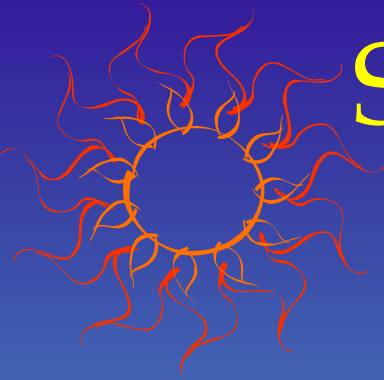


Summer Safety

Protecting Yourself and Others
From Heat Stress and Exposure



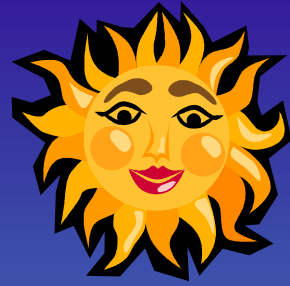


Some of the Hazards of Summer

- Sun exposure
- Heat related illnesses
- Fatigue and Exhaustion
- Eye Damage



The Rising Temperatures



As temperatures rise, so does the stress on your body

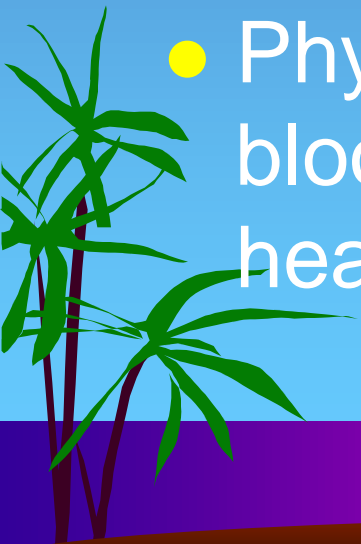
Two critical actions can help you battle the heat

- Acclimation to the heat
- Consumption of water

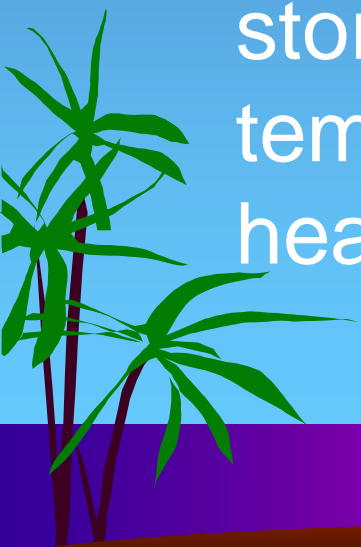


Your Body is a Good Regulator of Heat

- Your body reacts to heat by circulating blood and raising your skin's temperature. The excess heat is then released through the skin by sweating
- Physical activity can limit the amount of blood that flows to the skin to release heat



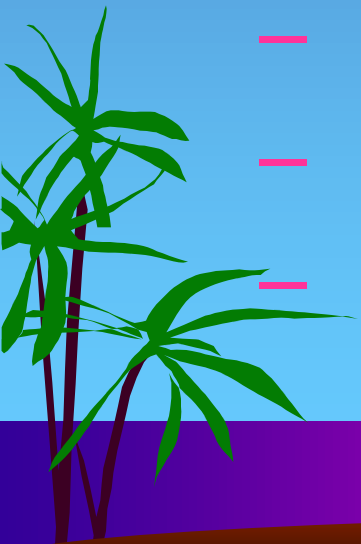
- Sweating can also maintain a stable body temperature if the humidity level is low enough to permit evaporation and if the fluids and salts you lose are adequately replaced
- When your body cannot release heat, it stores it. This raises your core temperature and heart rate putting your health at risk



