Helping Patients Establish a Heat Action Plan

For Providers

Exposure to heat is increasing across the United States, threatening the health of outdoor workers, or people who are particularly vulnerable, such as those who are elderly or pregnant. Heat can cause a range of illnesses, from cardiovascular problems like heart attacks to heat exhaustion and heat stroke.

Below is guidance to help you prepare for completion of the **Heat Action Plan and Tip Sheet** *included in this toolkit with your patients. Consider sharing* **Tips for People With Specific Health Conditions or Risk Factors**.

Assess if (and how) they access weather information, if they have a means to know the temperature inside their home, and what temperatures are dangerous for them

Ask: If you wanted to know how hot it would be outside, what would you do? How often do you look up the weather forecast?

If the patient does not know where to look, you can suggest their phone weather app, a local AM radio station with frequent weather reports, the National Weather Service website (weather.gov), or weather.com

Ask: If you wanted to know the temperature inside your home, what would you do? Do you have a thermostat or thermometer that can measure it?

If the patient does not have a thermometer/thermostat, consider providing one or suggest that they can be purchased for a few dollars at hardware stores or online.

Ask: Do you know when a temperature becomes too hot for you?

Talk about different thresholds for risk at different temperatures - inside v. nighttime v. unseasonal. You can find more information about these different temperatures here: https://ephtracking.cdc.gov/Applications/HeatRisk/

Assess risks for excess heat exposure above forecast temperatures

Ask: How hot do you feel your home gets in the summer?

Ask: Do you live in a building with many floors? If so, what floor do you live on?

Ask: Do the windows in your home open?

Ask: Are there greenspaces or trees around or near your home?

Ask: Do you ever feel hot at work?

Ask: Do you have a job in which you work outdoors or work inside when it is hot, near hot machinery such as ovens, grills, or boilers? What type of work do you do, and is it strenuous?

Ask: How do you get to work? Do you feel hot on your way to work?

If a patient lives on an upper floor, has a unit without functional windows, or has occupational risks or risks in transport, these all increase the risk of heat exposure and should be considered when developing a heat action plan.

Assess home cooling strategies, access to air conditioning and cool indoor spaces

Ask: Are you able to cool down your home (or rooms) when it gets hot out?

Ask: Do you have functioning air conditioning at home? If so, is it a window unit(s)? Do you use the air conditioning when it is hot?

Ask: Are there air conditioners in rooms where you sleep?

Ask: Are you concerned about how much air conditioning will cost if you use it? Does this affect your use?

Ask: Do you have other ways to cool your home such as fans or opening windows?

If a patient states that they have no access to air conditioning in their home, or if their air conditioning does not adequately cool the home (e.g. they have a single window unit that cools only a child's bedroom but not theirs), or they are worried about air conditioning costs, sometimes there are options to help with the costs of air conditioning such as the federal program LIHEAP (Low Income Home Energy Assistance Program). Local subsidies or agencies can also help in some cases.

You can also discuss cooling by opening windows, avoiding heating the house from inside (for example avoiding oven use), using fans, or dousing the skin with water. If opening windows, discuss monitoring and protecting from poor air quality, but remember that heat can kill people faster than poor air quality, so opening windows may be a reasonable action in some situations even when air quality is poor. If they cannot stay cool at home, then:

Ask: Is there somewhere that you can go when it gets hot outside that has air conditioning? For instance, a place of worship, a neighbor's home, a library, a community center, a local business, or mall, or elsewhere?

Ask: If you are going somewhere else, how far is it and how will you get there?

If they do not have any place, they can go that has air conditioning, consider providing them with a list of air-conditioned locations they may be able to access in your community. Many cities have cooling center maps available to identify the closest sites to a patient's home. Make a plan with them for how to get there that is safe and does not expose them to too much heat.

Assess connectedness

Ask: Do you live alone? Do you frequently interact with friends, family, or neighbors?

Ask: Do you have a plan to check in with anyone when the weather gets hot?

If they do not have a plan, work with them to identify WHO they will stay connected with if a heat warning is issued. If they do not have any connections, discuss when they should contact 911 (such as having the initial symptoms of dehydration and illness- like nausea, headache, dizziness - see **Heat Health Action Plan and Tip Sheet**). Some municipalities or nonprofits may also offer telephone check in services for interested at-risk individuals; if this is an option in your community, consider referring these patients to this service.

Consider increased risks from medications and how to monitor hydration

Many patients take medications that affect sweating, urination, and thermoregulation, which may accentuate their risk of harm during heat events. They should be advised to seek cooler environments, whether indoors or outdoors (e.g., in the shade). Go over the medication list with patients using **Medications and Heat (For Patients)**. Additional information on medications related to heat is available from the CDC here: https://www.cdc.gov/heat-health/hcp/clinical-guidance/heat-and-medications-guidance-for-clinicians.html

Ask: How do you know you are staying hydrated and healthy in the heat?

Go over symptoms of heat related illness and chronic medical conditions. Discuss checking urine color, monitoring weight for hydration status as well and go over ways to stay safe on the **Heat Action Plan and Tip Sheet**.

For patients with chronic lung diseases, assess air quality risks, especially if they may travel to a cooling center

In guidance about whether to access a cooling center, consider whether a patient may be exposed to high levels of outdoor or indoor air pollution.

Begin by assessing the AQI. If the AQI is over 50, closing windows may help prevent outdoor air pollution from getting inside, but this may also increase heat exposure, especially if no air conditioning is available.

Ask: Do you use an air filter in your home? If so, what kind is it and where does it sit?

Ask: How often do you change the air cleaner/filter? Are there any barriers to cleaning it?

If a patient's home has a forced air system (i.e., air gets blown into rooms through vents, for example an HVAC), this may increase the delivery of air pollution indoors, even with windows closed; however, many of these systems have air filters. See if they have changed the filter recently and make sure it is MERV 13 or higher. HVAC systems only filter when they are on.

Some patients may have indoor air cleaners, also known as air purifiers or sanitizers. Portable indoor air cleaners have a wide range of capabilities in filtering out air pollutants. The filter should be the right size for the square feet of the room it operates in.

Air cleaners typically come with either a MERV (minimum efficiency reporting value) rating or are HEPA certified. Ideally, patients will have an air cleaner with a MERV rating of at least 13, which should remove at least 60% of particulate matter 2.5 microns in diameter or smaller. HEPA filters should remove even more. If patients are unable to afford commercial portable air cleaners, they may be able to assemble box fan units or Corsi-Rosenthal boxes, both of which use a fan and air filters to produce a short-term home-made air filter. While not as good as commercial systems, these can be an effective way to improve short-term air quality in small indoor spaces. See **All About Air Purifiers** for more information.

If outdoor air quality is poor, traveling to a cooling center may worsen health, depending on how people travel and the level of exposure. However, remaining in a hot indoor space can be deadly, and in some cases exposure to air pollution may be necessary to reach safety or achieve cooler temperatures.

Notes: