

# 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

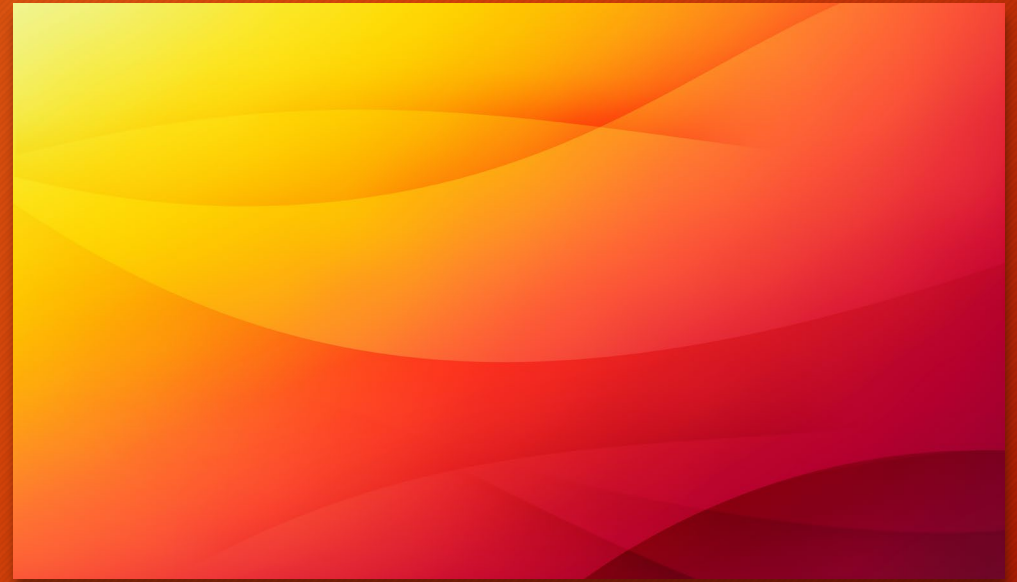
# Body temperature:

## 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

Sunburn

Heat Cramps

Heat Exhaustion

Heat Syncope

Heat Stroke

Problems caused by too much sun include:

# 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







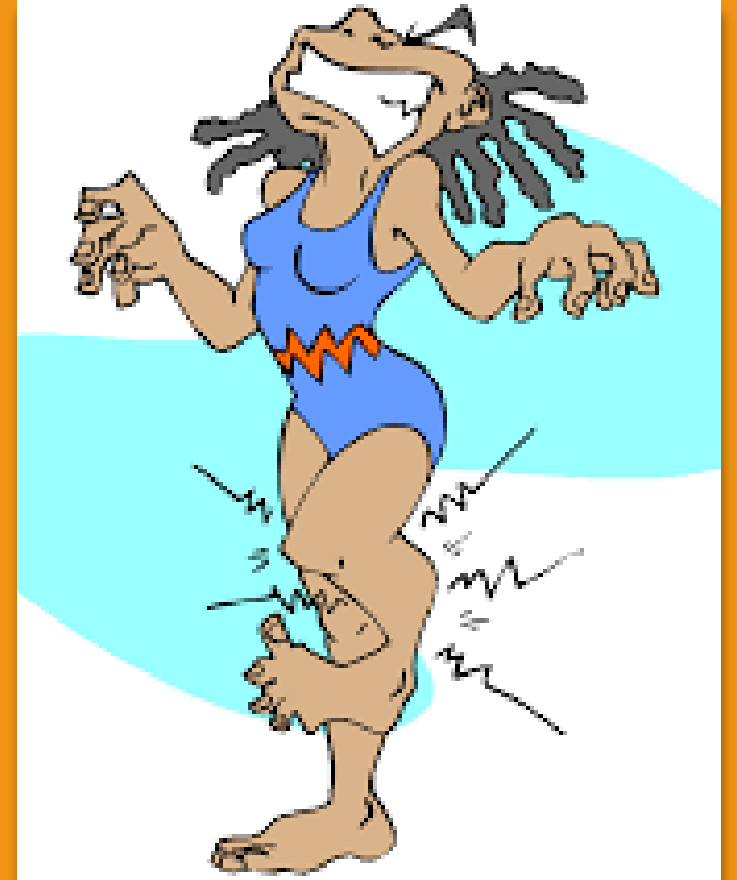
- Treatment: cool the skin, apply cooling gels or lotions such as aloe, Noxzema, Solarcaine, etc.
- Drink extra water
- Seek medical attention if severe blistering
- Prevention:
  - apply sunscreens of factor 15 or greater
  - wear light clothing
  - limit exposure to the sun