Interfering with the Regulator

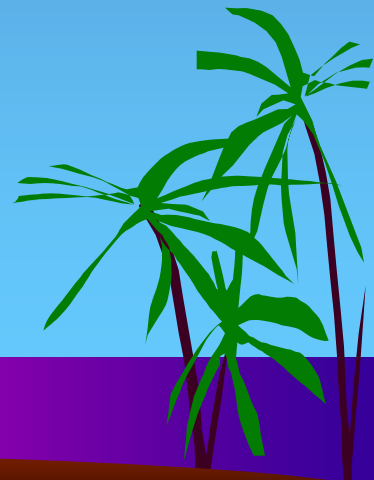
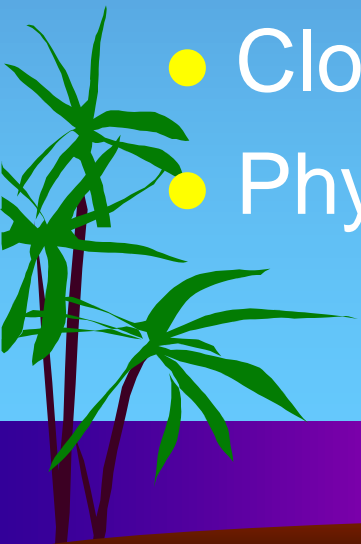
Many factors can cause imbalances in your body's ability to handle heat

- Age
- Weight
- Fitness
- Medical condition
- Diet



Six Factors of Heat Stress

- Temperature
- Humidity
- Movement of air or lack of air movement
- The radiant temperature of the surroundings
- Clothing
- Physical activity



Heat stress is a serious hazard in the workplace as well as at home. Excessive heat can place an abnormal stress on your body

When your body temperature rises even a few degrees above normal (which is about 98.6 degrees Fahrenheit) you may

- **experience muscle cramps**
- **become dangerously ill**
- **feel weak**
- **become disoriented**



Early Signs of Trouble

Heat stress will reduce your work capacity and efficiency

- Signs of heat stress include:

- Fatigue
- Irritability
- Inattentiveness
- Muscular cramps



Early Signs of Trouble (Cont.)

If you are:

- Overweight
- Physically unfit
- Suffer from heart conditions
- Drink too much alcohol
- Not used to summer temperatures

You may be at greater risk of heat stress and should seek and follow medical advice





First Aid

- Good nutrition
- Become heat acclimated
- Drink lots of fluids



Heat Rash

Also known as prickly heat, heat rash occurs when people are constantly exposed to hot and humid air, causing a rash that can substantially reduce the ability to sweat

Heat rash is not just a nuisance because of discomfort, but by reducing the ability to sweat, the ability to tolerate heat is reduced





First Aid

- Cleanse the affected area thoroughly and dry completely
- Calamine or other soothing lotion may help relieve the discomfort



Heat Cramps

Heat cramps are the painful intermittent spasms of the abdomen and other voluntary muscles, which may occur after prolonged exposure to heat

Heat cramps usually occur after heavy sweating and may begin towards the end of the workday





First Aid

- First aid for heat cramps will vary. The best care is:
 - Rest
 - Move to a cool environment
 - Drink plenty of water- **No soda, sparkling water, or alcohol.**
 - Electrolyte tablets and fluids such as Gatorade may also be used



Heat Exhaustion

May result from physical exertion in hot environments

- Symptoms may include:

- Profuse sweating
- Weakness
- Paleness of the skin
- Rapid pulse
- Dizziness
- Nausea
- Headache
- Vomiting
- Unconsciousness

The skin is cool and clammy

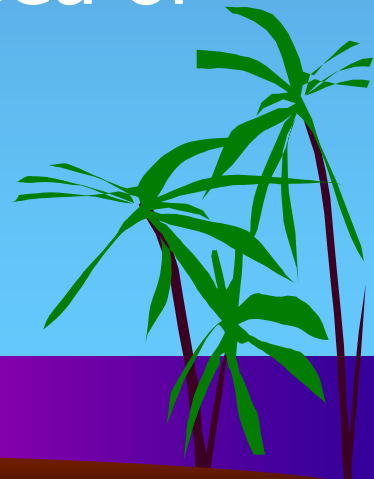
Body temperature may be normal or subnormal



Heat Exhaustion (cont.)

