How to stay cool while exercising in hot weather

Your body is a fine-tuned water-cooler machine. Its temperature is controlled by a delicate process dependent upon adequate water intake and the function of the circulatory system and sweat glands.

During exercise on a warm day body heat production rises, causing perspiration. As perspiration evaporates, the skin is cooled. At the same time, the circulatory system moves excess heat from the body's warmer core to its cooler outer surface by increasing the amount of blood flow through the skin.Water is the most critical link in this process--necessary to provide enough blood volume to move heat from the warmer core and to produce perspiration that cools the body as it evaporates.

In most instances this process adequately controls body temperature. However, temperature control can be short-circuited by several factors: a water intake that fails to keep pace with losses through perspiration; high humidity, preventing evaporation of perspiration; and high air temperature or bright sunshine, causing your body to soak up unwanted heat.

Heat illnesses. When your body produces more heat than it loses, especially if water intake is inadequate, body temperature can rise, causing heat illnesses. The two major types are heat exhaustion and heatstroke.

Signs of heat exhaustion include moderate elevations in body temperature (101[degrees]F to 102[degrees]F), increased heart rate, fatigue, dizziness, nausea, headache, and shortness of breath. A person experiencing these symptoms should stop exercising, move to where it's cooler, and drink plenty of water.

Continuing to exercise can result in further elevations of body temperature and lead to heatstroke. At a body temperature of about 106[degrees]F the brain loses its ability to control body temperature and the body becomes defenseless against heat. Perspiration stops, the skin becomes hot and dry, and body temperature quickly rises unless emergency treatment is given.

If you see someone with symptoms of heatstroke, call an ambulance immediately. While help is on the way, quickly cool the person's body with a garden hose, wet towels, fans, or an ice water bath. Heatstroke is a medical emergency, and without prompt treatment brain damage will likely occur.

Drink ample water before, during, and after hot-weather exercise. "The thirst mechanism isn't always an quate indicator of how much water a person should drink. People exercising in hot, humid weather should forcedrink--in other words, drink more water than necessary to just satisfy thirst," says Dr. Robert L. Hammer, associate professor of health science at Central Michigan University.

Some sports medicine experts recommend drinking 16 ounces of water before exercising, 8 ounces every 15 to 20 minutes during exercise, and 16 ounces at the end of the workout.

What about sports drinks containing carbohydrates and electrolytes? Dr. Richard Parr, professor of health science at Central Michigan University, recommends plain water as the best beverage for most people. "Plain cool water is absorbed into the body faster than are carbohydrate beverages," says Parr. "The more sugar a beverage has in it, the slower the fluid from that beverage is absorbed and the less effective it is at replacing body fluids lost through sweat. For most people it's more important to replace water than to provide extra calories as carbohydrate. Another advantage to water is its cost compared to sports drinks."

During extended exercise (for example, a marathon), consuming a carbohydrate drink can help maintain blood sugar levels and prolong exercise. For most people, though, carbohydrate beverages are not necessary as long as adequate carbohydrate is consumed with meals. Electrolytecontaining beverages are not needed except in extreme endurance events such as ultramarathons. As with carbohydrates, food supplies all the electrolytes most of us need.

Respect the heat. Monitor the temperature and humidity and adjust your exercise plans to suit the weather. Respect the heat.

Loose-fitting clothing will allow air to circulate freely close to your body and promote the evaporation of sweat. Light-colored clothing reflects sunlight, helping you stay cool.

Allow your body several days to adjust to hot weather before engaging in vigorous activity. Some experts say it takes your body about 10 days to adapt. If you are out of shape, begin your exercise program slowly and gradually increase it. If you have any questions about your ability to exercise, see your doctor, especially if you take medications, because some can reduce heat tolerance.

Above all, enjoy yourself. Exercise is great any time of year, even in the summer.

Cooldown Important

Don't jump into a cold shower immediately after hot-weather exercise. The sudden temperature change taxes your heart muscle while it's still recuperating from the strain of exercising in the heat. It's better to cool down first. Do some stretches or walk slowly for about 10 or 15 minutes to allow your core temperature to return to normal.