulse for 10 seconds. (To locate your pulse, gently press your index and middle fingers on your neck just under your jaw. Slowly slide your fingers toward the middle of your neck until you feel a pulse.) Multiply that number by six to determine your beats per minute. This number is your heart rate.

Try to achieve a heart rate between the two numbers you calculated above. If your heart rate is below the lowest number, try walking a bit faster to increase the intensity of your walk (and your heart rate). If your heart rate is above the highest number, CAUTION... decrease the intensity of your walk to lower your heart rate.