

TerranearPMC Safety Share

Week of April 9, 2012- Snakes – Basic Information and Safety

Snakes are perhaps the most feared and hated animals in the United States. This negatively goes all the way back to the beginning of mankind, where as one of the first stories in the Bible, the snake is the culprit that began man's fall from grace and losing the chance to live his existence in paradise (I'm not trying to start any controversy here; only to bring out that snakes have a history of some really bad press). In general, people's fear of snakes comes from lack of understanding and superstition. Snakes are not mysterious at all, and these fascinating creatures don't deserve the anxiety many people feel about them. One point that needs to be made is that technically, snakes are NOT poisonous as their venom is injected, thus classifying them as either venomous or non-venomous (poisons are ingested, so snakes should be defined as either poisonous or non-poisonous).

Of the thousands of snakes in North America, only four major species are venomous. They are rattlesnakes, copperheads, cottonmouths/water moccasins, and coral snakes (of course each of these species has members within their respective sub-species). Most importantly, please remember that these snakes generally only bite when provoked. They can be dangerous to outdoor workers including farmers, landscapers, construction workers, as well as those of us involved with environmental activities that spend time outside. Although rare, some workers with a severe allergy to snake venom may be at risk of death if bitten. According to the Centers for Disease Control (CDC), an estimated 7,000–8,000 people per year receive venomous bites in the United States, and about 5 of those people die. The CDC states that the number of deaths would be much higher if people did not seek medical care.

All snakes are predators, and many are fussy eaters. Bull-snakes eat rats, mice, and chipmunks. King snakes feed on other snakes, mice, young birds, and bird eggs. Some small snakes, like the smooth green snake, eat insects, while others (earth snakes and worm snakes) eat earthworms, slugs, and salamanders. Toads are the favorite food of hognose snakes.

There are many benefits from having some snakes around the yard or garden. Snakes are one of nature's most efficient mousetraps, killing and eating a variety of rodent pests. While snakes will not eliminate all pests, they do help keep their numbers in check. Some harmless snakes (king snakes and coach-whips) eat other snakes, including venomous ones. In addition, snake venom can be beneficial and has been used in developing a variety of human medicines. One type of high blood pressure medicine was developed using information based on chemicals in snake venom. Currently, researchers are conducting studies using snake poisons to develop treatments for blood and heart problems. Snake venom is also being investigated for controlling some types of harmful bacteria.

Some snakes are quite rare and are protected species. These rare snakes are on state and federal endangered and threatened species lists. The **ridge-nose rattlesnake** is on the federal list while the

mottled rock rattlesnake, Mexican and narrow-head garter snakes, plain-belly water snake, green rat snake, and western ribbon snake are on New Mexico's endangered and threatened list.

Snakes are ectotherms, meaning they regulate their body temperature by absorbing or giving off heat. Because their body temperature is affected by environmental temperatures and varies with surrounding conditions, snakes become inactive during very hot seasons (aestivation) and very cold seasons (hibernation). During these periods of inactivity, snakes may go for several weeks without eating. Because they are cold-blooded, snakes must rely on their behavior to regulate their body temperature. During the hot part of the day, snakes move to shaded areas, and on cool days they sun themselves in warm open areas. Snakes often seek out paved roads where they are attracted by the heat from the road surface.

Snakes use their forked tongue to smell, constantly flicking it to pick up any airborne particles and odors. Once a snake detects an aroma, it inserts its tongue into two holes on the top of its mouth (Jacobson's organ), where the smells are interpreted by its brain. If the snake detects food and is hungry, it will pursue the animal. Contrary to popular belief, snakes are not slimy; in fact, they feel dry to the touch. Snake scales and skin help retain body moisture. Snakes shed their skin and eye coverings together.

Soon after temperatures rise in the spring, snakes come out of hibernation and mate. Some snakes lay eggs in a damp protected area where they will hatch in about two months. Other snakes hatch eggs inside their bodies. Once the young have been hatched or born, parents do not care for their off-spring because they are able to take care of themselves.

