

LOS ANGELES UNIFIED SCHOOL DISTRICT PEST OF THE MONTH PROGRAM NO. 23

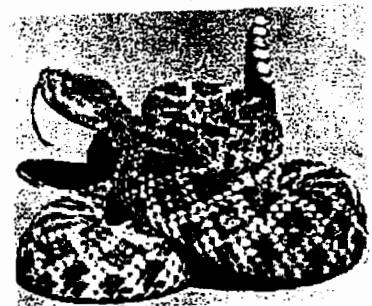
RATTLESNAKES

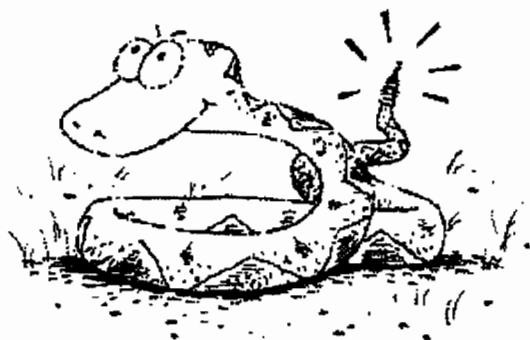
INTRODUCTION

The pest management department of the Los Angeles Unified School District has received two reports concerning rattlesnakes on District property so far for the year 2005. Both of these reports pertain to elementary schools and they involve immature (baby) rattlesnakes on school grounds. This is the justification for this program. 2005 represents a year of record rainfall. Excessive rains bring abundant vegetation which means more leaves, stems, flowers, fruits, berries, nuts, seeds, etc. which means more food for insects and rodents. There is a direct correlation between high prey populations and high predator populations. We are likely to experience more pest problems in 2005, including such pestiferous insects as mosquitoes which vector West Nile Virus.

LAUSD properties are distributed over an area of approximately 704 square miles from the coast to the desert and everything in between. Some schools, and other District properties, are located in mountainous, canyon, foothill, riparian, and other wild areas. These types of areas are prime habitats of predatory serpents. **Please be reminded that not all snakes are venomous.** Some common species of snakes, such as gopher snakes, garter snakes, king snakes, garden snakes, etc. are beneficial predators that play an important role in controlling rodent populations, including such rodents as *Peromyscus spp.* (deer mice, white-footed mice), that can carry Lyme's disease.

Inner city schools are not likely to experience snake problems, however, the information contained in this program will be very useful to anyone who hikes, camps, involved in scouting activities, or who's work or leisure activities takes them into snake habitats. This program is somewhat different from prior programs in that it has a simple 20 question true/false quiz at the end. **PLEASE** give the test to attendees **BEFORE** you review the content of the program with them. Most people like to test their knowledge of the subject matter ahead of time to see what they know about the topic. **DO NOT** give them the correct answers right after they have taken the test. Tell them that they have to pay careful attention to the program to in order to get the answers. However, at the end of the program, review the test and give them the correct answers.





HEAD:
narrow, barely
distinguishable
from neck

NON-VENOMOUS SNAKES

BODY:
relatively
thin or
narrow

TAIL:
tapers to a
long, thin
point (usually),
NEVER with
rattles



VENOMOUS SNAKES (Rattlesnakes)

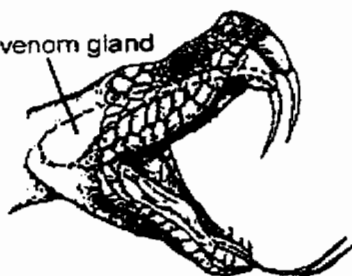
HEAD:
broad,
"triangular"

