

The Pulse

Tips for Preventing Heat Related Illnesses

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During the hot summer months in Sicily it is a good idea to exercise safely and prevent dehydration. Water makes up 60 percent of a man's weight and 50 percent of a woman's weight. This balance of water weight must be kept in narrow limits in the cells and body tissues to prevent heat related illnesses.

During a typical day a healthy adult can lose 8 to 10 cups of water, not counting water loss during physical activity such as walking, running, or aerobics. At a 3 percent loss of water, muscular strength begins to decrease. At a 4 percent loss of water, dizziness can occur and a person's ability to perform physical work can decrease by as much as 30 percent. At 6 percent water loss, the heart is beating fast and the body's ability to regulate temperature starts to fail and athletes may notice that they stop sweating. At a 7 percent water loss there is a strong chance the person may collapse and pass out. Moderate dehydration is said to have set in at 10 percent loss of body fluid and severe dehydration has set in at 15 percent loss of body fluid. Severe dehydration should be treated as a medical emergency and may even require the person be admitted to the hospital for fluid replacement.

The causes of dehydration include:

- Too much time in high temperatures and/or the sun
- Drinking water only when thirsty, especially in children and the elderly
- Persistent vomiting, diarrhea, high fever, diuretic medications, alcohol and caffeine use
- Appetite loss with illness, etc.
- Excessive urination, bacterial or viral infection or inflammation

The symptoms of dehydration include:

- Cracked lips, dry or sticky mouth, tiredness and sunken eyes
- Crying without shedding tears, and urinating less often
- Skin is less elastic and does not return to normal after it is pinched
- Confusion, constipation, tiredness, fever and thirst
- Pale and cold skin with dry nose and mouth
- Pulse may race and breathing becomes more difficult
- Blood pressure decreases and significant water loss often leads to shock

To prevent dehydration:

- Drink 8 glasses of fluid or more per day
- Beverages with caffeine only count two thirds towards fluid intake (8 ounces of a 12 ounce soda)
- It takes 8 ounces of water to make up for drinking 1.5 ounces of alcohol
- Weigh yourself before exercising and after exercising, for every pound lost, drink 2 cups of water

- Drink 4 to 8 ounces of water **for every 15 to 20 minutes of exercise** and drink 8 ounces of water **before** exercise
- For exercise that is 30 minutes or more in hot weather, consume a sports beverage such as Gatorade or eat a piece of fruit such as a banana
- If you are new to Sigonella, give your body 2 weeks to adjust to exercising in hot weather

Heat Illness Guide

Heat cramps:

- Causes: sweating and dehydration
- Symptoms: Painful contractions of muscles
- Treatment: Drink fluids, stretch affected muscles

Heat exhaustion:

- Causes: not drinking enough water, overdoing exercising
- Symptoms: Excess sweating, moist, wet skin, headache, weakness, tiredness, and glassy eyes
- Treatment: Move person to a cool, shady spot; remove excess clothing; have them drink water; and cool with water or ice

Heat Stroke:

- Heat stroke is considered to be a medical emergency. The person needs to be cooled and transported to a hospital immediately.
- Cause: No longer able to sweat
- Symptoms: Skin is hot, dry and red. Body temperature is 105 degrees Fahrenheit (40.5 Celsius) or higher. The person may pass out.
- Treatment: Cool the person immediately; remove from the hot environment into the shade or indoors. If the person is awake, have him or her drink fluids.

Remember to “drink early and drink often” when exercising in the hot summers of Sigonella, Italy.