

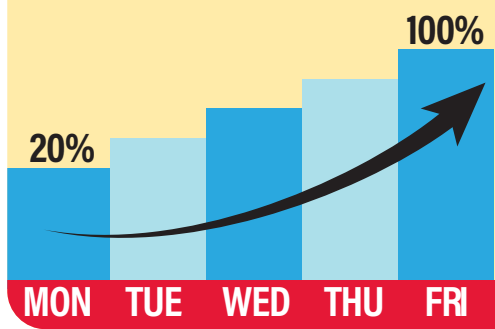


Prevent Heat Illness at Work

Outdoor and **indoor** heat exposure can be dangerous.

Ways to Protect Yourself and Others

Ease into Work. Nearly 3 out of 4 fatalities from heat illness happen during the first week of work.



- ✓ **New** and **returning** workers need to build tolerance to heat (acclimatize) and take frequent breaks.
- ✓ **Follow the 20% Rule.** On the first day, work no more than 20% of the shift's duration at full intensity in the heat. Increase the duration of time at full intensity by no more than 20% a day until workers are used to working in the heat.



Drink Cool Water

Drink cool water even if you are not thirsty — at least 1 cup every 20 minutes.



Dress for the Heat

Wear a hat and light-colored, loose-fitting, and breathable clothing if possible.



Take Rest Breaks

Take enough time to recover from heat given the temperature, humidity, and conditions.



Watch Out for Each Other

Monitor yourself and others for signs of heat illness.



Find Shade or a Cool Area

Take breaks in a designated shady or cool location.



If Wearing a Face Covering

Change your face covering if it gets wet or soiled. Verbally check on others frequently.

First Aid for Heat Illness

The following are signs of a medical emergency!



- Abnormal thinking or behavior
- Slurred speech
- Seizures
- Loss of consciousness

1 » **CALL 911 IMMEDIATELY**

2 » **COOL THE WORKER RIGHT AWAY WITH WATER OR ICE**

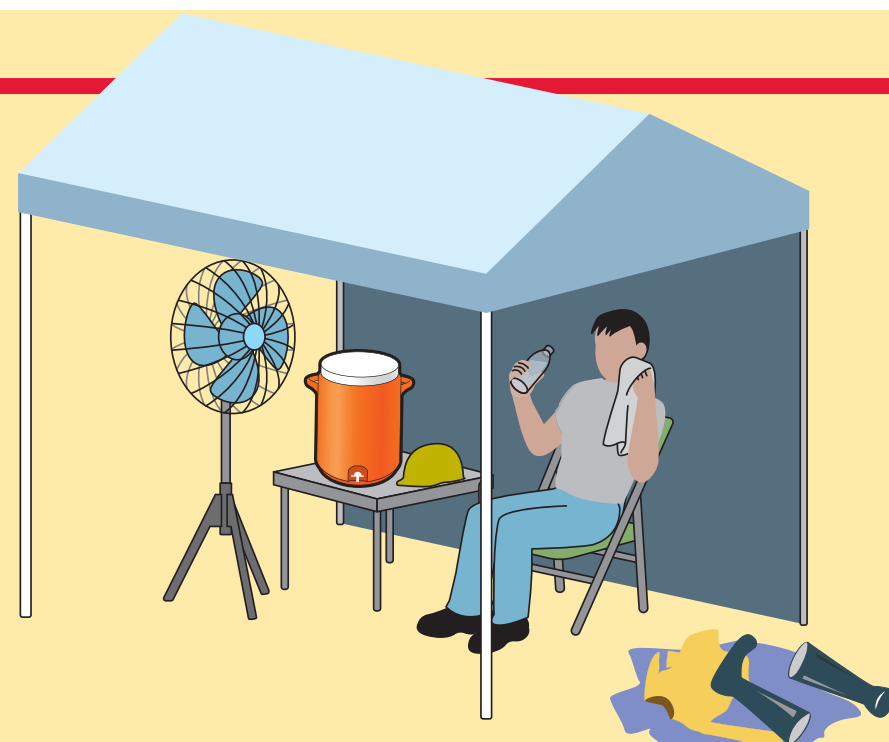
3 » **STAY WITH THE WORKER UNTIL HELP ARRIVES**



Watch for any other signs of heat illness and act quickly. When in doubt, call 911.

