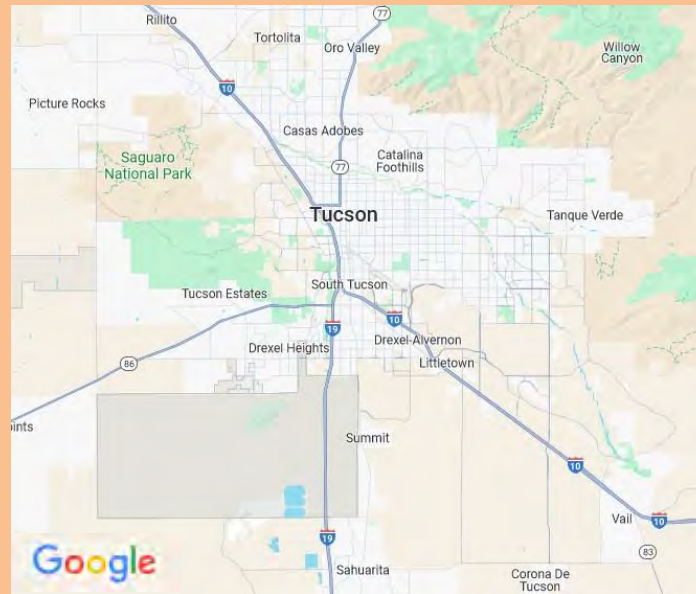


Introduction to Tucson Area Snakes

Identification, Safety Tips, First Aid
Treatment, and Most Common Species



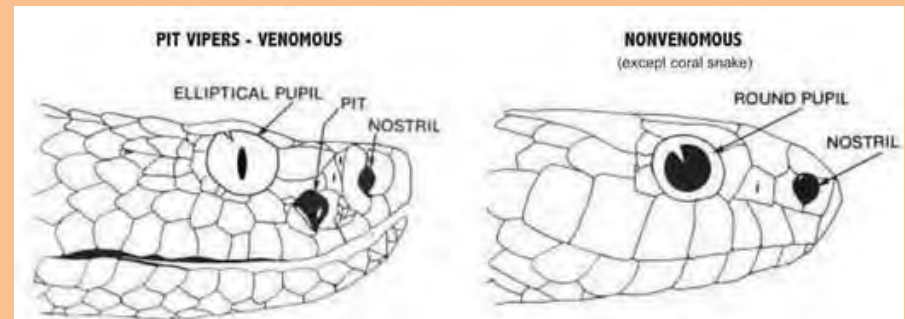
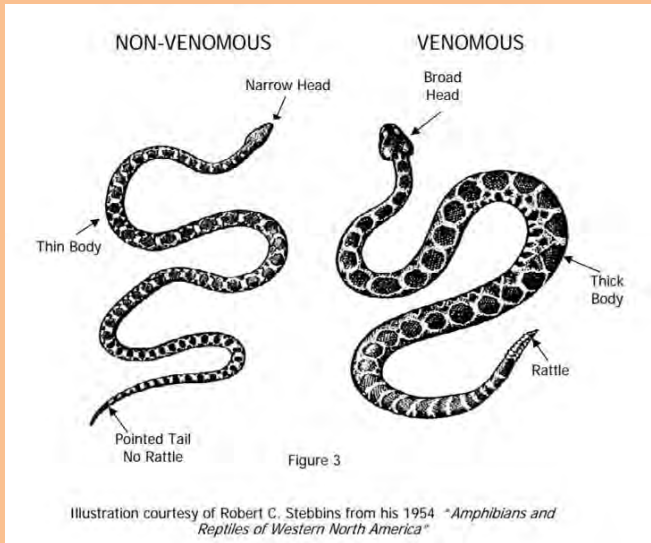
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Introduction

- Tucson is part of the Sonoran Desert, which is home to many species of snakes, both venomous and non-venomous
- The goal of this presentation is to help alleviate fear of snakes by teaching basic snake identification skills, safety tips during snake encounters, and basic first aid treatment for venomous snake bites
- Contrary to popular belief, snakes are not aggressive and want to minimize encounters with humans
- Snakes can be encountered any time of year in Tucson, but are most commonly observed March through October
- Being ectotherms (“cold blooded”) they are most active when air temperatures are between 70 to 90 degrees

