What are the Kinds of Outdoor Workplace Hazards That Expose Workers?



QUESTION

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A. Chemical hazards, physical hazards, workplace hazards.
B. Traumatic injury hazards, biological hazards, pesticides.
C. Physical hazards, biological hazards, vector-borne hazards.
D. Workplace hearing loss hazards, vector-borne hazards, industrial hazards.

ANSWER

C. Physical hazards, biological hazards, vector-borne hazards.

WHY IS IT RIGHT

Most safety hazards involve inanimate objects, chemicals or conditions, such as extreme heat. But living creatures can also pose a threat to workers, particularly when they work outside. Protecting workers from attacks by wild animals and insects may be a little unusual but really involves exactly the same process as addressing hazards such as pinch points in machinery and burns from hazardous substances.

But the duty to deal with the hazards of animal attacks and bug bites is usually covered by the so-called **“general duty” clause**—that is, the part of every OHS statute that requires employers to take every reasonable precaution to provide a safe and healthy workplace and protect workers from known or foreseeable risks. So if you know or should know that workers are at risk of, say, being attacked by a cougar or being bitten by a mosquito, you have a duty to take reasonable steps to protect them from that hazard.

Some jurisdictions have explicitly or implicitly applied the general duty clause to wild animals and insects in safety bulletins or guides.

- Work Safe Alberta released a safety bulletin on West Nile Virusthat says the OHS laws require employers to assess the work site and identify hazards before work begins. When a hazard exists—such as the risk of being bitten by an infected mosquito—it’s the employer’s duty to eliminate or control

the hazard. In the case of West Nile Virus, employers can protect outdoor workers by taking steps to reduce their chances of being bitten by infected mosquitoes.
- WorkSafeBC released a hazard alert on bear attacks as well as guidelines on training workers on bears, which can be applied to other hazardous wildlife and insects.
- Guide to Workplace Safety for Golf Courses and Groundskeeping from the Workers' Compensation Board of PEI notes that working outdoors means having to fend off bees, wasps, stinging ants, mosquitoes and other pests on occasion. It recommends that workers wear protective clothing or insect repellent to help prevent stings and bites from insects.

HAZARDS TO OUTDOOR WORKERS

Outdoor workers are exposed to many types of hazards that depend on their type of work, geographic region, season, and duration of time they are outside. Employers should train outdoor workers about their workplace hazards, including hazard identification and recommendations for preventing and controlling their exposures.

Physical Hazards

Physical hazards to outdoor workers may include extreme heat, extreme cold, noise, and sun exposure. Extreme heat can cause heat stroke, heat cramps, heat exhaustion, heat rash, and other problems. Extreme cold can cause hypothermia, frostbite, and other problems. Repeated exposures to loud noise can lead to permanent, incurable hearing loss or tinnitus.

Biological Hazards

Biological hazards include vector-borne diseases, venomous wildlife and insects, and poisonous plants. Venomous snakes, spiders, scorpions, and stinging insects can be found throughout various geographic regions, and are especially dangerous to workers who have allergies to the animal. Poisonous plants can cause allergic reactions if their oils come in contact with skin. These plants can also be dangerous if burned and their toxins are inhaled.

Vector-borne Diseases

Vector-borne diseases may be spread to workers by insects, such as mosquitoes or ticks. When a mosquito or tick bites a worker, it may transfer a disease-causing agent, such as a parasite, bacterium, or virus.

Outdoor workers may encounter other hazards in addition to the physical and biological hazards described here. They may be exposed to pesticides or other chemical hazards, traumatic injury hazards, or other safety and health hazards depending on their specific job and tasks.

DOG ATTACK INJURIES

The first occupation that comes to many peoples' minds when discussing dog bites on the job is postal carriers. Other occupations that are at higher risk of dog bites are cable installers, police officers, package deliverers, and meter readers. With the sheer number of dogs in the US, there are many other occupations exposed to potential dog attacks. It is important to take into

consideration the hazards dogs can pose both on and off the job.

