



Occupational Heat Exposure

May 2024

Housekeeping



Muster Point



Presenter & Introductions



Safety begins with me!

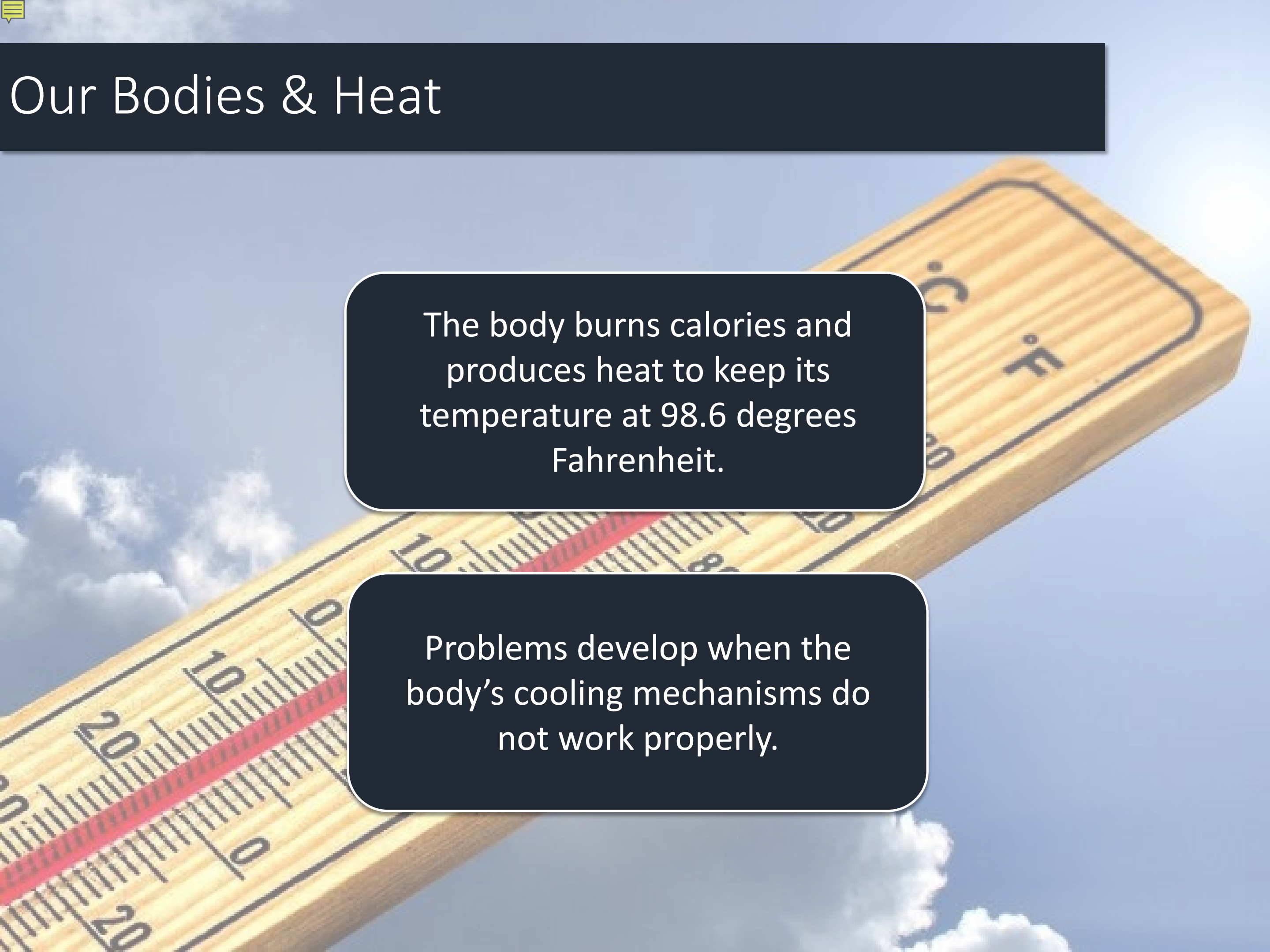
A top-down view of numerous keys of various shapes, sizes, and materials (brass, silver, metal) scattered across a dark wooden surface. The keys include standard house keys, a large brass key with a complex bit, a key with a circular head, and several smaller keys. The lighting is soft, highlighting the textures of the wood and the metal.

Why am I here?

You are the KEY to SAFETY!



Our Bodies & Heat



The body burns calories and produces heat to keep its temperature at 98.6 degrees Fahrenheit.

Problems develop when the body's cooling mechanisms do not work properly.



What is Heat Illness?