If a worker experiences:

- Headache or nausea
- Weakness or dizziness
- Heavy sweating or hot, dry skin
- Elevated body temperature
- Thirst
- Decreased urine output



Take these actions:

- » Give water to drink
- » Remove unnecessary clothing
- » Move to a cooler area
- » Cool with water, ice, or a fan
- » Do not leave alone
- » Seek medical care if needed

**For more information: 1-800-321-OSHA (6742)
TTY 1-877-889-5627 www.osha.gov/heat**

Federal law entitles you to a safe workplace. You have the right to speak up about hazards without fear of retaliation. See www.osha.gov/workers for information about how to file a confidential complaint with OSHA and ask for an inspection.



INCIDENT SUMMARY

Incident type: Fatality
Weather conditions/Time of day: Sunny, 1:00 PM
Type of operation: Tree Marking and Cutting
Size of work crew: Two
Worksite inspection conducted: Yes
Competent safety monitoring on site: Yes
Safety and Health program in effect: Yes
Training and education for workers: First Aid/CPR
Occupation of deceased worker: Logger
Age/Sex of deceased worker: 58
Time on job: 20 Years
Time at task: 8 Hours
Time employed/classification (FT/PT/Temporary): FT
Language spoken: French
Union/Non-Union: Non-Union



Photo: USDA

BRIEF DESCRIPTION OF INCIDENT

A forester, working as part of a logging team to identify trees to be harvested, was stung numerous times by a swarm of bees. The unsuspecting forester inadvertently stepped on or near the bee's nest while marking a maple tree. This incident was not the first time the employee had been stung during his employment, but in this particular incident, the forester went into anaphylactic shock, which led to a fatal cardiac event. The concentration and type of insect venom can produce different side effects and allergic reactions for each individual exposure.

INCIDENT PREVENTION

US residents died as a result of bee, hornet and wasp stings.¹ According to the Bureau of Labor Statistics, 83 workers died from injuries due to insects, arachnids, and mites from 2003 to 2010.² The majority of fatalities involved bee stings. Fatalities are often due to anaphylactic shock, a serious allergic reaction to insect venom. Insect-related deaths are most common in farming, construction, and landscaping. Annual nonfatal work-related injuries and illnesses that led to days away from work ranged from 4,930 to 6,870 between 2008 and 2010.²

The following are important for prevention of insect stings:^{3,4}

- Wear light-colored, smooth-finished clothing covering as much of the body as possible.
 - Clothing that seals at the wrists and ankles prevents insects from entering under clothing.
- Avoid colognes, perfumes, and scented soaps, shampoos, and deodorants.
- Wear clean clothing and bathe daily since sweat may anger bees.
- Avoid flowering plants and discarded food.
- Remain calm and still if a single stinging insect is flying around.
 - Swatting at an insect may cause it to sting or release a chemical (pheromone) that attracts more insects.
 - Crushing a bee may also result in pheromone release.
- If you are attacked by several stinging insects at once, run to get away from them. (They may release pheromones while attacking).
 - Go indoors.
 - A shaded area is better than an open area to get away from the insects.
 - If you are able to physically move out of the area, do not to attempt to jump into water. Some insects (particularly Africanized Honey Bees) are known to hover above the water, continuing to sting once you surface for air.

- If a bee comes inside your vehicle, stop the car slowly, and open all the windows.
- Workers with a history of severe allergic reactions to insect bites or stings should consider carrying an epinephrine auto injector (e.g. Epi-Pen™) and should wear a medical identification bracelet or necklace stating their allergy.

Worker training on exposure risk and prevention, insect identification and first aid is also important.

First aid for insect stings includes:^{3,4}

- Remove the stinger using gauze wiped over the area or by scraping with a fingernail or other straight-edged object such as a credit card. Do not squeeze the stinger or use tweezers as this may release more venom.
- Wash the site with soap and water or antiseptic towelettes.
- Remove rings and other tight fitting jewelry.
- Elevate the affected body area and apply ice or a cold compress to reduce swelling.
- Do not scratch the sting as this may increase swelling, itching, and risk of infection.
- Have someone stay with the worker to assist if they have an allergic reaction.
- Treatment for localized swelling and itching may include over-the-counter pain relievers, steroid creams, anesthetic sprays and/or oral antihistamines, if the individual is not allergic to these. However, antihistamines may cause drowsiness, which could create a safety concern for employees returning to work that day.

The website of the American Academy of Allergy, Asthma and Immunology (a professional organization for physicians and other healthcare providers who treat patients with allergies including from stinging insects) notes that most people develop pain, redness and swelling at the site of an insect sting.⁵ Much less commonly, some people experience anaphylaxis, which is a severe allergic reaction. According to the Mayo Clinic, people who have a severe allergic reaction to a bee sting have a 25% to 65% chance of anaphylaxis the next time they are stung.⁶ Symptoms and signs of anaphylaxis can include:

- Swelling of the face, throat or tongue
- Difficulty breathing
- Dizziness or fainting
- Stomach cramps
- Nausea or diarrhea
- Itchiness and hives over large areas of the body

Treatment for anaphylaxis involves properly administered epinephrine. Patients with a known history of this type of allergy carry auto-injectors with them for use if needed before they can get to an emergency room. Several states have passed laws allowing entities rather than individuals to have auto-injectable epinephrine in their first aid kits. For information by state, select “other entities” for non-school legislation and select the state at: www.auvi-q.com/public-access/state-laws.

The logging standard requires employers to provide first aid kits {1910.266(d)(2)}, first aid training for all employees {1910.266(i)(7)}, and a reliable employee communication and accountability system {1910.266(d)(6)}. The standard’s list of the minimal required first aid kit items does not include an epinephrine auto-injector. {1910.266 App. A}. There are challenges to storing epinephrine in a first aid kit. The recommended storage temperature ranges from 68 to 77°F with excursions permitted to 59 to 86°F.^{7,8} Other challenges include the need for additional first aid training required to administer epinephrine via an auto-injector and the need for periodic replacement when the medication expires.

Workers have the right to:

- Working conditions that do not pose a risk of serious harm.
- Receive information and training (in a language and vocabulary the worker understands) about workplace hazards, methods to prevent them, and the OSHA standards that apply to their workplace.
- Review records of work-related injuries and illnesses.
- File a complaint asking OSHA to inspect their workplace if they believe there is a serious hazard or that their employer is not following OSHA's rules. OSHA will keep all identities confidential.
- Exercise their rights under the law without retaliation, including reporting an injury or raising health and safety concerns with their employer or OSHA. If a worker has been retaliated against for using their rights, they must file a complaint with OSHA as soon as possible, but no later than 30 days.

For additional information, see www.osha.gov/workers.

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to help ensure these conditions for America's workers by setting and enforcing standards, and providing training, education and assistance. For more information, visit www.osha.gov.

OSHA Standards and Regulations: www.osha.gov/laws-regs

OSHA Publications: www.osha.gov/publications

OSHA-Approved State Plans: www.osha.gov/stateplans

No Cost On-Site Consultation Services: www.osha.gov/consultation

Training Resources: www.osha.gov/training

Compliance Assistance Services: www.osha.gov/complianceassistance/cas

References

1. QuickStats: Number of Deaths from Hornet, Wasp, and Bee Stings, Among Males and Females — National Vital Statistics System, United States, 2000–2017. MMWR Morb Mortal Wkly Rep 2019;68:649. DOI: [dx.doi.org/10.15585/mmwr.mm6829a5](https://doi.org/10.15585/mmwr.mm6829a5)
2. Steve Pegula and Andrew Kato. Fatal injuries and nonfatal occupational injuries and illnesses involving insects, arachnids, and mites. Beyond the Numbers. Office of Compensation and Working Conditions, U.S. Bureau of Labor Statistics. 2014;17:1-13.
3. National Institute for Occupational Safety and Health. Insects and Scorpions - Bees, Wasps, and Hornets. Available at: www.cdc.gov/niosh/topics/insects/beeswasphornets.html (accessed on 4/21/2021).
4. Bob Beckley. Insect Stings and Bites: Basic Information About Bees, Wasps, and Ants. Safety and Health Tech Tips. US Department of Agriculture Forest Service. July 2008.
5. American Academy of Allergy, Asthma and Immunology. Stinging Insect Allergy. Available at: www.aaaai.org/conditions-and-treatments/allergies/stinging-insect-allergy (accessed on 4/22/2021).
6. Mayo Clinic. Bee sting. Available at: www.mayoclinic.org/diseases-conditions/bee-stings/symptoms-causes/syc-20353869 (accessed on 5/17/2021).
7. Patient Information for AUVI-Q® (epinephrine injection) Auto-Injector. Available at: dailymed.nlm.nih.gov/dailymed/fda/fdaDrugXsl.cfm?setid=6180fb40-7fca-4602-b3da-ce62b8cd2470&type=display#JB200 (accessed on 4/21/2021).
8. EPIPEN- epinephrine injection. Mylan Specialty L.P. Section 16 How Supplied/Storage and Handling. Available at: dailymed.nlm.nih.gov/dailymed/fda/fdaDrugXsl.cfm?type=display&setid=7560c201-9246-487c-a13b-6295db04274a#section-13 (accessed on 4/22/2021).

Note: The described case was selected to increase awareness of the risk discussed and prevent similar fatalities. The incident prevention recommendations do not necessarily reflect the outcome of any legal aspects of this case. OSHA encourages your company or organization to duplicate and share this information.

This Fatal Facts is not an OSHA standard or regulation and it creates no new legal obligations. The recommendations contained herein are advisory in nature and are intended to assist employers in providing safe and healthful workplaces. The Occupational Safety and Health Act of 1970 (OSH Act) requires employers to comply with safety and health standards promulgated by OSHA or by an OSHA-approved state plan. The requirements of OSHA approved state plans can be reviewed by selecting the state's website at: www.osha.gov/stateplans. The OSH Act's General Duty Clause, Section 5(a)(1), requires employers to provide employees with a workplace free from recognized hazards likely to cause death or serious physical harm.

For assistance, contact us. We can help. It's confidential.



OSHA FactSheet

Working Outdoors in Warm Climates

Hot summer months pose special hazards for outdoor workers who must protect themselves against heat, sun exposure, and other hazards. Employers and employees should know the potential hazards in their workplaces and how to manage them.

Sun

Sunlight contains ultraviolet (UV) radiation, which causes premature aging of the skin, wrinkles, cataracts, and skin cancer. There are no safe UV rays or safe suntans. Be especially careful in the sun if you burn easily, spend a lot of time outdoors, or have any of the following physical features: numerous, irregular, or large moles; freckles; fair skin; or blond, red, or light brown hair. Here's how to block those harmful rays:

- Cover up. Wear loose-fitting, long-sleeved shirts and long pants.
- Use sunscreen with a sun protection factor (SPF) of at least 30. Be sure to follow application directions on the bottle or tube.
- Wear a hat. A wide brim hat, not a baseball cap, works best because it protects the neck, ears, eyes, forehead, nose, and scalp.
- Wear UV-absorbent sunglasses (eye protection). Sunglasses don't have to be expensive, but they should block 99 to 100 percent of UVA and UVB radiation. Before you buy sunglasses, read the product tag or label.
- Limit exposure. UV rays are most intense between 10 a.m. and 4 p.m.

OSHA Card—Protecting Yourself in the Sun
www.osha.gov/Publications/osha3166.pdf

Heat

The combination of heat and humidity can be a serious health threat during the summer months. If you work outside (for example, at a beach resort, on a farm, at a construction site) or in a kitchen, laundry, or bakery you may be at increased risk for heat-related illness. So, take precautions. Here's how:

- Drink small amounts of water frequently.
- Wear light-colored, loose-fitting, breathable clothing—cotton is good.

- Take frequent short breaks in cool shade.
- Eat smaller meals before work activity.
- Avoid caffeine and alcohol or large amounts of sugar.
- Work in the shade.
- Find out from your health care provider if your medications and heat don't mix.
- Know that equipment such as respirators or work suits can increase heat stress.

There are three kinds of major heat-related disorders—heat cramps, heat exhaustion and heat stroke. You need to know how to recognize each one and what first aid treatment is necessary.

OSHA Heat Stress Fact Sheet:
www.osha.gov/OshDoc/data_Hurricane_Facts/heat_stress.pdf

OSHA Heat Stress Quick Card:
www.osha.gov/Publications/osha3154.pdf

Lyme Disease/Tick-Borne Diseases

These illnesses (i.e., Rocky Mountain spotted fever) are transmitted to people by bacteria from bites of infected deer (blacklegged) ticks. In the case of Lyme disease, most, but not all, victims will develop a "bulls-eye" rash. Other signs and symptoms may be non-specific and similar to flu-like symptoms such as fever, lymph node swelling, neck stiffness, generalized fatigue, headaches, migrating joint aches, or muscle aches. You are at increased risk if your work outdoors involves construction, landscaping, forestry, brush clearing, land surveying, farming, railroads, oil fields, utility lines, or park and wildlife management. Protect yourself with these precautions:

- Wear light-colored clothes to see ticks more easily.

- Wear long sleeves; tuck pant legs into socks or boots.
- Wear high boots or closed shoes that cover your feet completely.
- Wear a hat.
- Use tick repellants, but not on your face.
- Shower after work. Wash and dry your work clothes at high temperature.
- Examine your body for ticks after work. Remove any attached ticks promptly and carefully with fine-tipped tweezers by gripping the tick. Do not use petroleum jelly, a hot match, or nail polish to remove the tick.

OSHA Lyme Disease Fact Sheet:
www.osha.gov/OshDoc/data_LymeFacts/lyme fac.pdf

West Nile Virus

West Nile virus is transmitted by the bite of an infected mosquito. Mild symptoms include fever, headache, and body aches, occasionally with a skin rash on the trunk of the body and swollen lymph glands. Symptoms of severe infection include headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, and paralysis. You can protect yourself from mosquito bites in these ways:

- Apply Picaridin or insect repellent with DEET to exposed skin.
- Spray clothing with repellents containing DEET or permethrin. (Note: Do not spray permethrin directly onto exposed skin.)
- Wear long sleeves, long pants, and socks.
- Be extra vigilant at dusk and dawn when mosquitoes are most active.
- Get rid of sources of standing water (used tires, buckets) to reduce or eliminate mosquito breeding areas.

OSHA West Nile Virus Fact Sheet:
www.osha.gov/OshDoc/data_Hurricane_Facts/west_nile_virus.pdf

OSHA Safety and Health Information Bulletin:
 “Workplace Precautions Against West Nile Virus”

<http://www.osha.gov/dts/shib/shib082903b.pdf>

Poison Ivy-Related Plants

Poison ivy, poison oak and poison sumac have poisonous sap (urushiol) in their roots, stems, leaves and fruits. The urushiol may be deposited on the skin by direct contact with the plant or by contact with contaminated objects, such as clothing, shoes, tools, and animals.

Approximately 85 percent of the general population will develop an allergy if exposed to poison ivy, oak or sumac. Forestry workers and firefighters who battle forest fires have developed rashes or lung irritations from inhaling the smoke of burning plants.

- Wear long-sleeved shirts and long pants, tucked into boots. Wear cloth or leather gloves.
- Apply barrier creams to exposed skin.
- Educate workers on the identification of poison ivy, oak, and sumac plants.
- Educate workers on signs and symptoms of contact with poisonous ivy, oak, and sumac.
- Keep rubbing alcohol accessible. It removes the oily resin up to 30 minutes after exposure.

OSHA Web Page—Poisonous Plants:
www.osha.gov/SLTC/etools/sawmills/poison.html

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For more complete information:



U.S. Department of Labor

www.osha.gov
 (800) 321-OSHA



Safety Practices for Working Outdoors in Hot Weather

1. Be aware of the hazards of working outside when the weather is hot.

- Overexposure to the sun can cause painful sunburn and even lead to deadly skin cancer.
- Always wear a sunscreen with an sun protection factor (SPF) factor of 30 or higher.
- Work in the early morning or late afternoon if possible.
- If you start to feel tired, weak, nauseous, or get cramps, go to a cool spot, rest, and drink plenty of water or other fluids, but not alcohol.



2. Plants, insects, and other animals can be dangerous.

- Plants such as poison ivy, poison oak, and poison sumac can cause itchy rashes or, in some cases, more severe reactions.
- Know what these plants look like—and don't touch them.
- Keep your skin covered when working outdoors.
- Wear an insect repellent containing DEET to help keep insects away.
- Bee or wasp stings can be very dangerous to some people.
- If a dog or other animal seems aggressive, it may be a sign of rabies.

3. Power equipment and chemicals can be hazardous.

- Use proper machine guarding to prevent serious injuries and even amputations.
- Wear hearing protection when operating noisy equipment.
- Check the labels on containers of pesticides and herbicides.
- Follow the Occupational Safety and Health Administration (OSHA) regulations for required personal protective equipment (PPE), such as gloves, eye protection, and a respirator.

4. Watch out for violent weather conditions, such as thunderstorms and tornadoes, in hot weather.

- Listen to frequent weather reports. Even a few minutes' warning can allow you time to reach safe cover.
- Watch the sky, and respond quickly if you sense that a storm is coming.
- Lightning can strike even if the storm seems a good distance away.
- Your best protection against bad weather is a sturdy building.
- Get inside, and stay there until the storm is over.

Enjoy working outside—but always follow the safety rules!