Dog attacks can be as minor as a small single bite to as serious as death. It is estimated that there is 20 to 30 fatalities due to dog attacks every year in the United States. Dogs also carry many bacteria that can be passed on to a human from a bite. **The CDC reports** that a dog's mouths can carry over 60 types of bacteria and approximately 18% of all dog bites gets infected. While rabies is a common disease, dogs can also carry Pasteurella, MRSA, and Tetanus. It is important to immediately wash the site of a dog bite with soap and water. Report any strange behavior from a dog that has attacked or been aggressive to Animal Control. It is possible the dog could have rabies. Seek medical attention if you get an infection or have a fever after getting bit by a dog.

Mosquitos

Mosquito season starts as early as mid-April and lasts until the first hard frost in late September or October. But the risk is greatest when the mosquito species that are the primary virus-carriers, are most prevalent, active and biting, which is generally between mid-July to mid-September. In fact, most people get infected in late July and early August.

Mosquito bites are itchy and uncomfortable. But the real danger comes from being bitten by a mosquito carrying West Nile Virus. Many people who are infected with West Nile don't have any symptoms. But others may develop either:

- West Nile Non-Neurological Syndrome, which can have symptoms including headache, body aches, nausea, vomiting, skin rash and swollen lymph glands that usually resolve within 3-6 days; or
- West-Nile Neurological Syndrome, a severe infection that can include headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness and paralysis.

SNAKES

After a natural disaster, snakes may have been forced from their natural habitats and move into areas where they would not normally be seen or expected. When you return to your home, be cautious of snakes that may have sought shelter in your home. If you see a snake in your home, immediately call the animal control agency in your county.

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DANGEROUS INSECTS

Bites by dangerous insects can not only be painful in and of themselves but also spread diseases, such as Lyme disease and West Nile Virus. In addition, workers with allergies can die even if bitten by an uninfected insect. Here are some of the key dangerous insects from which you should protect workers.

Ticks

Ticks live in tall grass and wooded areas, and are usually active April through October, with peak activity from June through August. Preventing tick bites is important because such bites can transmit Lyme disease. This illness is spread by the bite of an infected blacklegged tick (also called a deer tick) or western blacklegged tick, which are very hard to see and much smaller than common dog and cattle ticks.

According to the Public Health Agency of Canada, although not all blacklegged ticks carry Lyme disease, populations of infected blacklegged ticks are growing—meaning the risk of contracting Lyme disease is on the rise across Canada.

Fire Ants

According to a bulletin from WorkSafeBC, European fire ants are small reddish-brown ants native to Europe and Asia. But they're also present in parts of Canada, particularly in BC, and they can pose a threat to workers. Fire ants may be found in places such as:

- Construction sites
- Properties with landscaping
- Equestrian centres
- Garden centres and nurseries
- Urban parks
- Botanical gardens
- Community gardens
- Golf courses.

Fire ants are very aggressive. If their nests are disturbed, they swarm quickly and deliver painful stings that can inject venom under the skin. After a sting, a burning sensation develops and can last from 30 minutes to two hours. The burning is followed by itchiness that can last up to a week. At a minimum, stings cause swelling, redness and discomfort. In rare cases, they can result in a severe allergic reaction.

Stinging Insects

Attacks by stinging insects such as bees and wasps are a real threat to some workers—and can have very painful consequences. For example, a U.S. Postal Service worker in Chicago was hospitalized after being attacked by a swarm of hornets while delivering mail. She was stung between 30 and 50 times near her head and neck. A resident called 911 after hearing her screams. Landscapers working nearby may have aggravated the nest and set the hornets in motion.

Being bitten by insects such as bees, wasps and hornets may be especially painful and even deadly for workers who are allergic. So if you know that a worker has, say, a bee allergy, you may have an even greater obligation to protect him from bee stings.

WHY IS EVERYTHING ELSE WRONG

TO ENSURE THAT YOU PROPERLY PROTECT WORKERS FROM WILD ANIMAL ATTACKS AND INSECTS, TAKE THE SAME BASIC APPROACH THAT YOU USE TO DEAL WITH OTHER SAFETY HAZARDS:

Step #1

evaluate the workplace to determine if workers are at risk of being attacked by wild animals or bitten by dangerous insects. If you determine that workers are exposed to such hazards, assess the nature and seriousness of the hazard.

