Pit Vipers

Pit vipers are venomous snakes that have an opening on each side of the head between the eye and the nostril. In Texas, we have 3 groups of these snakes: Copperheads, Cottonmouths, and Rattlesnakes.

Copperhead snake

Copperheads

Copperheads have chestnut or reddish-brown crossbands on a lighter colored body. These snakes are found in rocky areas and wooded bottomlands and are rare in dry areas. In the spring they can be found along streams and rivers, as well as in weed-covered vacant lots. There are three subspecies of Copperheads in Texas; Southern copperhead, 20-30 inches long and found in the eastern one-third of the state; Broadbanded copperhead, about two feet long, widely scattered in central and western Texas; and the Trans-Pecos copperhead, 20-30 inches in length and found near springs in the southern part of the Trans-Pecos.

Cottonmouth Snake

Cottonmouths

The Latin name piscivorous means 'fish eating,' indicating its dietary characteristics. Also known as 'water moccasins', only one recognized subspecies is found in Texas; Western cottonmouth. Cottonmouths can be dark brown, olive-brown, olive green or almost solid black. They are marked with wide, dark bands, which are more distinct in some individuals than in others. Juvenile snakes are more brilliantly marked. The cottonmouth gets its name from the white tissue inside its mouth, which it displays when threatened. This heavy-bodied snake, which averages about 3-1/2 feet in length, is found over the eastern half of the state in swamps and sluggish waterways, coastal marshes, rivers, ponds and streams.

Venomous Snakes of Texas

Rattlesnakes

Western Diamondback Snake

The more advanced forms of rattlesnakes belong to the genus Crotalus and Texas is home to six:

Western diamondback, Brown, diamond-shaped markings along the middle of the back and alternating black and white rings on the tail. Averages 3 1/2 to 4-1/2 feet in length, and can reach seven feet. This is the most common and widespread venomous snake in Texas, found in all but the easternmost part of the state.

Timber rattlesnake also known as Canebreak rattlesnake is a large, heavy-bodied snake averaging 4-1/2 feet. Brown or tan with wide, dark crossbands. Tail is entirely black. Found in the eastern third of the state in wooded areas in wet bottomlands.

Mottled Rock rattlesnake is light bream or pink background with widely spaced, dark crossbands and mottled areas between the crossbands. Small and slender with an average length of about two feet. Found in the mountainous areas of West Texas.

Banded Rock rattlesnake Similar to the mottled rock rattlesnake, but darker greenish-gray in color. Found only in the extreme western tip of Texas.

Blacktail rattlesnake is gray to olive green with dark blotches along the back and a black tail. Averaging a length of 3-1/2 feet, it is found from Central Texas throughout most of West Texas in bushes and on rocky ledges.

Mojave rattlesnake is similar to the western diamondback in markings, but smaller and more slender and found only in extreme West Texas.

Prairie rattlesnake is a slender rattler that is greenish or grayish, with rounded blotches down the middle of its back. Average length is about three feet and its found in the grassy plains of the western third of the state

North American Cobras

Coral Snakes

Coral Snake

The brightly colored Texas coral snake is the state's only member of the Elapidae family, which includes the cobras of Asia and Africa. The coral snake is slender with a small indistinctive head and round pupils, and is usually 2-1/2 feet or shorter. Its distinctive pattern is a broad black ring, a narrow yellow ring and a broad red ring, with the red rings always bordered by the yellow rings. Several harmless snakes are similarly marked, but never with the red and yellow touching. 'Red on yellow, kill a fellow; red on black, venom lack,' is a handy way to distinguish the highly venomous coral snake from nonvenomous ringed species. Coral snakes are found in the southeastern half of Texas in woodlands, canyons and coastal plains.

Precautions and Responses

How to Avoid

Learn to recognize the snake species that are likely to be in the area. Please do not kill a snake - even a venomous one. Snakes serve a valuable function in the environment. The majority of bites result from people taking unnecessary or foolish risks with venomous snakes. Understanding what snakes look for in suitable habitat can help you know when to be wary. Understanding their behavior will help you know what to do if you encounter one. Snakes like tall grass.

- Keep the lawn around your home trimmed low.
- Remove any brush, wood, rock or debris piles from around the residence - they make great hiding places for snakes and their prey - rodents.
- Always wear shoes while outside and never put your hands where you cannot see them.
- Be careful when stepping over fallen logs and rock outcroppings.
- Take care along creek banks and underbrush.

