

MODULE 3

HEAT ILLNESSES: Who Is at Risk & Why?

SESSION DURATION:
35–40 MINUTES

MODULE OVERVIEW:

This module introduces audiences to different groups that are more at risk for heat illnesses and explains why they are more at risk. Presenters are encouraged to use relevant slides from this module to customize their presentations to community audiences. For example, if the presenter is presenting to an audience of parents, they might use slide 11 (Infants and Children) and slide 15 (Outdoor Activities/Sports). However, presenters may also choose to use all of the slides where appropriate.

SLIDE 1: Heat Illnesses: Who Is at Risk & Why?

PURPOSE: To introduce Module 3, which is focused on identifying who is more at risk for heat illnesses and why. Successfully conveying this information will help audiences be able to recognize whether they, their families, and members of their communities are more at risk. This knowledge is critical for increasing audience member awareness about who should take extra precautions during a heat wave and why. Presenters are therefore invited to use the below talking points but are also encouraged to frame the importance of these topics in terms they know will resonate strongly with their audiences.

KEY TALKING POINTS:

- 1. This module is designed to help you understand who is more at risk for heat illnesses and why.
- 2. It's important to remember that heat illnesses can affect anyone, but there are some groups that are more at risk.
- 3. Understanding who is more at risk can help us to know who should take extra precautions or who we should check in on during a heat wave.

KEY TALKING POINTS




NOTES:

SLIDE 2: Objectives

PURPOSE: To introduce the objectives for Module 3 and to provide audience members with an overview of what they will learn. This is the Module 3 roadmap.

KEY TALKING POINTS:

1. This module has two objectives designed to help you understand who is more at risk for heat illnesses and why.
2. The two objectives are:
 - a. To learn which groups are more at risk for heat illnesses
 - b. To understand why those groups are more at risk
3. During this module, we will talk about each of these topics in detail.

KEY TALKING POINTS 

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SLIDE 3: Who Is More at Risk?

PURPOSE: To provide audiences with a basic overview of what groups are more at risk for heat illnesses before discussing each group (or certain groups chosen by the presenter) in more detail. Presenters who used the full Module 2 slides (Heat Illnesses: What Are They & How Do You Treat Them?) will have already shown audience members a list of who is most at risk, in which case, here it can be acknowledged that the list is being shown again.

KEY TALKING POINTS:

- I. Like we've talked about before, heat illnesses can affect anyone, including people who consider themselves to be acclimatized! However, these groups are more at risk:
 - a. People who are unsheltered or unhoused
 - b. People with limited resources
 - c. People who experience social, cultural, or linguistic isolation
 - d. People with certain medical conditions
 - e. People taking certain medicines/medications
 - f. People with certain physical disabilities
 - g. Infants and children (<4)
 - h. People who are pregnant and/or nursing
 - i. Older adults (60+)
 - j. Outdoor workers
 - k. People who do outdoor activities/play outdoor sports

KEY TALKING POINTS 

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SLIDE 5: Unsheltered or Unhoused

PURPOSE: This slide can be used in presentations where audience members include (or are likely to include) people who are unsheltered or unhoused, or others who work with them. The purpose of this slide is to help audiences understand why, specifically, people who are unsheltered or unhoused are considered more at risk for heat illnesses.

KEY TALKING POINTS:

- I. People who are unsheltered or unhoused are especially at risk for heat illnesses because they may lack access to resources that are essential for staying cool, including:
 - a. Water
 - b. Shade
 - c. Air-conditioning (AC)
 - d. Transportation to public places with AC (e.g., cooling centers, shopping malls, libraries)
 - e. Ways to receive public health and emergency warnings (i.e., they may lack access to the internet or cell phones)

KEY TALKING POINTS



ADDITIONAL (OPTIONAL) INFORMATION:

What is a cooling center and are there any in San Diego County? A cooling center is a public, indoor, air-conditioned facility (often a library, community or senior center, school, or shopping mall) where anyone can go to cool off during hot summer days. Cooling centers are open to everyone and there is no cost. In San Diego County, the county libraries serve as cooling centers (called “Cool Zones”), and they are typically open between June 1st and October 31st. More information (including hours and locations) is available here:

https://www.sandiegocounty.gov/hhsa/programs/ais/cool_zones/

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SLIDE 6: Limited Resources

PURPOSE: This slide can be used in presentations where audience members include (or are likely to include) people who have limited resources, or people who work with resource-limited individuals or communities. The purpose of this slide is to help audiences understand why, specifically, people with limited resources are considered to be more at risk for heat illnesses.

