# HEAT RELATED ILLNESS

# The brain regulates body temperature

If it is too hot, the body needs to get rid of heat. How does it do this?

- By dilating blood vessels

- By sweating

# Body temperature:

Dilated blood vessels:
- Help heat escape
- But can cause ankle swelling because fluid leaves the blood vessel and goes into the tissue.

Sweating:
- Cools the body through evaporation
- Causes loss of body water which can lead to dehydration.

# Ability to lose heat is altered by:

- Aging - less sweating

- Obesity - fat insulates the body

- Alcohol – interferes with brain activity

- Medications – can affect brain activity

  plus have other effects

Heat Rash          Heat Exhaustion

Sunburn            Heat Syncope

Heat Cramps        Heat Stroke

Problems caused by too much sun include:

# Heat Rash



Prickly heat rash

- Caused by a hot, humid environment and plugged sweat glands
- Appears as tiny raised, red bumps with extreme itching
- Treatment: rinse skin with cool water, use mild lotions, and change into dry clothing
- Prevention: wash regularly, keep skin clean and dry

# Sunburn

- Caused by too much exposure to the sun

- Presents as red, painful, blistering, or peeling skin

➤ Treatment: cool the skin, apply cooling gels or lotions such as aloe, Noxzema, Solarcaine, etc.
➤ Drink extra water
➤ Seek medical attention if severe blistering
➤ Prevention:
  • apply sunscreens of factor 15 or greater
  • wear light clothing
  • limit exposure to the sun

# Sunburn – treat and prevent

# Heat Cramps–what & why?

- Heat cramps result from heavy sweating which causes loss of salt along with water. Lack of salt (electrolytes) can cause cramping of muscles.
- The painful cramps that usually occur in the arms, legs, and stomach start suddenly and can be a warning of more dangerous heat illnesses.

If these occur:
- move to a cool area
- loosen clothing
- consume drinks that contain salt such as Gatorade

To prevent:
- drink fluids regularly
- reduce activity levels in the heat

# Heat Cramps

Heat syncope is fainting due to heat.

It is caused by the pooling of blood in dilated blood vessels and lack of adequate fluid intake.

# Heat Syncope

# Fainting due to heat

Fainting (syncope) occurs suddenly

Treatment is aimed at cooling the person:
➢ Move to a cooler area
➢ Loosen clothing
➢ Offer sips of cold water when safe to drink

Prevention:
➢ Drink fluids regularly
➢ Reduce activity levels during the hotter parts of the day
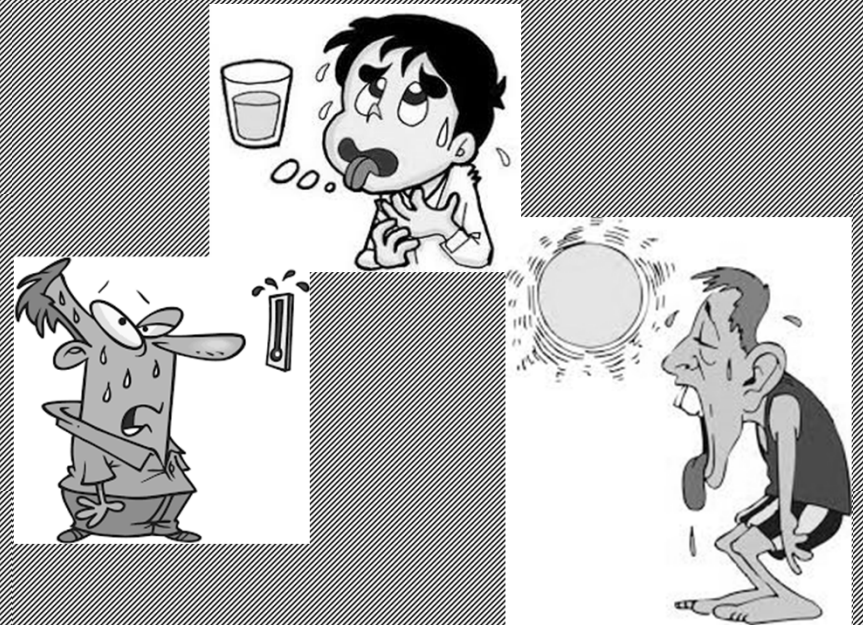➢ Avoid extreme heat

Heat exhaustion is caused by the breakdown of the body's cooling system due to loss of fluid from sweating without adequate fluid and salt replacement.

# Heat Exhaustion

Thirst
Heavy sweating
Moist, clammy skin
Low blood pressure
Weak pulse
Fatigue, weakness
Panting, breathing fast
Dilated pupils, blurred vision

# Heat Exhaustion Symptoms

# Treatment of Heat Exhaustion

Get medical assistance – it can progress to heat stroke and death



- Move to a cool, shaded area
- Loosen or remove excess clothing
- Provide cool water
- Fan and lightly spray with cool water

# Heat Stroke

**A Medical Emergency**

Heat stroke can suddenly develop when fluid and salt reserves are used up causing the body to lose the ability to sweat. The body temperature then rises dangerously high.

# Cause of Heat Stroke

# Heat Stroke Symptoms



Skin: hot, dry, red, mottled

Skin may be blue from lack of oxygen

Temperature over 104°F

# More Symptoms

Fast pulse     Headache

Weakness    Dizziness

Confusion    Seizure
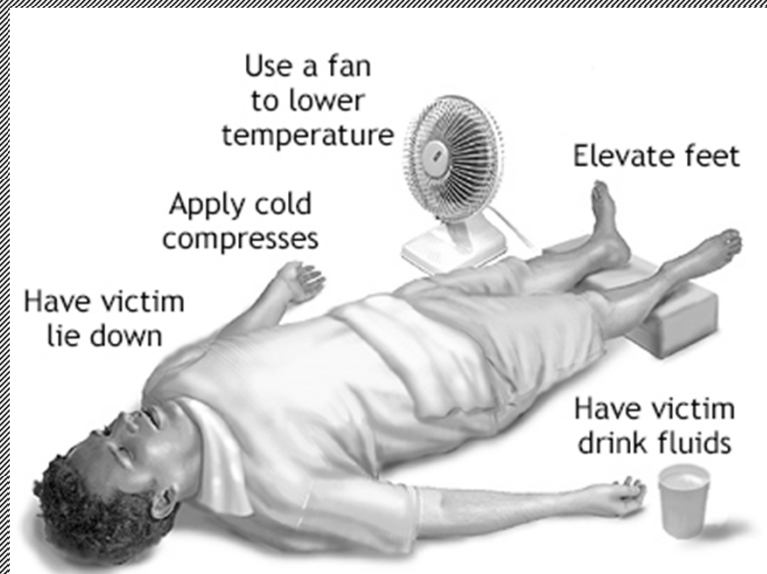
Agitation    Loss of consciousness

# Call 911

Death can occur quickly from a **HEAT STROKE!**

Move to a cool spot
Elevate the feet
Remove excess clothing
Apply cool, wet cloths
Cool with fan or spray with cool water
Offer water if able to safely drink

# Treatment of Heat Stroke

# Prevention

- Reduce activity levels and heat exposure
- Wear light clothing and broad brimmed hats
- Drink fluids regularly, avoid alcohol
- Eat light meals
- Check for signs of problems developing