Venomous Snakes of Texas

Snakes do not prey on humans and they will not chase you, in fact they usually retreat or escape if given the opportunity. The danger comes when they are either surprised or cornered. Do not play around with a dead snake, they have been known to bite and envenomate. Get a good field guide and keep it handy especially in the field.

What to Do

If bitten,

1. Assume envenomation has occurred, especially if initial symptoms are present. Initial symptoms of pit viper bites include fang puncture marks; in addition, they almost always include immediate burning pain at the bite site, immediate and usually progressive local swelling within five minutes, as well as local discoloration of the skin. Initial symptoms of coral snake bites include tremors, slurred speech, blurred or double vision, drowsiness or euphoria and a marked increase in salivation within four hours; however, life-threatening effects from coral snake envenomation may not be evident for 24 hours or longer.
2. Identify the species of venomous snake that inflicted the bite, if possible, taking care to avoid another person being bitten. Identification is not necessary, but may be helpful.
3. Keep the victim as calm as possible. This helps reduce the spread of venom and the onset of shock.
4. Keep yourself and any other members of the group calm as well. This will help reassure the victim and ensure that the appropriate first-aid measures are followed, as well as preventing anyone else from becoming injured.
5. Know and be alert for the symptoms of shock, and institute the proper treatment should it ensue. Difficulty in breathing and/or kidney failure are frequent symptoms of envenomation.
6. Wash the bite area with a disinfectant if available.
7. Remove jewelry such as rings and watches, as well as tight-fitting clothes, before the onset of swelling.
8. Reduce or prevent movement of a bitten extremity, using a splint if possible; this helps decrease the spread of venom. For the same reason, position the extremity below the level of the heart.
9. Get the victim to a medical facility as soon as possible and begin treatment there with intravenous antivenom, crystalloid solutions and antibiotics. Antivenom treatment is generally most effective within the first four hours of envenomation, and is ineffective after 8-10 hours.

What NOT to Do

1. Do not make incisions over the bite marks. This can result in significant damage to already traumatized tissue, and can damage intact structures such as nerves and blood vessels, enhance bleeding caused by anticoagulant components of venom and increase the rapid spread of venom throughout the body if the circulatory system is compromised. A suction device, such as the Sawyer Extractor™, may be used without making any incisions.

This device may remove significant quantities of venom, although its efficacy has yet to be conclusively determined.

2. Do not use a tourniquet or other constricting ban except in extreme cases of envenomation, and then only if properly trained in the technique. Such devices are of no value if applied more than thirty minutes after the bite, and if improperly used they can restrict blood vital blood flow to the traumatized tissue and possibly result in the amputation of an extremity. Unbearable pain can also result, and the improper loosening of such devices can allow sudden systemic absorption of venom.
3. Do not use cryotherapy (including cold compresses, ice, dry ice, chemical ice packs, spray refrigerants, and freezing) for the same reasons that the tourniquets should be avoided, and also because it can increase the area necrosis.
4. Do not use electroshock therapy, a method popularized following publication of a letter from a missionary in South America reporting its effectiveness in treating bites from snakes of uncertain identity. Several controlled clinical trials and at least one on humans have failed to demonstrate any positive result; moreover, the potential negative results from the uncontrolled use of an electric charge are obvious.
5. Do not drink alcohol, as it dilates blood vessels and increases absorption from the circulatory system, and thus helps spread venom faster.
6. Do not use aspirin or related medications to relieve pain, because they increase bleeding. A pain reliever not containing aspirin, however, may be used.
7. Do not use the pressure/immobilization technique, which consists of firmly wrapping the entire limb with an elastic bandage and then splinting, especially for pit viper bites. The theory behind this treatment is to confine the venom to the area of the bite until reaching a medical facility, but studies have shown the technique to be ineffective or worse with venoms which produce local swelling and tissue damage.
8. Do not administer antivenom in the field unless properly trained in the procedure, unless evacuation to a medical facility will take many hours or days, or unless envenomation has been extreme. Intramuscular or subcutaneous application of antivenom has proven to be much less effective, and in some cases ineffective, than intravenous administration. Acute allergic reactions to antivenom can occur, and contemplated field administration of antivenom should include provision for a sufficient supply of epinephrine (adrenalin) to counteract any such potential effects.