Step #2: Control the Risk

Next, take steps to eliminate or, if that's not practical, control or minimize that risk. For example, give workers bug repellent to spray on themselves while working outdoors to prevent insect bites. Also, remove standing water in or near the workplace to avoid attracting mosquitos. (We'll discuss the measures you can take to protect workers from animal attacks and dangerous insects in more detail below.)

Step #3: Educate and Train Workers

Educate workers on the risks of insect bites and animal attacks, and train them on how to deal with animal encounters and avoid being bitten by bugs.

Step #4: Monitor and Follow Up

As always, you should monitor the effectiveness of your safety measures. For example, investigate all incidents in which workers encountered wild animals. Assess not only actual attacks and why they happened, but also encounters that didn't result in attacks and why they didn't happen. Try to learn from each kind of encounter and modify your safety measures accordingly.

ANIMAL ATTACKS

To determine if an animal attack is a foreseeable risk for your workers, consider:

- Any history or reports of animal attacks against workers or others in the area;
- Knowledge of the presence of dangerous animals in or near the workplace. If your workplace is located in a part of Canada that's home to potentially dangerous animals, it's foreseeable that your workers are at risk of being attacked by such animals; and
- The nature of the work. For example, a worker at a remote oil drilling site is more likely to be exposed to animal attacks than a worker in a manufacturing plant.

If your workers *are* at reasonable risk of attack by wild animals, some of the safety measures you should consider implementing include:

- Giving workers at risk of bear attacks pepper spray, bear repellent, "bear bangers" (which make a loud noise designed to drive bears away) or even guns;

- Ensuring that workers working alone or in remote areas have portable radios, GPS systems and ready access to helicopters so they can quickly be found and removed from areas in which bears or other dangerous animals have been sighted; and
- Training workers on how to react when they encounter animals such as cougars, bears and wolves.

DOG ATTACKS

How to Avoid a Dog Attack

- Do not try to pet unfamiliar dogs
- Do not enter an area where a dog could be, like a back yard, especially if the owner is not present
- Even if you know the dog they could still bite if they do not recognize you
- Do not get aggressive with playing with a dog
- Never try to take a bone or other object from the dog if it is growling or showing aggression
- Do not let small children play with dogs unattended

If a Dog Keeps Approaching or Attacks

- Stand in place and do not make any sudden movements if an unknown dog approach
- Never run from an approaching dog
- Yell “NO” to attempt to get the dog to back down
- Do not make eye contact or take an aggressive posture towards the dog
- If knocked down, get into a fetal position and cover your head and neck

How to Prevent Snake Bites

- Be aware of snakes that may be swimming in the water to get to higher ground and those that may be hiding under debris or other objects.
- If you see a snake, back away from it slowly and do not touch it.

Signs of Snake Bites

If you have to walk in high water, you may feel a bite, but not know that you were bitten by a snake. You may think it is another kind of bite or scratch. Pay attention to the following snake bite signs.

Depending on the type of snake, the signs and symptoms may include:

- A pair of puncture marks at the wound
- Redness and swelling around the bite
- Severe pain at the site of the bite
- Nausea and vomiting
- Labored breathing (in extreme cases, breathing may stop altogether)
- Disturbed vision
- Increased salivation and sweating
- Numbness or tingling around your face and/or limbs

What TO DO if You or Someone Else is Bitten by a Snake

- If you or someone you know are bitten, try to see and remember the color

and shape of the snake, which can help with treatment of the snake bite.
- Keep the bitten person still and calm. This can slow down the spread of venom if the snake is venomous.
- Seek medical attention as soon as possible.
- Dial 911 or call local Emergency Medical Services (EMS).
- Apply first aid if you cannot get the person to the hospital right away.

- Lay or sit the person down with the bite below the level of the heart.
- Tell him/her to stay calm and still.
- Wash the wound with warm soapy water immediately.
- Cover the bite with a clean, dry dressing.