GOALS

This safety session should teach employees to:

- Realize there are pluses and minuses to working outdoors.
- Be aware of ways to protect themselves when they are working outdoors in hot weather.
- Realize that these same precautions can protect them and their families in everyday activities.

Applicable Regulations: 29 CFR 1910.95, 1910.132, 1910.243, and 1910.1200 may apply



1. Many people really enjoy the opportunity to work outside when the weather is warm, but they need to be aware that there are hazards.

- Overexposure to the sun can cause painful sunburn. Years of overexposure can often lead to deadly skin cancer.
 - Workers should wear a sunscreen with a sun protection factor (SPF) factor of 30 or higher to protect their skin from harmful ultraviolet (UV) radiation—even on a cloudy day.
 - They should wear cool, light-colored clothing; a broad-brimmed hat; and sunglasses.
- They can avoid overexposure to heat by doing as much work as possible in the early morning or late afternoon hours. The temperature may be lower and the sun's rays are not at their peak. They should:
 - Build up their tolerance slowly, and drink plenty of water while they work.
 - Pay attention to what their body tells them.
 - Rest in a cool spot, and drink water or other fluids, but not alcoholic beverages, if they start to feel tired, weak, nauseous, or get cramps

2. Plants, insects, and other animals can also pose dangers to workers.

- Exposure to plants such as poison ivy, poison oak, and poison sumac can cause itchy rashes or, in some cases, more severe reactions.
- For some people, even contact with nonpoisonous plants, or the pollen in the air, can cause sneezing, congestion, and other allergic reactions.
- The two best protections against contact with poisonous plants are simple ones:
 - Know what these plants look like—and don't touch them.
 - Keep skin covered when working outdoors. Wear long sleeves, gloves, long pants, and footwear that completely covers the feet.
- Wear an insect repellent containing DEET to protect against insect bites.
 - Tick bites can cause Lyme disease and other illnesses, which can have long-term complications if not treated early.
 - Mosquito bites can transmit West Nile virus, Zika, and other diseases.
 - The bite of some spiders can be serious—even life threatening.
- Some people can become seriously ill from a bee or wasp sting and require immediate medical attention.
- While animal bites are a rare problem, workers should always be aware of the possibility.



- Snake bites are a particular problem in some areas.
- People working outdoors may even encounter wild animals that are aggressive—a common sign that they may have rabies.
- And, of course, one should always be careful of unfamiliar dogs that may appear friendly but bite if approached.

3. Outdoor duties can expose workers to hazards from power equipment or hazardous chemicals.

- Follow all the Occupational Safety and Health Administration (OSHA) regulations for proper machine guarding to prevent serious injuries and even amputations.
- In addition, such equipment is often noisy enough to require hearing protection under OSHA.
- Many pesticides and herbicides are hazardous substances that can cause a variety of health problems from direct contact or from inhaling vapors.
- Check the labels on containers of pesticides and herbicides to make sure that you know how to use the substances safely.
- Follow OSHA regulations for any required personal protective equipment (PPE), such as gloves, eye protection, and a respirator.

4. Violent weather conditions, such as thunderstorms and tornadoes, are more common in hot weather. In some areas, so are flash floods.

- Make a point of listening to frequent weather reports. Even a few minutes' warning can allow you time to reach safe cover.
- Watch the sky, and respond quickly if you sense that a storm is coming near.
- If flash floods may be a problem where you are working, move to higher ground.
- Meteorologists warn that lightning can strike even if the storm seems a good distance away. It's not worth taking a chance and being caught outside.
- Your best protection against bad weather is a sturdy building. Get inside, and stay there until the storm is over.

DISCUSSION POINTS:



Which of the hazards discussed here have you encountered while working outdoors? Are there others that apply to your job—and do you have suggestions for other safety precautions to minimize the dangers?

CONCLUSION:



Most of the hazards of working outdoors in hot weather can be reduced or eliminated by following safe practices. The suggestions in this lesson will help you to safely enjoy the pleasures of outdoor work.

TEST YOUR KNOWLEDGE:



Have your employees take the Working Outdoors in Hot Weather quiz. By testing their knowledge, you can judge their understanding of the hazards involved and the safe practices they should follow to protect themselves.