BODY:
heavy or
relatively
"fat" in
appearance

TAIL:
blunt, usually
ending in a cluster
of modified scales
- the "rattle" -
(except in baby
snakes); never
tapers to a thin
point



venom gland



FACTS ABOUT RATTLESNAKES

GENERAL INFORMATION

- Six species of rattlesnakes are found in various areas of California. Fifteen species occur in the United States. Rattlesnakes are distinctive American serpents. The rattlesnake is California's only native venomous snake.
- Rattlesnakes have a distinctive, triangular or arrow shaped head. The neck of a rattlesnake is narrower than its head. See attached drawings for information on how to separate rattlesnakes from other non-poisonous snakes.
- The Pacific gopher snake and the common Bull snake have similar coloration as rattlesnakes but they do not have the triangular shaped head and narrow neck of a rattlesnake.
- Rattlesnake eyes are hooded and the pupils of the eyes are oval (like a cat) rather than round. **BE SAFE: DO NOT try to get close to a rattlesnake to determine the shape of its pupils.**
- Adults eat live prey, primarily rodents.
- Young snakes take mostly lizards, amphibians, and young rodents.
- Large rattlers may capture and consume squirrels, prairie dogs, wood rats, cottontails, and young jackrabbits. Ground-nesting birds can also make up an appreciable amount of the diet of some rattlers.
- Rattlesnakes mostly hide in rock crevices, under logs, in heavy brush, tall grass and weeds, rotten stumps, lumber piles, debris piles, rock piles, abandoned rodent burrows, etc.
- Adults are more nocturnal in summer than during spring and fall. They are cold-blooded reptiles and they avoid the heat of hot summer days.
- Young rattlesnakes are born with a small rattle or button. A new rattle segment is added each time the skin is shed. Rattlesnakes may molt several times a year, thus the size of the rattle is not a good indicator of age. The terminal segments of the rattle may break off in older snakes.
- Female rattlesnakes are ovoviviparous. That is, they produce eggs that are retained, grow, and hatch internally and the young are born alive.
- The young of most species of rattlesnakes are 6 to 8 inches long when born. **They can strike within minutes of birth and they do have venom at birth.**
- The average brood of a rattlesnake range from 5 to 12 young.
- On average rattlesnakes mature in about 3 years.

- Rattlesnakes usually see humans before humans see them. They can detect soil vibrations made by people walking.
- They coil for protection and they can strike from a third to a half of their body length. They do not need to coil to strike.
- Nationwide, there are over 800 cases of rattlesnake bites reported annually to the American Association of Poison Control Centers. Of these reported bites, only one or two cases per year result in death of the patient.

HABITAT MODIFICATION

One of the best ways to discourage rattlesnakes from an area is to remove suitable hiding places. Heavy brush, tall grass, rocks, logs, rotten stumps, lumber piles, debris piles, miscellaneous debris, and other places of cover should be cleaned up. Keep weeds cut close to the ground or hoe them out completely. Mow lawn areas regularly and keep them short. Since snakes often come to an area in search of prey, eliminating rodent populations especially ground squirrels, meadow voles, deer mice, rats, and house mice, is an important step in making a habitat less attractive to snakes. Rattlesnakes cannot dig burrows but they will frequently use those dug by rodents. After controlling the rodents, fill in all burrows with soil or sod and pack them down firmly. Seal all accesses to structures. Ensure that all substructural area vents are covered with ¼ inch hardware cloth and all cracks in building foundations are filled in.

WHAT CAN BE DONE TO PREVENT A BITE

Probably ninety percent of all snake bites can be prevented by following one simple rule: "Always watch where you put your hands and feet". Hands, feet, and ankles are the most common sites of rattlesnake bites.

- **Be smart, be safe: Leave snakes alone and avoid a bite.**
- Never go barefoot or wear sandals when walking in rough areas. Always wear hiking boots.
- Always stay on the cleared paths and walkways. Avoid tall grass, weeds, and heavy underbrush where snakes may be present.
- Always look for concealed snakes **before** picking up rocks, sticks, firewood, etc.
- If balls or other outdoor toys you are playing with in snake infested areas go into ivy or other brushy/weedy areas, look carefully before you reach for the item in such places.
- Always check carefully around stumps, rocks, or logs before sitting on them.
- When rock climbing, always look before putting your hands in a new location.

