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TITLE=SCIENCE IN THE NEWS #2137 – Heat and Health

BYLINE= Oliver Chanler

VOICE ONE:

This is Bob Doughty

VOICE TWO:

And this is Sarah Long with the VOA Special English program SCIENCE IN THE NEWS. Today, we will tell about some health problems linked to heat. And we tell about what you can do to prevent and treat these problems.

((THEME))

VOICE ONE:

Extremely hot weather is common in many parts of the world. Although hot weather just makes most people hot, it can cause medical problems -- and death.

Parts of the United States have had extremely hot weather recently. One professional football player died of heat stroke after training in the heat in Mankato, Minnesota two weeks ago. At least fifteen people have died as a result of the hot weather in Chicago, Illinois so far this summer.

In Nineteen-Ninety-Five, more than six-hundred people died in a similar heat wave in Chicago. Floods, storms and other terrible natural events kill thousands of people every year. And, as expected, we hear much about them in news reports. We generally hear little, however, about what experts say may be nature's deadliest killer -- heat.

VOICE TWO:

Health experts say that since the year Nineteen-Hundred, extremely hot weather has killed more people in the United States than any other natural event. One year -- the unusually hot summer of Nineteen-Eighty -- heat was linked to more than one-thousand deaths in the United States.

Doctors say there are many things people can do to protect themselves from the dangers of extreme heat. They say to stay out of the sun, if possible. Drink large amounts of cool water. Wear loose clothes made from light-colored natural materials. And learn the danger signs of the medical problems that are linked to heat.

## VOICE ONE:

The most common medical problem caused by hot weather is heat stress. Usually, it also is the least severe. There are many causes for heat stress. These include hard work or exercise, heavy clothes, hot weather or high humidity. Humidity is the amount of water in the air. Several of these conditions together can raise a person's body temperature above safe limits. The person perspires heavily, losing large amounts of body water and salt.

## VOICE TWO:

For most people, the only result of heat stress is muscle pain. The pain is a warning that the body is becoming too hot. Doctors say drinking water will help the pain disappear after the body again has the right amounts of water and salt.

For some people, however, the result is much more serious. For people who are not in good health, heat can make an existing medical problem worse.

## VOICE ONE:

For example, doctors say some people face a greatly increased danger from heat stress. These people have a weak or damaged heart, high blood pressure, or other problems of the blood system. Severe heat can help cause a heart attack or stroke. Health experts say this is the most common cause of death linked to hot weather.

Doctors say severe heat also increases problems for very small children, older people and people suffering the disease diabetes. It also is bad for people who weigh too much and have too much body fat, and for people who drink alcohol.

Hot weather also increases dangers for people who must take medicine for high blood pressure, poor blood circulation, nervousness or depression.

((MUSIC BRIDGE))

## VOICE TWO:

If heat stress is not treated, it can lead to a more serious problem called heat exhaustion. Perspiration is one of the body's defenses against heat. It is a process during which the body releases water to cool the skin. However, a person suffering from heat exhaustion loses too much water through perspiration. The person becomes dehydrated.

The person's ability to work and think becomes sharply limited. Experts say a reduction of only four or five percent in body water leads to a drop of twenty to thirty percent in work ability. The loss of salt through perspiration also reduces the amount of work that muscles can do.

A person suffering from heat exhaustion feels weak and extremely tired. He or she may have trouble walking normally. Heat exhaustion also may produce a fast heart beat, breathing problems, headache, chest pain and a general feeling of sickness.

Doctors say people suffering from these problems should move to a cool place and drink water.

VOICE ONE:

Heat exhaustion can develop quickly. But it also can develop slowly, over several days. Doctors call this disorder dehydration exhaustion. Each day, a person's body loses only a little more water than is taken in. The person may not even know the problem is developing. But if the problem continues for several days, the effects will be the same as the usual kind of heat exhaustion.

The treatment for dehydration exhaustion is the same as for heat exhaustion. Drink large amounts of water, and rest in a cool place if possible.

VOICE TWO:

Heat exhaustion can lead to heat stroke if it is not treated. With heat stroke, the body temperature rises to more than forty degrees Celsius. The body stops perspiring. And the skin becomes dry and very hot. A person may even become unconscious.

Doctors say that if the body temperature goes higher than forty-two degrees Celsius, the body's tissues and organs begin to cook. Permanent brain damage may result. Often death results.

Immediate medical help is necessary for someone with heat stroke. Doctors say treatment should begin immediately or the person could die before medical help arrives.

VOICE ONE:

Immediate treatment should begin by moving the victim out of the sun. Then, take off the person's clothes. Pour water over the victim's body. And, if possible, put pieces of ice in areas where blood vessels are close to the skin. These areas include the neck, under the arms and where the legs join.

The purpose is to cool the victim as quickly as possible to stop the body's temperature from increasing. Experts say it is important to know the danger signs of each of the medical disorders linked to hot weather. And they say you should know what to do if the signs appear.

((MUSIC BRIDGE))

VOICE TWO:

Experts say water is important for many health reasons. The body itself is mostly water -- more than sixty-five percent water. Water in blood carries hormones and antibodies through the body. Water in urine carries away waste materials.

Water also is needed for cooling the body on hot days, and when we are working or exercising. Water carries body heat to the surface of the skin. There, the heat is lost through perspiration.

VOICE ONE:

Health experts say adults should drink about two liters of liquids each day to replace all the body water lost in urine and perspiration. They say people should drink more than that in hot weather. They say we should drink liquids even before we start to feel like we need something to drink. This is because we sometimes do not feel thirsty until we already have lost a lot of body liquid.

We get some of the water we need in the foods we eat. Most fruits and vegetables are more than eighty percent water.

VOICE TWO:

In hot weather, cold liquids are best. They do more than just replace lost body water. Doctors say cold liquids also help cool us faster than warm liquids. This is because they take up more heat inside the body and carry it away faster.

Researchers also say, however, that sweet drinks are not good. The sugar slows the liquid from getting into the blood system. Tea and coffee also are not effective. Doctors also warn against alcoholic drinks. Alcohol speeds the loss of body water through urine.

VOICE ONE:

In addition to drinking lots of cool water, doctors say there are other things to do to protect against the health dangers of heat. Stay out of the sun, if possible. Wear loose, light-weight and light-colored clothes. Wear a hat or other head cover while in the sun. Eat fewer hot and heavy foods. And when possible, cook foods during cooler times of the day. If possible, rest more often. Physical activity produces body heat.

Health experts say these simple steps can prevent the dangerous health problems linked to heat. They will prevent sickness, help you feel better and may even save your life.

(THEME)

VOICE TWO:

This SCIENCE IN THE NEWS program was written by Oliver Chanler. It was produced by Caty Weaver. This is Sarah Long.

VOICE ONE:

And this is Bob Doughty. Join us again next week for more news about science, in Special English, on the Voice of America.

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