

Shock



Faculty of Pharmacy

Dr Samer Sara

Shock

- **Definition:** dangerous condition in which not enough **oxygen-rich blood** reaches vital organs.
- **Characterized by:**
 1. low blood pressure.
 2. rapid pulse and breathing.
 3. decrease blood supply to the brain and other vital organs.

Shock is a life threatening emergency

physiology

In order to have well oxygenated vital organs :

- **The heart** must efficiently pump blood.
(**Heart rate** varies as needed to pump more or less blood).
- **Blood vessels** must be intact and function normally.
Blood vessels constrict or dilate to ensure enough blood circulation to vital organs at all times.
- **Blood volume** must be sufficient to fill blood vessels.
The body controls **Blood volume** by moving fluid in or out blood circulation.

Causes of Shock

- Hypovolemic shock:
 - sever bleeding(external or internal).
 - Sever burns.
 - Dehydration.
- Cardiogenic shock:
 - heart attack.
 - Heart failure.
 - ventricular fibrillation.
- Neurogenic shock:
 - certain spinal cord injuries.
- Anaphylactic shock:
 - insect sting.
 - Food.
 - Medication.

Signs and symptoms:

vary depending on the cause and severity of shock.

- **signs include** : not in the same order
 - Feeling of anxiety, restlessness.
 - Confusion.
 - disorientation or sleepiness.
 - Rapid and shallow breathing.
 - Rapid heart beat, low blood pressure.
 - Skin: pale, ashen and cool.
 - Nausea and thirst.

First Aid for Shock

- In the absence of treatment Shock leads to **respiratory and cardiac arrest**.
- Once it develops, **shock cannot be reversed** without professional medical care.
- **Call 110 immediately** because shock will continue to develop.
- Victim reaching medical care late has **lower chance of survival**.
- Call for any **infant or child with persistent vomiting or diarrhea** before progressed shock signs appear.

First Aid for Shock

- Ensure that airway is open.
- If the victim is bleeding, **control bleeding** immediately .
- **Position** : victim on his back with **legs raised** about 8 to 12 inches **unless** having spinal injury, head injury or stroke.
- help victim to maintaining **normal body temperature** by covering him.
- **Do not let shocked victim eat, drink or smoke.**

- Place the victim in shock position
- Keep the person warm and comfortable
- Turn the victim's head to one side if neck injury is not suspected



Anaphylaxis

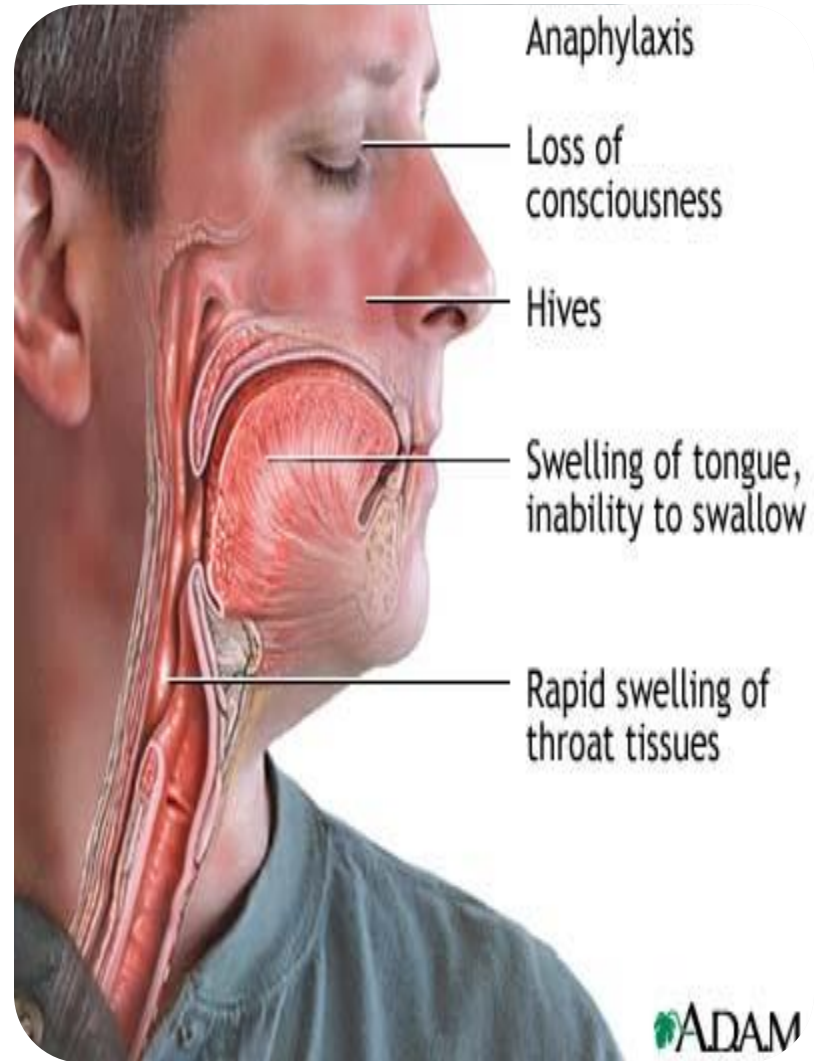
- Most common causes of anaphylaxis are :
 - ❖ Certain drugs.
 - ❖ Certain foods.
 - ❖ Insect stings and bites.



ADAM.



Wasp sting



ADAM
MADA

- Signs and symptoms of anaphylactic shock may begin within minutes and even seconds of the contact with the allergen(substance allergic to individual).
- The more quickly the reaction occurs, the more serious it is likely to be.