Venomous vs Non-Venomous Snakes

- The Tucson area has about 30 species of snakes, but only 7 species are venomous to humans
- All of the venomous species are either a type of pit viper (rattlesnakes) or the Sonoran coralsnake
- Pit vipers are named for the distinctive heat sensing “pit” below the nostril. These pits allow the snake to see thermal images in complete darkness.
- Coralsnakes do not have pits or elliptical pupils so they look similar to non-venomous snakes. Their color pattern is unique, so that is how they’re identified.
- Many non-venomous snakes mimic venomous snakes, either via coloration and/or behavior to scare off predators



Snake Encounter Safety Tips

- During warmer months, watch where you place your hands and feet when walking or working outdoors, especially around plants where snakes may hide to avoid detection and excessive heat
- Do not walk outside after dark without a flashlight or something to illuminate your path. Many snake bites are due to accidentally stepping upon them.
- If you do encounter a snake:
 - Do not panic or move rapidly to minimize a defensive response from the snake
 - Move slowly away from the snake and alert others to the snake's presence
 - Stay at least 6 feet away from the snake to avoid being bitten
 - In an urban setting, try to identify the type of snake, take a photo using your phone if you can do so safely, and contact a snake relocation expert to remove the snake
 - Store your local snake relocater's phone number in your contact list
 - Have someone watch the snake from a safe distance to ensure its location is known, until the snake relocater has arrived
 - Do not attempt to kill the snake, throw things at it, or move the snake on your own!

Basic Treatment for Snake Bites

- Identify the location of the snake and ensure it's not an ongoing risk to you or the patient
- Check for symptoms of Anaphylaxis (Highest risk factor for all bites):
 - Swelling of face, eyelids, lips, throat, and/or tongue
 - Raised bumps or hives on the skin
 - Difficulty breathing
 - Nausea or abdominal cramping
- Keep the patient calm, stationary, and comfortable
- Remove jewelry and clothing that constricts swelling at the bite location
- Get to an ER as soon as possible and bring a phone photo of the snake, if possible, to help with identification

(This information is not intended to be a substitute for professional medical advice, diagnosis, or treatment)

Venomous Reptile Bite Treatment

- Identify the type of snake but do not attempt to capture it. Anti-venom is the same for all rattlesnake bites but some have more toxic venom so it helps to know the species. (Most bites are from WDB rattlesnakes)
- Do not cut, suck, apply compression bandage or tourniquet, hot or cold compress, or use “Extractor” type devices (None are effective and may increase tissue damage)
- Keep the bite below the heart level and the patient calm to slow venom distribution



Western Diamondback rattlesnake

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Venomous Reptile Bite Treatment (Cont.)

- Time = Tissue damage in rattlesnake bites
 - Immediate evacuation to a hospital for treatment with anti-venom is required
 - Anti-venom prevents tissue damage, but cannot reverse tissue damage
 - 25% of venomous snake bites are “dry” with little to no venom injected
- Coralsnake bites are neurotoxic with little tissue damage but patient may experience delayed system wide effects instead of localized effects. Sonoran coralsnake bites do not usually result in death, but seek medical attention if bitten.
- Gila Monster bites can be painful and the lizard may not let go. Do not try to remove the lizard unless wearing thick leather gloves. No anti-venom treatment is available but seek medical attention.



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First Aid Summary

- Before helping a bite victim, make sure the reptile is no longer a threat
- Keep the patient calm and seek medical attention at an ER for any suspected venomous reptile bite
- Try to identify the reptile so that you can inform the medical personnel about the nature of the bite
- Watch the patient for any signs of Anaphylaxis (severe allergic reaction) and seek immediate medical attention if symptoms are present
- Remember that bites are painful, but very few result in death or permanent injury, so remaining calm is very helpful

Tucson Area Most Common Snake Species

Venomous Snakes

- These snake species have venom that requires medical treatment as soon as possible
- In the Tucson area, there are 6 species of rattlesnakes and 1 species of coralsnake
- There is also one type of venomous lizard, the gila monster, and it requires medical treatment as soon as possible

Venomous Snake: Western Diamondback Rattlesnake

- This is the most common venomous snake in the Tucson area and it's responsible for the most bites
- Excellent camouflage makes it difficult to see, especially in low light conditions
- It's a heavy bodied snake that varies from 10 inches to 5 feet long in rare cases
- It typically rattles when it feels threatened but not always
- The black/white tail banding helps with identification
- It's most active at night during extreme heat



Venomous Snake: Mohave Rattlesnake

- This is the second most common venomous snake in the Tucson area but is rarely seen
- Excellent camouflage makes it difficult to see, especially in low light conditions
- It is a heavy bodied snake that varies from 10 inches to 3.5 feet long
- It has a potent venom that may be neurotoxic
- It has black/white tail banding but the white bands are typically wider than the black bands