- Baby rattlesnakes are poisonous! They can and do bite. They are not pets. **PLEASE leave them alone.**
- Never handle a dead, injured, or freshly killed snake. You can still be bitten. Muscle contractions, heat sensing organs, and reflex action can cause a dead snake to bite. The decapitated head of a rattler can still bite because of the presence of heat sensing pits/areas on and in it.
- Never tease a snake to see how far it can strike. You can be several feet from the snake and still be within striking distance.
- Don't keep, or attempt to keep, rattlesnakes as pets. The majority of rattlesnake bites occur when people tease or play with their "pet" rattlesnake.
- **Teach children to respect snakes and to leave snakes alone.** Curious children who pick up snakes are frequently bitten. Always give snakes the right of way!
- Don't reach into holes in the ground, tree stumps, rock piles, logs, woodpiles, and even abandoned buckets and tires.
- When walking, stay on cleared areas (paths and walkways) as much as possible, and keep a visual and auditory look-out for rattlers.
- Never put your hands or feet in places you cannot see.
- Step on a log or rock, not over them, so you can first look down to make sure that there is nothing concealed on the other side.
- If you should hear a rattle, freeze until you identify where the sound is coming from. You don't want to step on a snake when trying to flee. Once you have spotted it, give it time to move away. If it doesn't, move slowly away from it. Don't make any quick, jerky movements. Don't walk to one side or the other as that could be perceived as threatening. Look behind you before you start to walk backwards as you don't want to trip over a rock or another snake.
- Use a flashlight if you are walking around rattlesnake infested areas at night.
- Snakes like to crawl in piles of clothes, backpacks, or piles of other materials left on the ground. Look before you pick up these items from the ground.
- Use a walking stick when walking or hiking in rough areas. If you come across a snake, it can strike the stick instead of you.
- Never grab "sticks" or "branches" while swimming or wading across streams, etc. Rattlesnakes are excellent swimmers.
- Never hike alone. Always have a buddy to help in case of emergency. Learn basic life-saving methods. Carry a cell phone with you when you are out in the wilds.

WHAT TO DO IN CASE OF A RATTLESNAKE BITE

HAVE AN EMERGENCY PLAN

You need to know the following information:

- Where is the nearest hospital emergency room?
- How long will it take 911 emergency responders to arrive on the scene?
- How close are you to a fire department, park ranger, highway patrol, or sheriff station?

The best first aid for a poisonous snake bite is to seek immediate medical care. You can call California Poison Control Center at 1 800 876 – 4766 for additional information.

THINGS THAT YOU SHOULD DO

- Get away from the snake – getting bitten twice is not necessary.
- Keep the victim calm, warm, and reassured.
- The vast majority of bites occur on extremities. When this happens, keep the extremity below the level of the heart to reduce the flow of venom.
- Gently wash the bite area with soap and water.
- Remove any rings on constricting items as the affected area will swell.
- Apply a cold, wet cloth over the bite to help reduce swelling and discomfort.
- Calmly transport victim to the nearest emergency facility for treatment.
- Don't panic, 30 to 60 minutes is enough time to get to emergency medical care.
- Remember that from 20 to 30 percent of rattlesnake bites are dry, i.e. no venom is injected.

THINGS THAT YOU SHOULD NOT DO AFTER A SNAKE BITE

- **DON'T** apply a tourniquet to the area above the wound.
- **DON'T** pack the bite site in ice.
- **DON'T** cut the wound with a knife or razor.
- **DON'T** use your mouth, or any other device, to suck out the venom.
- **DON'T** let the victim drink alcohol or any other stimulants.
- **DON'T** apply electric shock.
- **DON'T** use freon spray to treat the bite.
- **DON'T** allow the victim to engage in physical activity such as running or walking. Carry them if they need to be moved.
- **DON'T** give the victim anything by mouth.
- **DON'T** raise the bite area above the level of the victim's heart.
- Stun guns and other folklore remedies delay appropriate treatment, and in some cases, cause additional problems.