HEAT STROKE



WHO AT RISK



SIGN & SYMPTOM

104 F NO SWEATING	 DRY, HOT RED SKIN	 DIZZINESS & HEAD ACHE
 PINPOINT PUPILS	 VOMITING	 UNCONCIOUSNESS

PREVENTION

 DRINK ENOUGH	 NO ALCOHOL & CAFFEINE	 COOL SHOWERING
 WEAR LIGHT PROTECTION	 DO NOT STAY CLOSED CAR	 LIMIT OUTDOOR TIME



In the United States...

702

An average of **702** heat-related deaths occur each year.



67,512

Each year, there are **67,512** emergency department visits due to heat, on average.

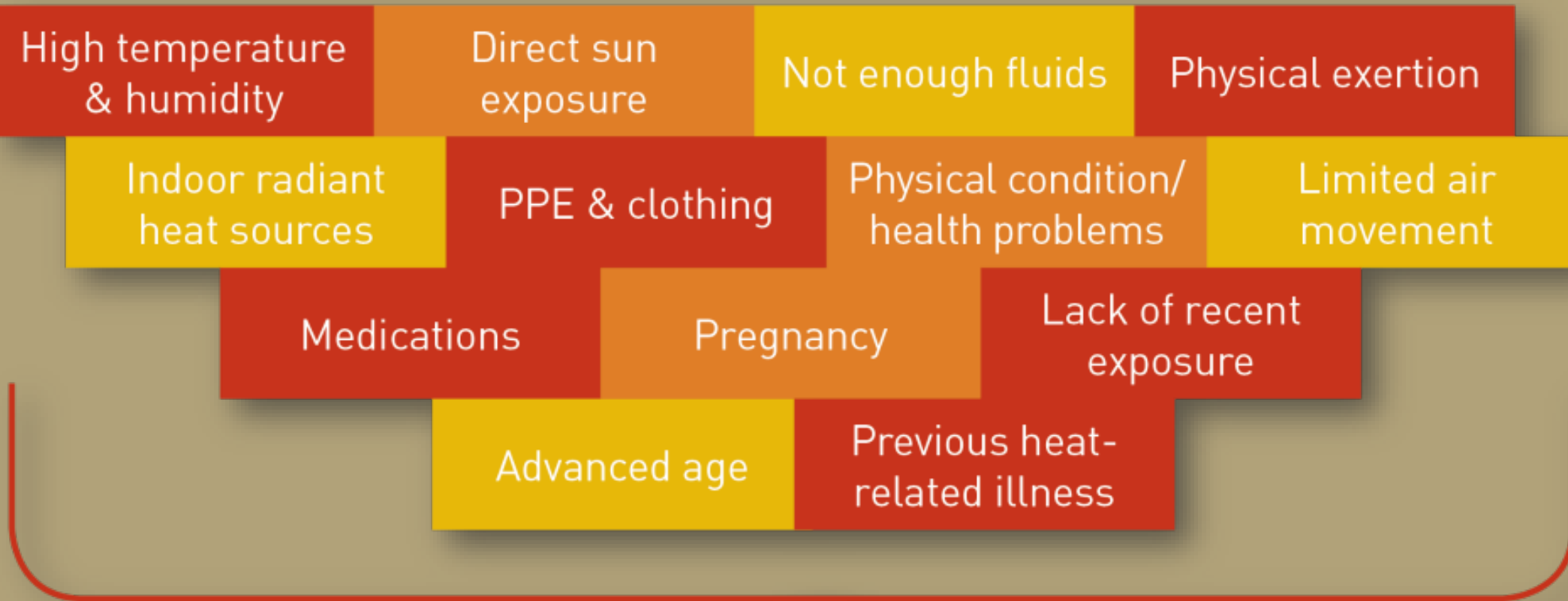


9,235

Each year, an average of **9,235** people are hospitalized due to heat.



Factors that Increase Risk of Heat Illness



Heat Index

NWS Heat Index

Temperature (°F)

Relative Humidity (%)	Temperature (°F)															
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										



Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution

Extreme Caution

Danger

Extreme Danger

A person wearing a green shirt, dark shorts, white socks, and teal sneakers is standing on a dirt path in a grassy field. They are holding their right knee with both hands, suggesting pain or discomfort. The background shows a bright, hazy sky and a distant horizon.

Signs and Symptoms of Heat Illness

Heat Cramps

Fainting

Heat Rash



Dehydration





The Effects of Fluid Loss On Performance

2% - Impaired Performance

4% - Capacity for muscular work declines

6% - Heat Exhaustion

8% - Hallucination

10% - Circulatory collapse and heat stroke





Dehydration - Video



Electrolytes

You can imagine electrolytes are like antifreeze in an automobile. Without antifreeze or the proper mix of antifreeze, the car quickly overheats during intense use. Without electrolytes, the body responds similarly.





Heat Exhaustion



Heat Exhaustion First Aid

Move victim to a cool place and elevate their feet.

