

Hyperthermia

1. Introduce yourself to the students; let them know your name, background, and anything else that may interest them and ties into the presentation.
2. Make the students aware that the information you will present to them is important and that they need to pay attention.

Introduce the Hyperthermia Topic

- Students all have their own stories and experiences to tell.
- Introduce the hyperthermia topic and ask the students if they know what it is or what they think it might be.
- Ask the students what the weather is like in the summer. When “hot” is pointed out, ask the students if they like being hot. Let them comment for a while on this; ask them if being hot for too long can be harmful to their bodies.

Ask the following questions:

- When it is hot outside, what type of clothing do we wear? How does this clothing prevent injury to our bodies in hot weather?
 - Wear cool, loose-fitting clothing, preferably cotton.
 - Hats and other head coverings protect the face from the sun.

Feel free to expand on these and to discuss each one as time allows.
- What other things can you do when it is hot out to prevent bodily injury?
 - Wear a wide-brimmed hat to keep your head and face cool. This also provides added protection from sun exposure. Baseball caps provide little protection except to the face. A hat should protect the neck, face and ears.
 - Wear a long-sleeved shirt at all times. It should be light colored and loose fitting except when working around machinery.
 - Carry a source of water with you. Take frequent drinks, at least every 15 minutes.
 - Take frequent breaks in the shade or in a cool environment during the hottest times of the day.
 - Adjust gradually to working in the heat over a period of 10-20 days.
 - Move someone suffering from heat exhaustion or heat stroke to a cool environment. Offer sips of water, if conscious, and provide with attention from emergency medical personnel.

- Wear sunscreen with an SPF of at least 15. Make sure children are also adequately protected.

Discuss the symptoms of heat-related injury.

- Skin feels hot and dry and appears flushed.
- Feeling of weakness
- Dizziness
- Visual disturbances
- Headache
- Nausea
- Elevated temperature
- Pulse is generally rapid and may be irregular or weak.

Wrap up:

Discuss other information found on the posters, including heat exhaustion and heat stroke. Make sure students understand that heat can be dangerous to their health and quiz them on warning signs of heat-related illnesses as time allows.

- i. Seek immediate shelter in a warm place if you can't stop shivering, notice numbness, or become disoriented.
- ii. Handle any frostbitten area gently. Do not rub it.
- iii. Remove cold, wet and restricting clothing and replace with dry items.
- iv. Warm the body gradually, not by a stove or fire.
- v. Contact your local emergency medical services for help with frostbite or hypothermia.

Activity

Materials needed:

- Large coolers filled with ice and cold water. The more coolers you have, the more quickly the activity can be performed.
- An instant-read infrared (non-contact) thermometer.
- Paper towels for spills and wet arms.
- An assistant if the group is large or made of young students.

Before starting the activity, walk through it with the students. If the group is older, you may ask

for a volunteer and demonstrate the activity as you explain it.

Procedure:

1. Have the group roll up one sleeve of their shirt.
2. Place one arm into the ice water for 15-20 seconds. Immerse the arm past the elbow, if possible. Ask the students to “wiggle” their fingers to increase the heat loss in their arm.
3. Immediately after time has passed, measure the temperature of the hand that was immersed. Tell the student this temperature.
4. Measure the temperature of the hand that was not placed in the water and tell the student this temperature.

Depending on the student, how long the arm was immersed, and how cold the water is, the temperature may vary anywhere from a five degree difference to closer to a 20 degree difference.

Wrap up:

After the activity, discuss with the students what could happen if their entire body was immersed in cold water or what would happen if they were not wearing enough clothing on a very cold day. Re-discuss the warning signs of hypothermia.