WORKING OUTDOORS IN HOT WEATHER QUIZ

1. **Years of overexposure to the sun can often lead to deadly skin cancer.**
a. True b. False
2. **You don't need to wear sunscreen when it is cloudy.**
a. True b. False
3. **If you start to feel tired, weak, nauseous, or get cramps, go to a cool spot, rest, and drink plenty of water or other fluids.**
a. True b. False
4. **Know what plants such as poison ivy, poison oak, and poison sumac look like—and don't touch them.**
a. True b. False
5. **Insect repellents are not necessary because most insect bites are only a minor annoyance.**
a. True b. False
6. **You never need personal protective equipment when working outdoors.**
a. True b. False
7. **Check the labels on containers of pesticides and herbicides to make sure that you know how to use the substances properly.**
a. True b. False
8. **Listening to frequent weather reports can give you a few minutes' warning of violent weather conditions in your area.**
a. True b. False
9. **There is no danger from lightning unless you are in the middle of a storm.**
a. True b. False
10. **Your best protection against bad weather is a sturdy building.**
a. True b. False

When you have completed this quiz, turn it in to your supervisor.

Name: _____

Date: _____



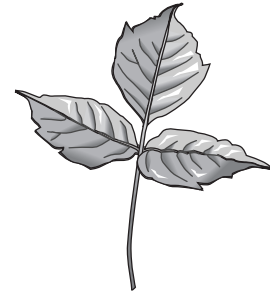
ANSWERS TO WORKING OUTDOORS IN HOT WEATHER QUIZ

1. a. True.
2. b. False. You should wear a sunscreen with a sun protection factor (SPF) factor of 30 or higher to protect your skin from harmful ultraviolet (UV) radiation—even on a cloudy day.
3. a. True.
4. a. True.
5. b. False. Ticks and mosquitoes can transmit serious diseases, and bites and stings from spiders, bees, and wasps can be dangerous. You should use an insect repellent containing DEET when working outdoors.
6. b. False. You may need hearing protection if you are working with noisy equipment. You may need gloves, eye protection, and even a respirator if you are working around hazardous chemicals.
7. a. True.
8. a. True.
9. b. False. Lightning can strike even if the storm seems a good distance away.
10. a. True.



Take Precautions When Working Outdoors

- Know how to identify the hazardous plants, insects, and animals that might be found in your work area.
- Wear clothes that cover skin thoroughly, including:
 - Hats and light-colored clothes in summer.
 - Layered clothing and hand and head coverings in winter.
 - Sturdy shoes.
- Avoid any perfumes that could attract insects.
- Drink a lot of water when working outside in summer.
- Use sunscreen on exposed skin in summer.
- Know what to do for allergic reactions to insect bites or plant contact.
- Be alert to symptoms of overexposure to weather conditions and act promptly to get relief.
- Find out about hazards of any recently applied pesticides or herbicides and the protective clothing and other protective measures they require.
- Avoid contact with outdoor machines' blades, pinch points, or other points of dangerous contact.
- Don't smoke or create other fire hazards around gasoline.
- Know first-aid practices to follow for potential exposures and injuries.





WORKING SAFELY OUTDOORS QUIZ

1. **Long-sleeved shirts and other clothes that cover the skin are recommended when working outdoors.**
a. True b. False
2. **Serious allergic reactions to insect bites may even lead to death.**
a. True b. False
3. **Poison ivy plants are only dangerous when they're in flower.**
a. True b. False
4. **Mosquito bites may cause Lyme disease or Rocky Mountain spotted fever.**
a. True b. False
5. **When working in the heat, you should protect yourself with light-colored clothing and:**
a. A hat
b. Sunscreen
c. Drinking water
d. All of the above
6. **When you work in the cold, a symptom that tells you it's time to get warm is:**
a. Coughing
b. Losing feeling in fingers or toes
c. Itching
7. **If herbicides or pesticides are hazardous, they should have information on container labels and safety data sheets.**
a. True b. False
8. **Machine guards should remain in place on mowers and other outdoor equipment.**
a. True b. False
9. **When working outdoors with mowers or other machinery, you never need any personal protective equipment.**
a. True b. False
10. **The usual slogan to follow to avoid contact with poison ivy and similar plants is:**
a. "If it's red, you may be dead."
b. "Leaves of green and white, take flight."
c. "Leaves of three, let them be."

When you have completed this quiz, turn it in to your supervisor.