Venomous Snake: Black-tailed Rattlesnake

- This rattlesnake lives in rocky areas on the outskirts of town at elevations above 2800ft
- It rattles readily but is typically a very calm snake
- It is a heavy bodied snake that varies from 10 inches to 3.5 feet long
- Bites are rare and the venom is about 2/3 as potent as WDB rattlesnake venom
- The snake is easy to identify by the black tail, yellow or greenish coloration, and large head with a black face mask



Venomous Snake: Tiger Rattlesnake

- This rattlesnake lives in rocky areas on the outskirts of town (Sabino Canyon and Tucson Mtns)
- It is a very shy and secretive snake that is mostly nocturnal
- It is a heavy bodied snake that varies from 10 inches to 3.5 feet long
- It is typically a very calm snake and bites are rare
- The snake is easy to identify by the small head and “tiger stripe” banding along the entire body



Venomous Snake: Sidewinder Rattlesnake

- This rattlesnake lives in flat sandy areas on the far West and NW parts of town
- It is a very shy and secretive snake that is mostly nocturnal
- It is a heavy bodied snake that varies from 6 inches to 2 feet long
- It is typically a very calm snake and bites are rare
- The snake is easy to identify by the short length and “horn” like scales above the eyes



Venomous Snake: AZ Black Rattlesnake

- This rattlesnake typically lives at elevations above 4000ft on the NE side of town
- It is a shy and secretive snake
- It is a heavy bodied snake that varies from 10 inches to 3.5 feet long
- It is typically a very calm snake and bites are rare
- The snake is easy to identify by the almost solid black coloration
- Juveniles of this species typically have a different pattern that changes to mostly black as they mature (see below)



Venomous Snake: Sonoran Coralsnake

- This venomous snake lives mostly on the outskirts of town
- It is a very shy snake that is mostly nocturnal and rarely seen
- It is a thin bodied snake that varies from 6 inches to 24 inches long
- When seen, it rapidly moves away and bites are rare
- It has a very potent neurotoxin but no deaths have been observed in AZ
- The snake is easy to identify by the solid black nose and black/white/red color pattern



Venomous Lizard

- The Gila Monster is one of the few venomous lizards in the world
- Bites are rare unless a person attempts to handle the lizard
- There is no anti-venom available but medical treatment is required due to possible systemic effects and infection

Venomous Lizard: Gila Monster

- This venomous lizard lives mostly on the outskirts of town
- It is a very shy lizard that is mostly nocturnal and rarely seen
- It is a heavy bodied lizard that varies from 5 inches to 24 inches long
- When seen, it rapidly moves away and bites are rare
- Very few deaths occur from Gila Monster bites
- The lizard is easy to identify by the solid black nose and black/orange color pattern on a “beaded” looking skin



Non-Venomous Snakes

- Some non-venomous snakes have a mild venom that is delivered to their prey via fangs in the rear of their mouth
- These snakes are considered “non-venomous” because their bite is not considered medically significant to humans and no treatment is required beyond cleaning the bite with a disinfectant
- If you have been bitten by a snake and exhibit any medical issues, regardless if the snake is non-venomous, seek medical attention at an emergency room

Non-Venomous Snake: Sonoran Gopher Snake

- One of the most common non-venomous snakes, it is often mistaken for a WDB rattlesnake, due to its coloration and behavior when it feels threatened
- It is a heavy bodied snake that varies from 10 inches to 6 feet long
- When threatened, it mimics a rattlesnake by shaking its tail, puffing up and hissing, and flattening its head while striking
- The pointed tail and head shape help identify it as non-venomous
- It is a great snake for rodent control



Non-Venomous Snake: Coachwhip Snake

- A common non-venomous snake, it moves extremely fast and rapidly away from threats
- It is a slim bodied snake that varies from 10 inches to 6 feet long
- Coachwhip snake coloration varies from pinkish red, tan, to totally black
- This snake readily bites if you attempt to pick it up but it doesn't have venom
- The pointed tail and head shape help identify it as non-venomous
- It is a great snake for rodent control



Non-Venomous Snake: Kingsnake (California & Desert Species)

- A very common non-venomous snake, with two species found in the Tucson area: California and Desert
- It is a slim bodied snake that varies from 8 inches to 4.5 feet long
- Kingsnakes are immune to rattlesnake venom and readily eat rattlesnakes
- It is a very calm snake and rarely bites
- The pointed tail and head shape help identify it as non-venomous
- It is a great snake for both snake and rodent control