KEY TALKING POINTS:

- I. People who have limited financial resources are more at risk for heat illnesses because they may lack access to material and other resources that are essential for staying cool, including:
 - a. Air-conditioning (AC) or the money to pay electric bills
 - b. Transportation to public places with AC (e.g., cooling centers, shopping malls, libraries)
 - c. Housing that allows modification (e.g., addition of AC or shade awnings for renters)
 - d. Material resources (e.g., water or light-weight clothing) to cope with high temperatures
 - e. Ways to receive public health and emergency warnings (i.e., they may lack access to the internet or cell phones)

KEY TALKING POINTS



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SLIDE 8: Medical Conditions

PURPOSE: This slide can be used in presentations where audience members include (or are likely to include) people with certain medical conditions, such as diabetes, heart disease, and neurodegenerative disorders. The purpose of this slide is to help audiences understand why, specifically, people with certain medical conditions are considered more at risk for heat illnesses.

KEY TALKING POINTS:

1. Certain medical conditions can affect the body's ability to maintain a normal temperature.
2. Examples include (but are not limited to):
 - a. Diabetes
 - b. Heart disease
 - c. Neurodegenerative disorders
4. If you have an existing medical condition, check with your doctor to learn if you are at risk.

KEY TALKING POINTS



ADDITIONAL (OPTIONAL) INFORMATION:

Why are people with diabetes more at risk for heat illnesses? Certain diabetes complications, like damage to blood vessels and nerves, can affect sweat glands and therefore the ability of the body to cool down. People with diabetes also dehydrate more quickly. Lastly, high temperatures can affect how the body uses insulin (meaning that a person with diabetes may need to test their blood sugar more often and adjust their insulin doses with what they eat and drink).

Why are people with heart disease more at risk for heat illnesses? Exposure to high heat puts increased strain on the heart and can lead to heat illnesses if the cardiovascular system fails to properly regulate internal body temperature.

Why are people with neurodegenerative disorders more at risk for heat illnesses? People with neurodegenerative disorders can have varying degrees of difficulty regulating body temperature and therefore may overheat more quickly.



Someone asked if mental health conditions make someone more at risk for heat illnesses. Tell them: Currently there is less research available on mental health conditions as a risk factor in comparison to other medical conditions. However, people with mental health conditions may be taking medicines/medications that can increase risk (e.g., certain brands of antidepressants or antipsychotics). Mental health conditions may also affect the ability of a person to think clearly and assess changes in the environment and body.

SLIDE 9: Medicines/Medications

PURPOSE: This slide can be used in presentations where audience members include (or are likely to include) people who take certain classes of medicines/medications, such as antidepressants, antihistamines, antipsychotics, antihypertensives, and diuretics (among others). The purpose of this slide is to help audiences understand why, specifically, people who take certain medicines/medications are considered more at risk for heat illnesses.

KEY TALKING POINTS:

1. Certain medicines/medications can affect the body's ability to cool down.
2. Examples include, but are not limited to:
 - a. Antidepressants (medicine for depression and anxiety)
 - b. Antihistamines (medicine for allergies)
 - c. Antipsychotics (medicine for psychotic disorders, like schizophrenia)
 - d. Antihypertensives (medicine for high blood pressure)
 - e. Diuretics (medicine to increase urine production)
3. This does not apply to all brands of these medicines/medications.
4. If you take any medicines/medications, check with your doctor to learn if you are at risk.

KEY TALKING POINTS



I don't know how to answer that question. What do I do?

Someone asked if a specific medicine/medication they are taking makes them more at risk for heat illnesses. Tell them: If you are taking any medicines/medications, it is important for you to check with your doctor to know if you are at risk because he/she will be able to comment on your particular case. For example, your doctor will know what condition you have, what medicines/medications you are taking, and how you may be affected when exposed to heat.

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SLIDE 10: Disabilities

PURPOSE: This slide can be used in presentations where audience members include (or are likely to include) people with certain disabilities and/or caretakers of people with certain disabilities. The purpose of this slide is to help audiences understand why, specifically, people with certain disabilities are considered more at risk for heat illnesses.

KEY TALKING POINTS:

1. Certain disabilities can worsen during heat or interfere with cooling down. For example:
 - a. Some multiple sclerosis symptoms worsen in heat
 - b. Some spinal cord injuries prevent sweating
 - c. People with limited mobility may not be able to access place with AC (e.g., cooling centers, shopping malls, libraries)
2. Some visual impairments can impede access to public health and emergency warnings.
3. If you have a disability, check with your doctor to know if you are at risk.

KEY TALKING POINTS



ADDITIONAL (OPTIONAL) INFORMATION:

Why do some multiple sclerosis symptoms worsen in heat? Multiple sclerosis damages the protective sheath around nerve cells in the brain and spinal cord. This slows down nerve signals, so the body does not always respond to stimuli the way it should. Heat can slow down these signals even more, causing symptoms like fatigue and pain to flare up.