When people encounter a snake, they often corner it, causing the snake to hiss loudly, open its mouth in a threatening manner, coil up, and strike at the individual; or bluff by advancing toward the intruder. These behaviors, intended to scare off the intruder, lead to a common misconception that snakes charge or attack people. In most cases, a snake advances only if it feels threatened. Usually it crawls away if it can reach cover safely. If you encounter a snake, leave it alone. A snake cannot reach around and grab its tail, rolling away from predators—there are no “hoop” snakes.

Signs or symptoms associated with a snake bite may vary depending on the type of snake, but 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

Various home remedies, including moth balls, sulfur, lime, cayenne pepper, sticky bird repellent, coal tar and creosote, gourd vines, and musk from king snakes, have not proved effective in deterring snakes. No fumigants or poisons are registered for snake control. Although there are chemicals on the market which their respective manufacturers claim to repel snakes, most scientific

investigations have found them ineffective. The only efficient method of discouraging snakes is to modify the environment so they find it unattractive.

Snakes often live in cool, dark places where food is abundant. Likely places to find snakes around homes include:

- Firewood or haystacks directly on the ground.
- Old lumber or junk piles.
- Gardens and flower beds with heavy mulch.
- Untrimmed shrubs and shrubs growing next to a foundation.
- Unmowed and unkempt lawns, abandoned lots, and fields with tall vegetation.
- Pond and stream banks where there is abundant debris or trash.
- Cluttered basements and attics with rodent, bird, or bat problems.
- Feed storage areas in barn haylofts where rodents may be abundant.

The environment around a home can be made less attractive to snakes by removing potential snake shelters (usually cool, dark, damp hiding places) and food sources (rodents).

Lawns and fields that are kept clean and closely mowed are less attractive to snakes than areas with tall grass, weeds, brush, and junk. Remove other snake hiding places such as old boards lying on the ground, rock and junk piles, and trash piles. Trim shrubs and bushes so limbs hang no lower than 12" from the ground. Stack fireplace or stove wood away from the home on a rack (not on the ground) that sits at least 12" from the ground.

Keeping the yard clean also removes habitats for rodents, a favorite snake food. Other suggestions for reducing a snake's food source include placing garbage in sealed trash cans (not bags) away from the house. If you feed pets outside, keep all dog and cat food cleaned up after each feeding and store feed in a steel trash can so it is unavailable to rodents.

Snakes enter buildings in search of cool, damp, dark areas, or places where rodents and insects abound. To prevent snakes from entering your home, check the foundation for cracks and openings 1/4" or larger. Use mortar to plug holes in poured concrete, concrete block, or brick foundations.

When working in the field, employees need to practice the following precautions:

- Do not try to handle any snake.
- Stay away from tall grass and piles of leaves when possible.
- Avoid climbing on rocks or piles of wood where a snake may be hiding.
- Be aware that snakes tend to be active at night and in warm weather.
- Wear boots and long pants when working outdoors.
- Wear leather gloves when handling brush and debris.

If bitten, the following steps need to be employed:

- Seek medical attention as soon as possible (dial 911 or call local Emergency Medical Services.)
- Try to remember the color and shape of the snake, which can help with treatment of the snake bite.
- Keep still and calm. This can slow down the spread of venom.
- Inform your supervisor.

- Apply first aid if you cannot get to the hospital right away.
 - Lay or sit down with the bite below the level of the heart.
 - Wash the bite with soap and water.
 - Cover the bite with a clean, dry dressing.

AND, NEVER DO ANY OF THE FOLLOWING:

- Do not pick up the snake or try to trap it.
- Do not wait for symptoms to appear if bitten, seek immediate medical attention.
- 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 painkiller.
- Do not drink caffeinated beverages.

There is an abundance of information available to us through books and the internet, including ways to recognize the various classifications, specific toxicological affects and specific locations where particular breeds live. Most importantly, please remember that snakes, venomous or otherwise, generally only bite when provoked. Leave them be, and you should be okay. Mess with them, and they will mess with you. This is not something you want to do.

I have found that if you love life, life will love you back

Arthur Rubinstein (One of the World's Great Pianists)