The early signs and symptoms of anaphylaxis

- ❑ Skin flushing, itching or burning and rash.
- ❑ Sneezing and watery eyes or nose.
- ❑ Coughing.
- ❑ Gastrointestinal upset.

As symptoms worsen:

- Victim becomes anxious.
- Feels that the throat is closing.
- Fast breathing, coughing, wheezing, hoarseness.
- Headache, weakness or fainting.
- Pale ashen skin or cyanosis.

Prevention

- Medication allergies

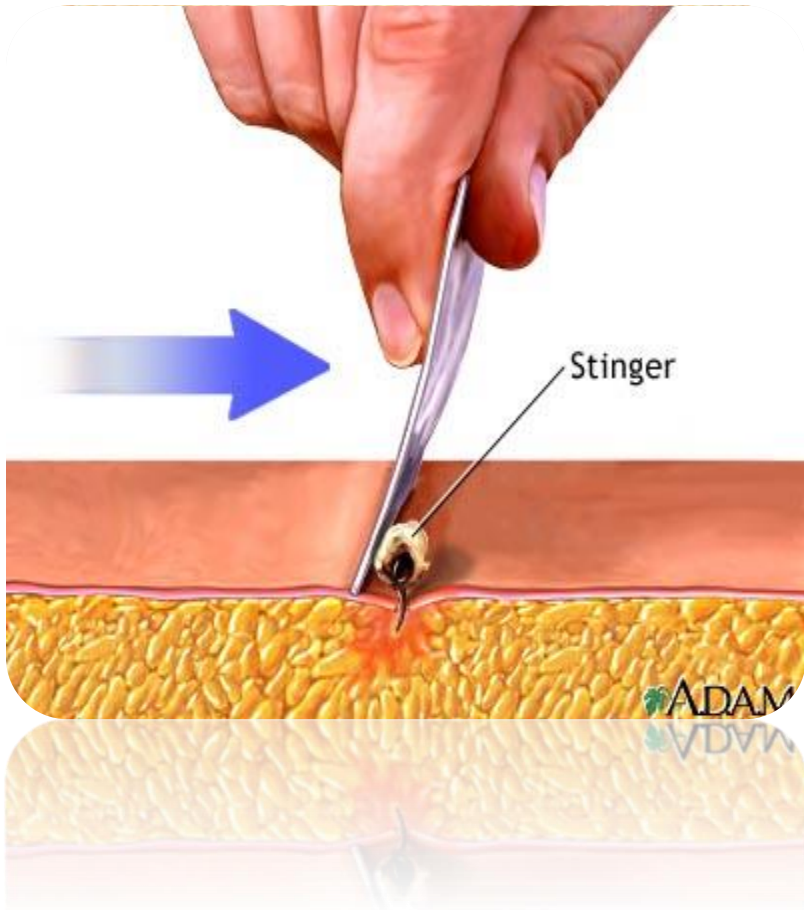
- Maintain a complete history of medication allergy.
- Read product label carefully.

- Foods allergies

- Check food product labels. and avoid that may contain hidden ingredients.
- Educate a child caretakers , teachers.....

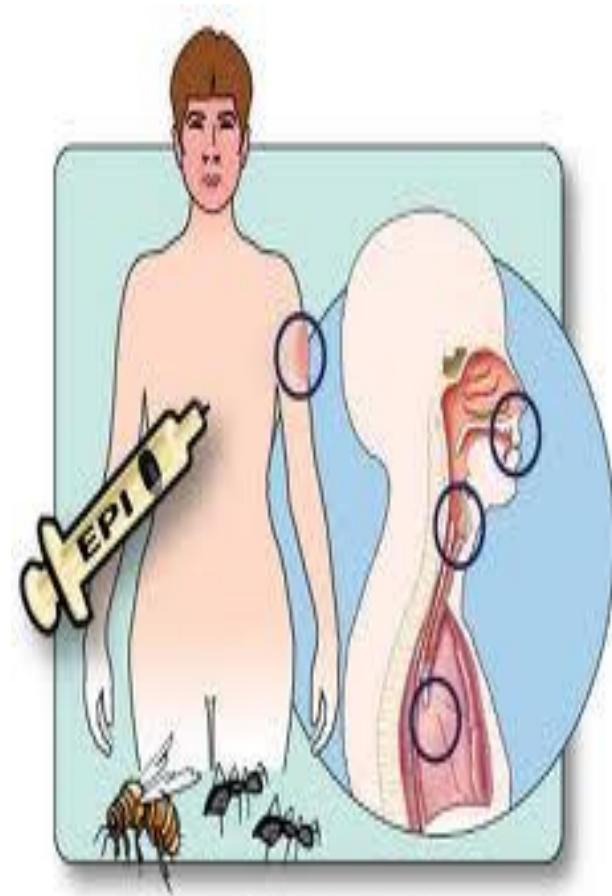
- Insects allergies

- Stay away from insect nesting areas.
- Wear clothes that covers arms and legs.
- Don't swat or try to wave insects away.
- Don't wear light colors or sweet-smelling perfumes or colognes.
- If stung **don't pull the stinger with finger**, instead scrap it off with something similar in size and rigidity to a credit card.



First Aid for Anaphylaxis

- Ask about:
 - allergic antecedents.
 - what the **victim has eaten and drunk..**
 - insect sting.**
- Observe for early and developing **signs and symptoms of anaphylaxis.**
- **Call** for emergencies.
- Position the victim for easiest **breathing.**
- Be prepared to give **BLS** and put the victim in **recovery position.**
- Give **Epinephrine** for severe allergy.



© SEIF & ASSOCIATES, INC., 2008