WHAT YOU CAN EXPECT FROM AN ENVENOMATED RATTLESNAKE BITE

The amount of venom injected into a bite is variable depending on a number of factors such as:

- The age of the snake and how it perceived the threat.
- Whether or not the snake has recently envenomated a prey.
- Rattlesnakes can regulate the amount of venom they inject when they strike.
- Although not venomous "dry bites" are painful and they can become infected. **ALL RATTLESNAKE BITES REQUIRE MEDICAL ATTENTION IN AN EMERGENCY ROOM.**

SYMPTOMS OF AN ENVENOMATED BITE

Rattlesnake bites are extremely painful and can lead to severe medical trauma. Symptoms include immediate pain, swelling, and discoloration of the bite area, weakness and dizziness, difficulty in breathing, nausea, vomiting, sweating, chills, hemorrhaging from the wound site, numbness or tingling of the mouth or tongue, and changes in the heart rate and blood pressure. Other symptoms can include excessive salivation, thirst, swollen eyelids, blurred vision, muscle spasms and unconsciousness. Rattlesnake venom also interferes with the ability of the blood to clot properly.

WHAT IS THE TREATMENT FOR A RATTLESNAKE BITE?

Severe symptoms can be life-threatening and must be treated with antivenin, a prescription medication. Antivenin is given intravenously with fluids. Other therapy may include numerous laboratory tests, antibiotics and an update on the tetanus shot, if needed. Although complications such as possible blood clotting problems, allergic reactions to treatment, infection and shock may develop, the majority of rattlesnake bites are successfully treated with as little as two to three days of hospitalization.

LEGAL STATUS OF RATTLESNAKES IN CALIFORNIA

The California Fish and Game Code Title 14. Division 1. Subdivision 1. Chapter 5. Number 40. General Provisions Relating to Native Reptiles and Amphibians. Sections 40 (b) and (e) basically state that native reptiles cannot be captured and released without written approval of the department. Besides being hazardous, it is unlawful to capture rattlesnakes and release them at some other location. This was confirmed by officers at the San Diego Regional Office of the Department of Fish and Game.

True or False Rattlesnake Test

- | | |
|--|-----|
| 1. Rattlesnakes always rattle before striking. | T F |
| 2. The snake rattles to dispense a poison dust in the air. | T F |
| 3. A rattlesnake can charm a bird out of a tree. | T F |
| 4. A rattlesnake can locate its prey in total darkness. | T F |
| 5. A rattlesnake can grow to 10 or 12 feet long. | T F |
| 6. A rattlesnake can swallow its young to protect them from harm. | T F |
| 7. A rattlesnake cannot crawl across a horse-hair rope. | T F |
| 8. Its venom, flesh, skin or rattles can cure various human diseases and wounds | T F |
| 9. Its eyes, clouded by loosening skin prior to shedding, impair its vision. | T F |
| 10. Baby rattlesnakes are more deadly than adults. | T F |
| 11. A rattler has to coil to strike. | T F |
| 12. A rattler can jump and bite you. | T F |
| 13. You can tell a rattler's age by counting the segments on its rattle. | T F |
| 14. Rattlesnakes are the only dangerously native venomous snakes in California. | T F |
| 15. One third of all snake bites occur to people who were, for one reason or another, trying to do something to a snake (capture, kill, handle, pick up, etc.) | T F |
| 16. When rattlesnakes bite people, it demonstrates their aggressive behavior. | T F |
| 17. Only about 12 people in the US die from venomous snake bites each year. | T F |
| 18. Ninety percent of snake bites can be prevented by following one simple rule: Always watch where you are putting your hands and feet. | T F |
| 19. Because of the danger rattlesnakes pose to people, pets, and domestic animals, it is necessary to remove them from school grounds. | T F |
| 20. Rattlesnakes can spit venom. | T F |

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