Non-Venomous Snake: Long-nosed Snake

- A very common non-venomous snake that has two predominant colorations: black/white & red/black/white
- It is a slim bodied snake that varies from 8 to 35 inches long
- It is often mistaken for a Sonoran coral snake even though the nose is not black and much longer in length
- It is a very calm snake and rarely bites
- The pointed tail and head shape help identify it as non-venomous
- It is a great snake for mouse control



Non-Venomous Snake: Desert Nightsnake

- A common non-venomous snake in the Tucson area
- It is a slim bodied snake that varies from 8 to 23 inches long, though most are around 15 inches long
- It is a very calm snake and rarely bites
- It has vertical pupils and is mildly venomous but not to humans
- It is solely nocturnal in activity



Non-Venomous Snake: Sonoran Lyre Snake

- A rare non-venomous snake in the Tucson area
- It is a medium bodied snake that varies from 8 to 40 inches long
- It is named for the “lyre” shaped marking on top of the head
- The triangular head shape looks similar to a rattlesnake
- It is typically a calm snake and rarely bites unless handled
- It has vertical pupils and is mildly venomous, but beyond a possible slight swelling and irritation, it’s not medically significant
- It is mostly nocturnal in activity



Non-Venomous Snake: Glossy Snake

- A non-venomous snake found in the Tucson area
- It is a slim bodied snake that varies from 8 to 42 inches long
- It is a very calm snake and rarely bites
- The pointed tail and head shape help identify it as non-venomous
- It looks quite similar to the non-venomous Desert Nightsnake, but it doesn't have vertical pupils and the head pattern is different
- It is a nocturnal snake and rarely seen during the day



Non-Venomous Snake: Variable Sand Snake

- A non-venomous snake found in the Tucson area
- It is a small snake that grows to 12 inches long
- It is a very calm snake and rarely bites
- The pointed tail and head shape help identify it as non-venomous
- It can be mistaken for a Sonoran coral snake, but it doesn't have a black nose and distinct red/white bands
- It is mostly nocturnal



Non-Venomous Snake: Western Patch-nosed Snake

- A non-venomous snake found in the Tucson area
- It is a slim bodied snake that varies from 8 to 40 inches long
- It is a very calm snake and rarely bites
- The pointed tail and head shape help identify it as non-venomous
- It does not look similar to any of the venomous snakes
- It is most active during the day



Non-Venomous Snake: Western Threadsnake

- A common non-venomous snake found in the Tucson area and is sometimes called a “blind snake”
- It is a very tiny snake that grows to 15 inches long and looks similar to an earthworm
- It is a very calm snake and cannot bite humans
- It is a nocturnal snake and rarely seen during the day



Non-Venomous Snake: Sonoran Whipsnake

- A non-venomous snake found in the Tucson area
- It is a very slim bodied snake that grows to 6ft long
- It is extremely fast and bites readily when handled
- The pointed tail and head shape help identify it as non-venomous
- It is a great snake for rodent control
- It is most active during the day



Non-Venomous Snake: Groundsnake

- A non-venomous snake found in the Tucson area
- It is a very small snake that grows to 20 inches long and has several possible color variations
- It is a very calm snake and rarely bites
- The pointed tail and head shape help identify it as non-venomous
- It is active both day and night



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Non-Venomous Snake: Ring-necked Snake

- A non-venomous snake found in the Tucson area
- It is a small snake that grows to 39 inches long
- It is a very calm snake and rarely bites
- The pointed tail and head shape help identify it as non-venomous
- It is mildly venomous but not to humans
- It is most active during the day



Non-Venomous Snake: Gartersnake (Checkered & Black-necked)

- A non-venomous snake found in the Tucson area
- It is a slim bodied snake that grows to 42 inches long
- It is a very calm snake and rarely bites
- The pointed tail and head shape help identify it as non-venomous
- It is mostly found near water sources and preys upon tadpoles, frogs, and small fish
- It can be active both day and night



Non-Venomous Snake: Saddled Leaf-nosed Snake

- A non-venomous snake found in the Tucson area
- It is a very small snake that grows to 20 inches long
- It is typically a calm snake with vertical pupils
- The pointed tail and head shape help identify it as non-venomous
- It is a nocturnal snake that feeds on the eggs from snakes and lizards



Additional Resources

Arizona Snake Identification:

<https://live-reptilesfaz.pantheonsite.io/snakes-2/>

Venomous Reptile First Aid:

<https://azpoison.com/venom>

Rattlesnake Information and Facts:

https://www.desertmuseum.org/books/nhsd_rattlesnakes.php