Heat exhaustion develops when a person fails to replace fluids and salt that are lost through sweating

You may start to experience extreme weakness, fatigue, giddiness, nausea or a headache as heat exhaustion progresses





First Aid

- Notify supervisor immediately
- Rest in the shade or cool place
- Drink plenty of water (preferred) or electrolyte fluids
- Loosen clothing to allow for your body to cool
- Use cool wet rags to aid cooling



Heat Stroke



- A serious medical condition that requires urgent medical attention
- Sweating is diminished or absent, which makes the skin hot and dry
- Body temperature is very high (106 degrees F. and **rising**)



Heat Stroke- Signs and Symptoms

- Mental confusion
- Delirium
- Chills
- Dizziness
- Loss of consciousness
- A strong fast pulse
- Convulsions or coma
- A body temperature of 105 degrees F or higher
- Hot, dry skin that may be red, mottled or bluish



Heat Stroke- **Rapid Response**

An illustration of a bright yellow sun with several rays extending downwards. Below the sun are three light blue ice cubes. The middle ice cube is melting, with a pinkish-red area in the center and a small puddle of water forming at its base. The other two ice cubes are also slightly melting.

If you suspect someone is suffering from heat stroke, you must provide immediate care as their condition will deteriorate rapidly

Notify your supervisor immediately



Supervisors will notify management staff,
who will determine action to be taken

Management staff will contact emergency
medical services and arrange transportation
to medical facility, if deemed necessary





First Aid

This is a Medical Emergency!!



Brain damage and death are possible

Until medical help arrives, move the victim from the heat and into a cool place





First Aid

- Soak his or her clothes with water and use a fan or ice packs. Use extreme caution as shock may occur if done too quickly or with too cool of water
- Douse the body continuously with a cool liquid and summon medical aid immediately



Eye Damage from UV Radiation

- Long exposure to sunlight can lead to eye problems later in life, such as cataracts
- UVB damage to the eyes is cumulative, so it is never too late for people to start protecting their eyes



The Heat Index

The following heat index table was developed by the National Weather Service



General Heat Stress Index											
Danger Category		Apparent Temperature (°F) (Humiture)				Heat Syndrome					
IV. Extreme Danger		>130°				Heatstroke or sunstroke imminent					
III. Danger		105° – 130°				Sunstroke, heat cramps, or heat exhaustion likely. Heatstroke possible with prolonged exposure and physical activity.					
II. Extreme Caution		90° – 105°				Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and physical activity.					
I. Caution		80° - 90°				Fatigue possible with prolonged exposure and physical activity.					
Note: Degree of heat stress may vary with age, health, and body characteristics.											
			Relative Humidity								
			10%	20%	30%	40%	50%	60%	70%	80%	90%
TEMPERATURE °F	104	98	104	110	120	>130	>130	>130	>130	>130	>130
	102	97	101	108	117	125	>130	>130	>130	>130	>130
	100	95	99	105	110	120	>130	>130	>130	>130	>130
	98	93	97	101	106	110	125	>130	>130	>130	>130
	96	91	95	98	104	108	120	128	>130	>130	>130
	94	89	93	95	100	105	111	122	128	>130	>130
	92	87	90	92	96	100	106	115	122	128	128
	90	85	88	90	92	96	100	106	114	122	122
	88	82	86	87	89	93	95	100	106	115	115
	86	80	84	85	87	90	92	96	100	109	109
	84	78	81	83	85	86	89	91	95	99	99
	82	77	79	80	81	84	86	89	91	95	95
	80	75	77	78	79	81	83	85	86	89	89
	78	72	75	77	78	79	80	81	83	85	85
	76	70	72	75	76	77	77	77	78	79	79
	74	68	70	73	74	75	75	75	76	77	77

NOTE: When the air temperature is above 80 degrees F. and the relative humidity is above 40% the temperature the body experiences is greater than the air temperature



Let's Have Fun In the Sun

With everything, moderation is best.

- Wear sunscreen when out in the sun
- Proper eye protection is essential
- Consume lots of water to stay hydrated
- Cool down in air conditioned rooms or vehicles, or near fans
- Pace yourself while working out in the field