Name: _____

Date: _____



Safety **Working Safely** Trainer **Outdoors**

ANSWERS TO WORKING SAFELY OUTDOORS QUIZ

1. a. True.
2. a. True.
3. b. False. Contact is always hazardous, even if the plants are dead or dying.
4. b. False. Tick bites may cause Lyme disease or Rocky Mountain spotted fever.
5. d. All of the above.
6. b. Losing feeling in fingers or toes.
7. a. True.
8. a. True.
9. b. False. You may need safety glasses, sturdy shoes, hearing protection, etc.
10. c. "Leaves of three, let them be."



GOALS

This safety session should teach employees to:

- Be aware of potential safety and health hazards outdoors.
- Know ways to avoid and respond to hazards when working outdoors.

Applicable Regulations: General Duty Clause 5(a)(1), 29 CFR 1910.132 may apply



1. Outdoor jobs can expose workers to health and safety hazards.

- It's important to be aware of hazards and ways to protect against them when working outdoors.
- Contact with certain plants can cause itchy rashes or allergic reactions.
- Bites from insects or animals can cause discomfort or illness.
- Overexposure to heat or cold can cause health problems.
- Exposure to pesticides or herbicides can cause health problems.
- Improper use of, or contact with, equipment can cause injuries.

2. Plants and living creatures may sometimes be hazardous.

- Don't let skin, clothes, or equipment touch poison ivy, oak, or sumac.
 - Learn to identify the plants: If they have "leaves of three," let them be.
 - The plants' sap can be hazardous even when plants are dead.
 - Common reactions are itchy rashes, which may blister, ooze, or scab.
 - Cover hands, arms, legs, and feet when working outdoors.
 - Wash promptly and thoroughly with soap and water after contact and after working outdoors.
- Recognize that some people are allergic to the pollen in certain plants.
 - Medications are available to prevent or relieve these allergies.
- Be alert to mosquitoes, ticks, bees, spiders, chiggers, black flies, and other insects.
 - Mosquito bites can swell and itch; some mosquitoes carry disease.
 - Tiny ticks can carry Lyme disease and Rocky Mountain spotted fever.
 - A few spiders can be venomous.
 - Get immediate medical attention if a bite or sting causes trouble breathing or swallowing; it could be a potentially fatal allergic reaction.
 - Check for ticks whenever you finish working outdoors; remove ticks with tweezers and get medical attention for bites.
- Try to repel insects by:
 - Wearing clothes that cover as much skin as possible
 - Not using cologne, after-shave, or perfumed soap when working outdoors
 - Using insect repellents on skin and clothes
- Stay away from snakes and animals outdoors; they'll try to avoid you, too.
 - Get medical attention if you are bitten.



3. Protect against overexposure to hot or cold conditions.

- Dress properly when you work outdoors.
 - In cold, wear layers of clothes, a hat and, if necessary, a face mask.
 - In hot weather, wear light-colored clothing and a hat.
- Hot conditions also call for:
 - Using sunscreen on exposed skin.
 - Drinking a lot of water.
- Avoid frostbite and hypothermia in the cold; get to a warm spot if you lose feeling in fingers or toes, and if you start shivering uncontrollably or become confused and disoriented
- Avoid heat sickness; get to a cool place if you get cramps, nausea, weakness, etc.

4. Avoid exposure to pesticides or herbicides.

- Know what hazardous substances are used in your outdoor work area.
- If signs say an area was recently treated with herbicides or pesticides, don't enter until you find out:
 - If it's safe to work there.
 - If you need to use any type of personal protective equipment (PPE) to prevent exposure.
- Check herbicide and pesticide labels and/or safety data sheets to find out specific hazards, means of exposure, protective measures, and first aid.

5. Practice equipment safety outdoors.

- Keep machine guards in place.
- Wear necessary protective equipment, such as safety glasses, sturdy shoes, etc.
- Remove debris and rocks from your path before mowing or cutting.
- Don't smoke around gasoline-powered equipment.
 - Start and refuel equipment outdoors.
- Turn off equipment before making adjustments or performing maintenance.
- Get prompt first aid for minor injuries and professional help for anything more serious.



DISCUSSION POINTS:

Briefly review some of the possible outdoor hazards in your work area as well as the PPE required.



CONCLUSION:

- Be aware of outdoor hazards and protect yourself against them.
- Outdoor work can expose you to both natural and man-made hazards. Be alert and take the proper precautions to stay safe and healthy.



TEST YOUR KNOWLEDGE:

Have your employees take the Working Safely Outdoors quiz. By testing their knowledge, you can judge their understanding of outdoor hazards and protective measures and whether they need to review this important topic again soon.