Exposure to heat can be dangerous

Exposure to extremes of heat or humidity car create a dangerous degree of stress. To persist with strenuous exercise under such conditions, ignoring weakness, dizziness, a throbbing head,

cramps or nausea, is to flirt with disaster! In the United States alone, during the last decade, approximately 50 football players have died as a direct result of heat stress. Heavy, heattrapping uniforms, combined with hot, humid conditions, lengthy workouts and too little water, make for a deadly set of circumstances

The risks aren't confined to football players though. Older people, those with circulatory disand the overweight are especially orders. vulnerable, and even the well-conditioned young athlete can be struck down if certain precautions aren't taken.

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Water Loss

Hot weather workouts can also produce a dangerously high loss of body fluid. Football players have been known to lose up to 15 pounds during a strenuous, two-hour workout. Distance running on a hot day can create sweat losses that may total as much as 10% of the athlete's total bodyweight!

Heat and Humidity

Heat problems can occur when either the air temperature or humidity is very high. When they occur together though, they form a particularly dangerous combination.

For example, on an unusually warm day, 32 degrees C (90 degrees F) or higher, the air is so warm that little or no heat can be thrown off by radiation. The only means of cooling then, is through perspiration.

Add high humidity though, and the moisture in the air prevents the sweat from evaporating. It just sits on the skin or rolls off in large drops. In other words, under conditions of high heat and high humidity, the body loses its two chief means of cooling itself!

Three Serious Disorders

There are three heat disorders which commonly occur: heat cramps, heat exhaustion, and the most serious of all, heat stroke

Heat Cramps:

This is the least serious, but still requires immediate treatment. Painful cramps occur in the muscles as a result of excessive loss of water and salts

If a cramp develops, discontinue the activity, try to ease the cramp with gentle stretching, get out of the heat and into a cooler atmosphere and take some salty fluids (e.g., a teaspoon of salt in an 8 oz. glass of water). Postpone any further physical activity for at least 24 hours.

Heat Exhaustion:

This is a more serious disorder which signifies a dangerous depletion of fluids and salts. Symptoms include profuse sweating, dizziness, confusion, fatigue, excessive thirst, and cool, moist skin. The body temperature may be slightly elevated, normal, or even below normal.

The first aid measures are the same as for heat cramps. In addition, clothing should be removed and the body bathed in cool water.

Heat Stroke:

This develops when the sweating mechanism breaks down. Potentially fatal, it requires immediate action. Prompt medical attention is imperative because the high fever can lead to perma-nent brain, liver and kidney damage.

The symptoms include a hot, dry skin, absence of sweating, a rapid pulse, abnormal breathing, faintness or unconsciousness

The body temperature must be brought down as quickly as possible. The individual should be mov-

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ed to a cool, shady spot and placed on his back with head and shoulders slightly elevated. Remove clothing and rub the body with alcohol or water and ice. Fanning will assist the evaporation process. If the victim is conscious, give him cool water to drink

Prevention Better Than Cure

Fortunately, with knowledge and proper precautions, heat stress disorders can be avoided. Here are the steps you can take to protect vourself

1. Use Discretion: On days when heat and humidity are high, postpone your workout, or move it to early morning or

the cool of the evening.

2. Dress Appropriately: Hot weather exercise calls for light, loose-fitting clothes. Avoid dark, heat absorbing colours as well as rubberized clothing and sweatshirts. Choose cotton over synthetic materials. Under extreme weather conditions, wear as little as possible. A light cotton hat will protect the head from the sun.

3. Lighten Your Workload:

Reduce your workload by 50 per cent, gradually increasing it 5-10 per cent each day until you are back to your normal schedule. This will allow your body time to get acclimatized. 4. Rest Frequently:

Take short, frequent rests. A study involving miners showed that when temperature and humidity rose to an uncomfortable level, their need for rest increased from their normal 7.3 The Mississauga Times, Wednesday, July 30, 1980 - 39

minutes per hour to 22 minutes per hour - three times as much

5. Replace Fluids & Salt:

This is the most important preventive measure of all. Fluid balance can be maintained only when fluid input matches output. By consuming fluids before and during prolonged activity in high heat, dehydration can be avoided.

Don't rely on natural thirst to satisfy your fluid requirements. Thirst is a delayed mechanism and therefore a poor indicator of actual fluid needs.

Take about one pint of fluid (400-500 ml) 10-15 minutes before starting your workout or activity, then take another 6-8 oz. (200 ml) every 15 minutes during the activity

Water intake is helpful only after it leaves the stomach and this will happen sooner if the sugar content of the drink is kept quite low - no more than 2.5 gm glucose/100 ml water. Drinks that are highly sweetened also lead to gastric fullness and discomfort

The colder the drink, within reason, the more rapidly it will be emptied from the stomach. A cool beverage of 8 degrees-13 degrees C (45 degrees-55 degrees F) is best.

Regardless of common belief, very little salt supplementation is needed. Fluid replacement is more important. The drink should be dilute, containing salt in the proportions of one teaspoon to six quarts of water. Several commerciallyprepared electrolyte replacement drinks are available (ERG, Body Punch, etc.) These can be quite useful, but check their sugar content first. A normal, balanced diet, with some light extra

salting of the food, ordinarily will be enough to replace that lost in heavy sweating. 6. Avoid Salt Tablets:

Excessive salt intake hurts more than it helps. Salt tablets can cause nausea and even greater fluid losses. They are not recommended unless at least 5-6 lbs. of body weight have been lost.

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