Fundamentals of First Aid – Fractures



What's at Stake?

A fracture is the medical term for a broken bone. The break can be along the length of the bone or across the bone, so it looks as though the bone has snapped. These are generally clean breaks but sometimes the bone can fracture in several places, especially if the fracture is caused by a fall from a great height or from being crushed.

Fractures are common; the average person has two during a lifetime. They occur when the physical force exerted on the bone is stronger than the bone itself. Children and older people are especially prone.

What's the Danger?

Sometimes a broken bone can pierce the skin. This is known as an open fracture. This can cause blood loss and increase the chance of developing an infection. Even if a bone does not come through the skin – a closed fracture – the person often suffers blood loss from and around the fracture. Any delay in getting medical treatment can result in the bone not healing in a straight line.

Swelling or a bone out of place can cause problems with nerves in the area of the injury. Delays in treatment can lead to long-term damage to the nerves. This can cause numbness, reduced function or changed sensation along the line of the nerve.

How to Protect Yourself

First aid for fractures

1. Keep yourself safe

- **Call 911 1st in an emergency.**
- Assess the scene.
- Proceed with care only if it's safe to do so.
- Put on proper personal protective equipment (PPE), especially if there is blood loss or other hazards.

2. Recognize the signs of a fracture

- There is pain.
    - One of the most common signals in any muscle, bone or joint injury is pain.

- The area is bruised or swollen, often quite significantly.
- The area may be twisted or strangely bent or have odd ridges, dents or hollows.
- Difficult or impossible to move the area.
- The person says they can feel bones grating.
- A snap or pop at the time of injury is heard.
- The injured area is cold, numb and tingly.

3. RICE it while you wait

- RICE is a way to remember what you should do if you suspect a fracture
    - Rest: Do not move or straighten the injured area.
    - Immobilize: Keep the patient still and help them support the injured area to keep it still.
        - Only apply a splint if you have been trained to do so.
    - Cold: Cold reduces internal bleeding, pain and swelling.
        - Fill a plastic bag with ice and water or wrap ice with a damp cloth and apply ice to the injured area for periods of about 20 minutes.
            - Place a towel or thin piece of clothing between the ice and bare skin.
        - If 20-minute icing cannot be tolerated, apply ice for periods of 10 minutes.
        - If continued icing is needed, remove the pack for 20 minutes, and then replace it. Do not apply heat.
    - Elevate: Elevate the injured part only if it does not cause more pain.
        - Elevating the injured part may help reduce swelling.

4. Call 911 if:

- The broken bone is the result of major trauma or injury.
- The person is unresponsive, isn’t breathing or isn’t moving.
    - Begin CPR if there’s no breathing or heartbeat.
- There is heavy bleeding.
- Even gentle pressure or movement causes pain.
- The limb or joint appears deformed or the bone has pierced the skin.
- The extremity of the injured arm or leg, such as a toe or finger, is numb or bluish at the tip.
- You suspect a bone is broken in the neck, head or back.

5. Check what else is happening

- Stop any bleeding.
- Apply pressure to the wound with a sterile bandage, a clean cloth or a clean piece of clothing.
- Treat for shock.
- If the person feels faint or is breathing in short, rapid breaths, lay the person down with the head slightly lower than the trunk and, if possible, elevate the legs.

6. Don’t let it happen to others

- Look around for the events leading to the cause of the fracture, for example:
    - Was a safety barrier missing?
    - Was scaffolding insecure?
    - Was safety equipment not working correctly?
    - Was someone not using machinery correctly?

Final Word

Fractures are common and are often not life-threatening, but wrongly managing a fracture in the first few hours can lead to long-term problems. If the fracture is serious, urgent medical attention is required. The area also needs to be checked to find the cause of the accident leading to the fracture to make sure no one else is injured.