



# Emergency Medical Training Services

Emergency Medical Technician – Basic Program Outlines

Outline Topic: **ALLERGIC REACTION**

Revised: 11/2013

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## DEFINITIONS

- Allergic Reaction - is an immune response brought on by a trigger.
- Allergens - substance that cause an immune response, "the trigger".
- Urticaria - are hives from an allergic reaction. They are not called a rash. The hives are the capillaries releasing histamines.

## Allergic Reaction

- Brought on by shellfish, peanuts, strawberries, insects, makeup, latex, medication, ants, eggs, milk, sunflower seeds.
- Body senses an intruder so the patients immune system over responds to the trigger.

## How this works?

- You get stung by bee. Body senses an intruder (trigger). Immune system releases histamines to find trigger and communicate back to immune system. Only the histamines by the bee sting know what is happening. The other histamines cause a body shut down. Diarrhea because the trigger might be in the colon. Sweating because the trigger might be in the skin. Vomit because the trigger might be in the stomach. Swelling in the respiratory system because the trigger might be inhaled.

## Levels Of Reactions

- Mild, moderate and severe/anaphylaxis.
- Mild - hives (urticaria), itching localized, runny nose, tearing eyes.
- Moderate - Mild S/S with breathing affected (coughing, etc).
- Severe - all of moderate and mild with now lowering blood pressure.
- In general, the faster the reaction to the substance the worse the reaction.

## Bee Stings/Wasp

- Watch for reaction as listed above.
- Remove stinger with credit card/ knife across skin. NO tweezers.
- Ice for comfort.

## Fire Ants

- Alkalosis bite and necrotic.
- Redness with puss sacs.
- Most common insect reaction in U.S.
- Wash with soap and water.

## Black Widow Spider

- CNS depressant spider. Takes time to get to brain.
- ABDOMINAL SPASMS - muscles start to tense up. Start in about one hour.
- Anti-venom only if unstable - can only give once.
- Red hour glass on belly. Found in all 50 states.
- Clean with soap and water.

#### Brown Recluse Spider

- Most common in southwest and along the Mississippi/Ohio/Missouri river basin.
- Little to no pain once bitten.
- Also know as fiddle back - has violin on back.
- Local tissue necrosis. Digestive toxin.
- White wheel around bite.
- In about 2 days to the bone.
- If not caught early must cut out skin and grow new
- Supportive, cold compresses and sterile dressings.

#### Scorpion

- Only one kind fatal to healthy people in U.S. The sculptured (barked) scorpion (yellow and brown color) is most dangerous to humans in North America. Found in New Mexico, California, and Arizona.

- Localized pain.
- Wash with soap and water, ice for pain.
- No local swelling, just pain.

#### Tick Bites

- Seldom require emergency care. Can carry microorganisms.
- S/S fever, chills, infection in body.
- Rocky Mountain Spotted Fever - Transmitted by rabbits and ticks along the Atlantic seaboard mostly. 40 deaths per year. Develops over 5 to 7 days. About 2 to 3 days small pink spots on ankles and wrists.  
Feel sick like the flu. Recover is 20 days.
- Lyme disease - Red dot at site of bite. Feel sick like the flu. 4 to 6 weeks start cardiac problems. Last stage arthritis symptoms over the next several years if not diagnosed
- Remove tick many ways. Just make sure it is all out. Tweezers are OK just don't pull the body off of the head. Suffocate with Vaseline and it will back out. Cut it out. NO NOT BURN.

#### Plant Poisoning

- 2nd most common reported poisoning next to ingestion of cleaning substances.
- Wash the area while wearing gloves. If ingested contact poison control or medical direction.
- Wash with soap non-stop.

- Not lethal most of the time.

## Snake Bites

- Vipers (cotton mouth, copper head (smallest 3 to 4 feet), rattle (largest)) and coral snake (Arizona and Eastern Coral Snakes).
- Vipers are digestive toxin, coral are CNS depressed (no pain, death in 8 to 24 hours if untreated).
- Vipers two punctures, Coral chews in soft places. example between fingers or toes
- NO ICE ON SNAKES. CAUSES ENZYMES TO SPEED UP - MORE DAMAGE AND ALSO CAUSE MORE LOCALIZED TISSUE DEATH BY KEEPING THE TOXIN CONCENTRATED.
- No need for constricting band distal and proximal.
- Do not suck out poison.
- Ice only for swelling after toxin has been neutralized.
- No need to catch snake.
- 20% of all bites do not envenomate.
- Lower bitten area. Splint area.

## Man-of-War (jelly fish)

- Tentacles remain embedded in tissue.
- Wash with soap and water ice for pain.

- Stinging, red-brown wheals. Remove tentacles, Rinse with sea water not fresh water.

#### Animal Bites and Human Bites

- Raccoons, bats, skunks, dogs, squirrels can carry rabies.
- Acute viral infection of CNS.
- Vector Borne transmission.
- Hawaii is the only rabid free U.S. state.
- Incubation period is 9 days to 7 years.
- Low fever, headache, loss of appetite, AMS.
- Death if untreated.
- Wash with soap and water.
- Dry dressing to pull fluid from bite.