What NOT TO DO if You or Someone Else is Bitten by a Snake

- Do not pick up the snake or try to trap it (this may put you or someone else at risk for a bite).
- Do not apply a tourniquet.
- Do not slash the wound with a knife.
- Do not suck out the venom.
- Do not apply ice or immerse the wound in water.
- Do not drink alcohol as a pain killer.
- Do not drink caffeinated beverages.

According to NIOSH, here are some ways that workers can protect themselves from insect bites:

- Wear light-coloured, smooth-finished clothing that covers as much of the body as possible;
- Avoid perfumed soaps, shampoos, and deodorants. And don’t wear cologne or perfume;
- Wear clean clothing and bathe daily;
- Avoid flowering plants when possible;
- Keep work areas clean. Some insects are attracted to discarded food;
- Remain calm and still if a single stinging insect is flying around. Swatting may cause it to sting;
- If attacked by several stinging insects, run away. (Bees release a chemical when they sting, which attracts other bees.) Go indoors or to shaded areas, which are better than open ones. Don’t jump into water. Some insects (such as Africanized honey bees) are known to hover above the water;
- If an insect is inside your vehicle, stop slowly and open all the windows; and
- Workers with a history of severe allergic reactions to insect bites or stings should carry an epinephrine autoinjector and wear medical ID jewelry stating their allergy.

If a worker *is* stung by an insect:

- Have someone stay with the worker to be sure that he doesn’t have an allergic reaction;
- Wash the site with soap and water;
- Remove the stinger using gauze wiped over the area or by scraping a fingernail over the area. Never squeeze the stinger or use tweezers;
- Apply ice to reduce swelling; and

Don’t scratch the sting, which may increase swelling, itching and risk of

infection.

To protect workers from tick bites, tell them to do the following when working in areas where ticks may be present:

- Wear closed-toe shoes, long-sleeved shirts and pants;
- Pull socks over pant legs to prevent ticks from crawling up legs;
- Wear light-coloured clothes to make spotting ticks easier;
- Use insect repellents that contain DEET or Icaridin. Repellents can be applied to clothing as well as exposed skin. Always read and follow label directions;
- Shower or bathe within two hours of being outdoors to wash away loose ticks; and
- Do a daily “full body” check for ticks.

If a worker finds a tick on his skin, removing it within 24-36 hours of the tick bite usually prevents infection. To remove a tick, using clean tweezers, carefully grasp the tick as close to the skin as possible. Pull slowly upward, but try not to twist or crush the tick. If parts of the tick’s mouth break off and remain in the skin, remove them with tweezers.

Once the tick is removed, wash the area with soap and water or disinfect it with alcohol or hand sanitizer. Save the tick in a plastic bag that you can seal or a pill bottle. Record the location and date of the bite. You can store the container for up to 10 days in the refrigerator (for live ticks) or freezer (for dead ticks).

Prevent Mosquito Bites

- Adult mosquitoes do not generally survive high winds during a hurricane.
- Immediately following a hurricane, flooding occurs. Mosquito eggs laid in the soil by floodwater mosquitoes during previous floods hatch. This results in very large populations of floodwater mosquitoes. Most of these mosquitoes are considered nuisance mosquitoes.
- In general, nuisance mosquitoes do not spread viruses that make people sick. The types of mosquitoes that can spread viruses may increase 2 weeks to 2 months after a hurricane, especially in areas that did not flood but received more rainfall than usual.

The best was to prevent infection from diseases spread by mosquitoes is to prevent mosquito bites. Mosquitoes bite during the day and night. Take the following steps to protect yourself and your family:

- Use EPA-registered external icon insect repellent
- Wear long-sleeved shirts and long pants
- Take steps to control mosquitoes indoors and outdoors

FIRE ANTS

To help prevent workers from being stung by fire ants, instruct them to wear clothing and footwear that cover exposed skin, such as long-sleeved shirts, long pants, socks, closed-toe shoes and gloves. In addition, workers should tie pants’ bottoms or tape them to socks or boots.

If a worker *does* get stung by a fire ant, he should brush the ants away from the

skin with a gloved hand or cloth. Don’t crush the ants—it’ll only encourage more of them to sting. Taking an antihistamine can relieve minor swelling and irritation. Workers should see a doctor if the symptoms get worse.