CHAPTER 9

Shock

Video – Shock (3)
Lesson Objectives

1. Explain what happens inside the body with severe blood loss.
2. List common causes of shock.
3. Describe first aid steps for a victim in shock.
4. Describe ways to prevent exposure to known allergens.
5. Describe first aid for anaphylaxis.
6. Demonstrate how to use an emergency epinephrine auto-injector (if trainers are available).
Shock

• Dangerous condition:
  • Not enough oxygen-rich blood reaching vital organs, such as brain and heart
  • Caused by anything that significantly reduces blood flow
  • Life-threatening emergency
  • May develop quickly or gradually
  • Always call 9-1-1 for victim in shock
Shock continued

Three general conditions must be present:
(for normal tissue oxygenation)

1. Heart must efficiently pump blood
2. Blood volume sufficient to fill blood vessels
3. Blood vessels intact and functioning normally
Causes of Shock

- Severe bleeding
- Severe burns
- Heart failure
- Heart attack
- Head or spinal injuries
- Severe allergic reactions
- Dehydration
- Electrocution
- Serious infections
- Extreme emotional reactions (temporary/less dangerous)
Types of Shock

- **Hypovolemic** occurs when blood volume drops
- **Cardiogenic** occurs with diminished heart function
- **Neurogenic** occurs with nervous system problems
- **Anaphylactic** occurs with extreme allergic reaction
First Aid for Shock

• Assume any victim with serious injury is at risk for shock
• Often occurs in stages
• May progress gradually or quickly
• Victim ultimately becomes unresponsive
• Not all victims experience all signs and symptoms of shock
Signs and Symptoms of Shock

In compensatory shock (first stage):
- Anxiety, restlessness, fear
- Increased breathing and heart rate

In decompensatory shock (second stage):
- Mental status continues to deteriorate
- Breathing becomes rapid and shallow, and heartbeat rapid
- Skin becomes pale or ashen and cool
- Nausea and thirst occur
In irreversible shock (third stage):

- Victim becomes unresponsive
- Respiratory and cardiac arrest
Urgency of Shock Treatment

• Shock continues to develop unless medical treatment begins.
• Call 9-1-1 immediately.
Shock in Infants and Children

- Blood loss in infants/children may quickly lead to shock.
- Infants/children are susceptible to shock from dehydration.
- Early shock may be less obvious but child’s condition rapidly declines.
- Treatment is same as for adults.
First Aid: Shock

1. Check for responsiveness, normal breathing and severe bleeding.
2. Call 9-1-1 and care first for life-threatening conditions, such as severe bleeding.
3. Be ready to give CPR if needed.
4. Positioning

a) If there is no evidence of trauma, position a responsive victim on his or her back using a blanket or coat as a pad.

If the movement or position does not cause the victim pain, raise the legs such that the feet are 6-12 inches above the ground.

b) Put a breathing, unresponsive victim (if no suspected trauma, especially a neck, back, hip or pelvic injury) in the recovery position.
5. Loosen any tight clothing.

6. Be alert for the possibility of vomiting; if vomiting occurs, turn the victim’s head to drain the mouth.

7. Try to maintain the victim’s normal body temperature. If necessary, maintain the victim’s body heat with a blanket or coat over the victim.
Anaphylaxis

- Severe allergic reaction in some people
- Also called anaphylactic shock
- Life-threatening emergency because airway may swell
- Always call 9-1-1
Causes of Anaphylaxis

• Common allergens:
  • Certain drugs
  • Certain foods
  • Insect stings and bites
Development of Anaphylaxis

• Signs and symptoms may begin within seconds to minutes.
• The more quickly it occurs – the more serious.
• You cannot know how severe the reaction will be.
Prevention of Anaphylaxis: Medication Allergies

- Maintain a history of medication reactions and share it with health care providers.
- Wear a medical alert ID.
- Read product labels carefully.
Prevention of Anaphylaxis: Food Allergies

- Check food product labels.
- Avoid foods if exact ingredients not known or that may contain hidden ingredients.
- Educate child’s care givers, teachers, etc., about allergy and dangers.
Prevention of Anaphylaxis: Insect Stings

- Stay away from insect nesting areas.
- Check around home for insect nests.
- Wear clothing that covers arms and legs.
- Wear shoes.
- Do not swat or wave insects away.
Prevention of Anaphylaxis: Insect Stings continued

• Check inside vehicles.
• Be cautious around flowering plants and garbage cans.
• If stung, do not pull out stinger with fingers:
  • Attached venom sac may eject more venom when squeezed.
  • Scrape stinger out with object, such as a credit card, instead.
First Aid for Anaphylaxis

- Always take SAMPLE history:
  - Ask victim about allergies.
  - Ask victim about recent food or drink.
- Cannot depend on history for a first reaction.
- Suspect allergic reaction based on situation and victim’s signs and symptoms.
Emergency Epinephrine Auto-Injector

- May be carried by people with severe allergies.
- Medication stops anaphylactic reaction temporarily.
- Ask a victim about it.
- Help victim open and use auto-injector.
First Aid: Use of an Emergency Epinephrine Auto-Injector

1. Call 9-1-1.

2. Help a responsive victim use his or her epinephrine auto-injector. If the victim cannot use his or her prescribed auto-injector, you may administer it yourself if permitted by state law.

3. Take the EpiPen out of its case and remove the cap or protective cover.
First Aid: Use of an Emergency Epinephrine Auto-Injector continued

4. To administer the medication, press the auto-injector firmly against the outer thigh and hold it there while the medication is injected. You should feel a “click” when the injection starts.

5. Monitor the victim’s breathing and be ready to give CPR, if needed.

6. Help a responsive victim sit up in a position of easiest breathing. Put an unresponsive victim who is breathing in the recovery position.
Seated at a nearby table at a local Mexican restaurant are a woman, her two daughters, and her daughter’s friend. They are sharing a variety of dishes and having a good time – until the friend abruptly puts down her fork and leans back in her seat, looking ill.

You notice her face seems puffy around the mouth, and she is obviously having trouble breathing. The mother and two daughters are asking her if she is OK but don’t seem to know what to do. With your first aid training, you recognize the situation as a possible food allergy.

What should you do?
Scenario 1

The rear bumper of a truck backing up to the loading dock strikes a man’s leg above the knee, knocking him down. The man is yelling with pain, and his leg looks twisted and distorted above the knee. By the time you reach him he has become quiet and seems confused about what happened. He is sweating but his skin is cool and clammy.

What should you do?
Scenario 2

You are finishing lunch in a restaurant with a coworker when she says she doesn’t feel well. She is wheezing and short of breath and holding her throat. Her eyes look puffy. You ask her if she has any allergies and she says she is allergic to peanuts, but she didn’t think there were any nuts in the sauce on her food. Her wheezing becomes worse and she is very agitated.

What do you do?
Scenario 3

While working outdoors, your coworker is stung by a bee. He says he is allergic to bees. Almost immediately he starts having difficulty breathing.

What is the first thing you should ask him?
CHAPTER 9

Discussion and Questions