Keep victim lying down with legs straight and elevated 8-12 inches.

Cool the victim by applying cold packs or wet towels or cloths. Fan the victim.

Give the victim cold water if he or she is fully conscious.

If no improvement is noted in 30 minutes, seek medical attention.





Heat Stroke

Heat stroke is a **medical emergency!**

Symptoms of heat stroke include:

- Confusion, altered mental status, slurred speech
- Loss of consciousness (coma)
- Hot, dry skin or profuse sweating
- Seizures
- Very high body temperature
- Fatal if treatment delayed



Heat Stroke First Aid





Heat Illness Prevention

Supervisors should:

- Allow time for employees to adjust to hot jobs when possible. Adjust the work schedule, if possible.
- Reduce the workload.
- Establish a schedule for work and rest periods during hot days.
- Train workers to recognize signs and symptoms of heat stress disorders and be prepared to give first aid if necessary.
- Choose appropriate employees
- Realize individual employees vary in their tolerance to heat stress conditions.

Workers should:

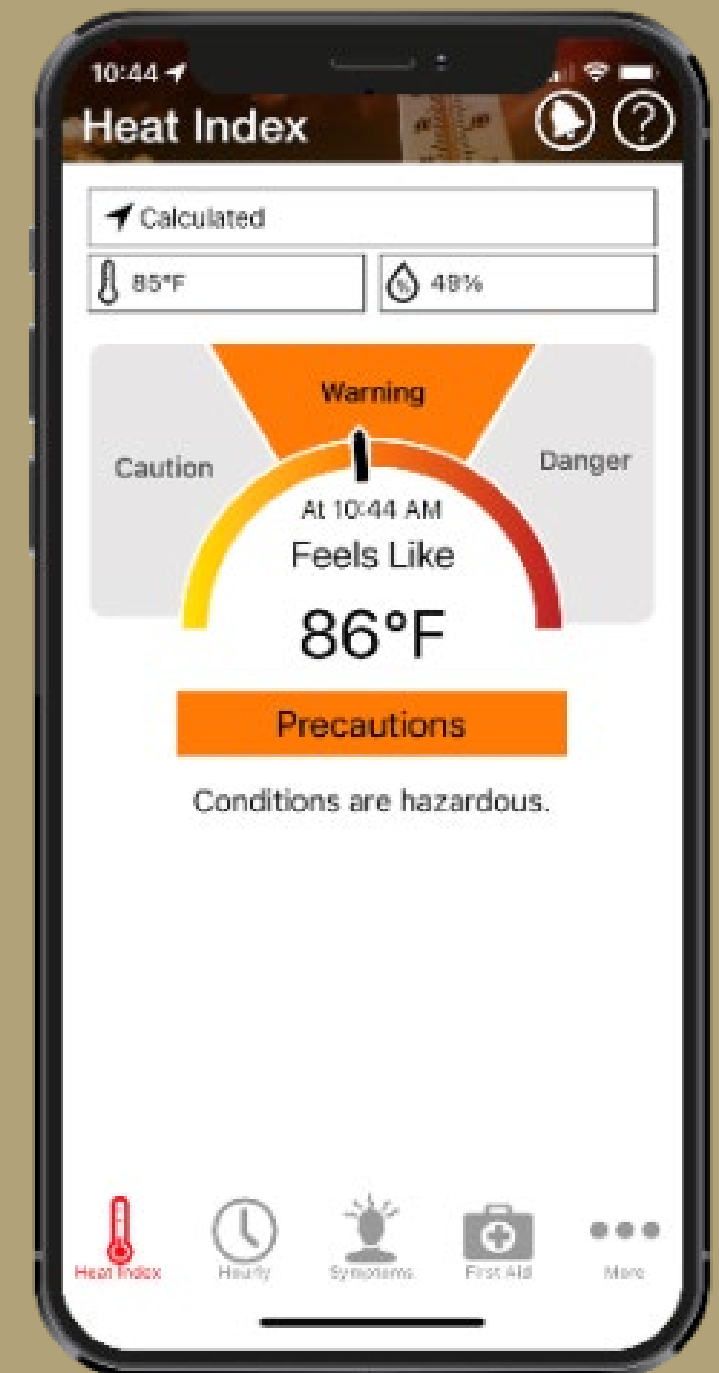
- Learn to recognize the symptoms of heat stress.
- Pace the work, taking adequate rest periods.
- Use adequate fans for ventilation and cooling.
- Wear light-colored, loose clothing (unless working around equipment with moving parts).
- Keep shaded from direct heat where possible
- Drink plenty of water.

Toolbox Talk on Heat Stress Safety - Video



NIOSH Heat Safety Tool iPhone & Android App

- [NIOSH Heat Safety Tool iPhone & Android App](#)



One Team

QUESTIONS?