# 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:

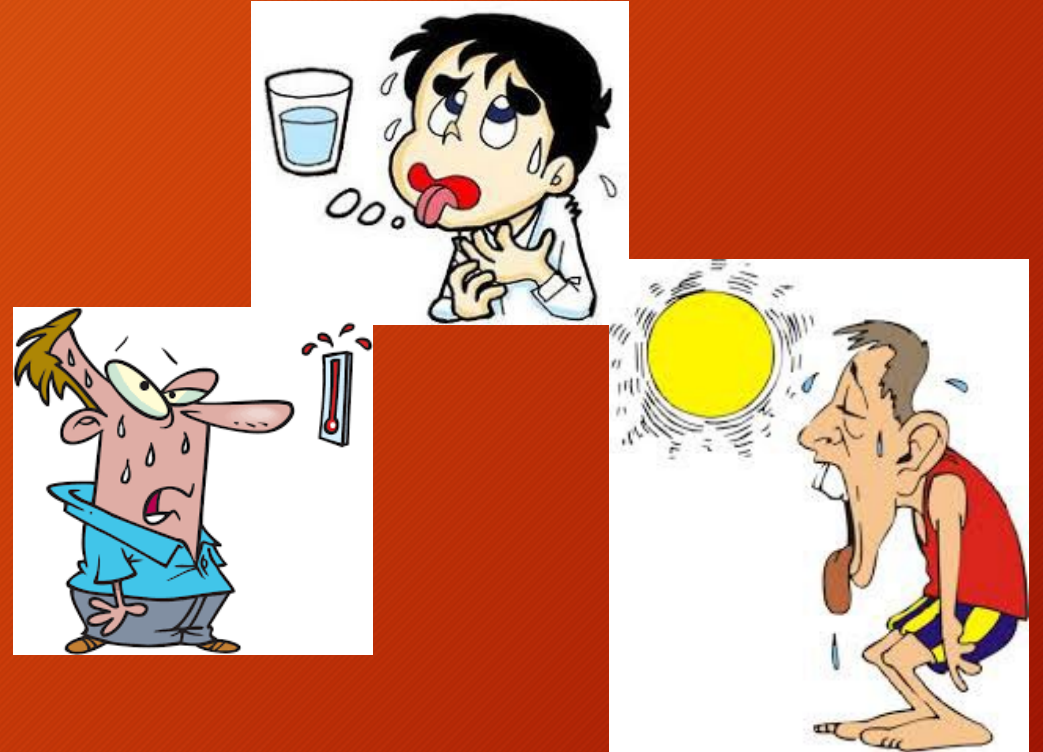
- Drink fluids regularly
- Reduce activity levels during the hotter parts of the day
- Avoid extreme heat



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

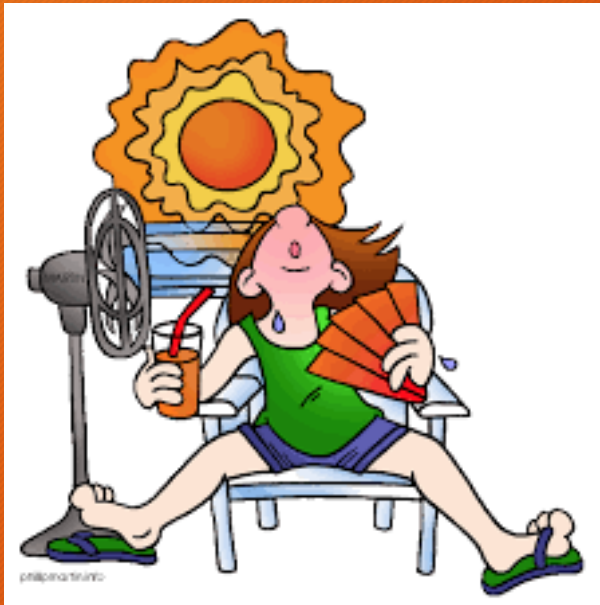


# Heat Exhaustion Symptoms



# 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

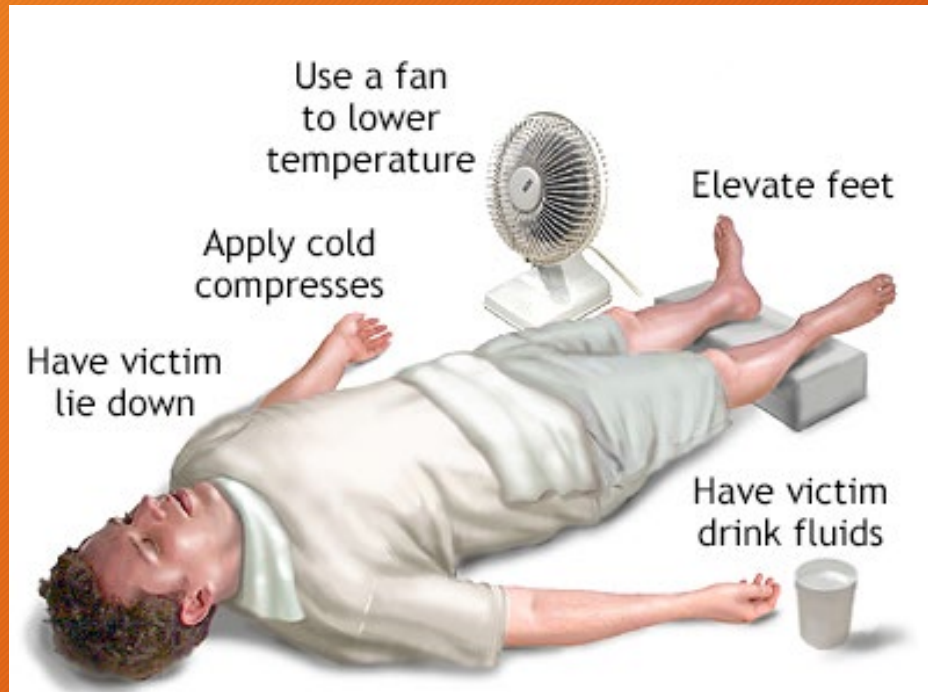


# Call 911

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