Why do some spinal cord injuries prevent sweating? The part of the brain that controls sweating is the hypothalamus. If that part of the brain is affected by injury or stroke, it can impact the ability to sweat.



I don't know how to answer that question. What do I do?

Someone asked if a specific disability they have makes them more at risk for heat illnesses. Tell them: If you have a disability, it is important for you to check with your doctor to know if you are at risk because he/she will be able to comment on your particular case. For example, your doctor will know what disability you have, what (if any) medicines/medications you are taking, and how you may be affected when exposed to heat.

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SLIDE 13: Older Adults (60+)

PURPOSE: This slide can be used in presentations where audience members include older adults and/or caretakers of older adults. The purpose of this slide is to help audiences understand why, specifically, older adults are considered more at risk for heat illnesses. Here, “older adult” is defined as anyone 60 years or older.

KEY TALKING POINTS:

- I. There are several reasons that older adults are more at risk for heat illnesses.
 - a. Their bodies don't cool down as easily.
 - b. They are more likely to have an existing medical condition that affects the body's ability to maintain a normal temperature.
 - c. They are more likely to take medicines/medications that affect the body's ability to cool down.
 - d. Also, they may be homebound or have limited ability for accessing public places with air-conditioning (e.g., cooling centers, shopping malls, libraries).

KEY TALKING POINTS

ADDITIONAL (OPTIONAL) INFORMATION:

Why do the bodies of older adults not cool down as easily? As a person ages, the body's natural cooling mechanisms become less effective. For example, they have decreased cardiac function, meaning that they are not able to send as much blood to the skin (vasodilation). They also have less body water content, meaning that they become dehydrated more easily.

Why are older adults more likely to have an existing medical condition that affects the body's ability to maintain a normal temperature? Aging increases the risk of medical conditions, including some that may affect the body's ability to maintain a normal temperature. Examples of these medical conditions include (but are not limited to) diabetes, heart disease, and neurodegenerative disorders.

Why are older adults more likely to take medicines/medications that affect the body's ability to cool down? Older adults are more likely to take medicines/medications because they are more likely to have existing medical conditions. Examples of these medicines/medications include (but are not limited to) some antihypertensives (i.e., medicine for high blood pressure) and diuretics ((i.e., medicine to increase urine production).



I don't know the answer to that question. What do I do? Someone asked if an older adult who is experiencing dementia is more at risk for heat illnesses. Tell them:

An older adult who is experiencing dementia may have trouble processing information about heat illnesses and remembering what actions to take to stay cool (or to prevent heat illnesses), and therefore should be considered high risk. In this case, it may be important to consult with a medical professional about how best to help the older adult manage their risk for heat illnesses.

SLIDE 14: Outdoor Workers

PURPOSE: This slide can be used in presentations where audience members include (or are likely to include) people who work outdoors and/or supervisors of outdoor workers. The purpose of this slide is to help audiences understand why, specifically, people who work outdoors are considered more at risk for heat illnesses.

KEY TALKING POINTS:

- I. There are several reasons why people who work outdoors – like in construction, transportation, agriculture, and road maintenance – are more at risk for heat illnesses.
 - a. Physical activity increases body temperature.
 - b. Working on a hot day can make it harder for the body to get rid of extra heat, especially if it's humid.
 - c. Outdoor workers are often exposed to heat throughout the day and may lack shade during breaks/lunch.
 - d. New workers may not be acclimated to heat.
 - e. Not drinking enough fluids during the day can lead to dehydration.
 - f. Heavier, darker colored, and less breathable work clothing traps heat.

KEY TALKING POINTS



ADDITIONAL (OPTIONAL) INFORMATION:

Do outdoor workers have rights and protections with respect to heat? Yes, the State of California (under the Division of Occupational Safety and Health, commonly known as Cal/OSHA) has specific laws governing occupational heat exposure. In brief, employers are required to: 1) train all employees and supervisors about heat illness prevention; 2) provide a certain amount of available fresh water for each employee; 3) provide access to shade and encourage employees to take breaks; and 4) develop and implement written procedures for complying with the Cal/OSHA Heat Illness Prevention Standard. More information is available here: <https://www.dir.ca.gov/dosh/heatillnessinfo.html>.

Are indoor workers also more at risk for heat illnesses? Not all indoor workers are more at risk. However, people who work indoors in hot environments, such as bakeries, restaurant kitchens, boiler rooms, and factories can be more at risk, especially if measures are not taken to keep those environments cool and if workers are not given adequate water and breaks.

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