

## What is a fracture?

A fracture is a break in the bone.

- The fracture is called “displaced” if pieces of the bone bend or move out of proper position.
- The fracture is called “non-displaced” if the bones stay in place.

## What is a broken bone?

A broken bone is a fracture.

- Fracture, broken bone, and break in the bone all mean the same thing.
- One is not more or less severe than the other.

## What causes fractures?

Bones are fairly strong and rigid, but they can break if enough force is applied to them. This is like when a plastic ruler breaks after being bent too far.

Fractures can happen:

- From trauma like falls, sports injuries and car accidents.
- When a disease weakens the bone.

## What are the possible symptoms?

Symptoms of a fracture may include:

- Pain, which may get worse with movement
- Swelling
- Deformity

Your child may be able to use their hand or foot even though they have a fracture. This makes it hard to tell if your child has a muscle sprain or strain or if they have a fracture. The only way to tell for sure is by having a medical exam and X-rays.

## What are some common fractures?

Some common fractures that need treatment include:

- Greenstick – only one side of the bone breaks, just like splitting a young branch on a tree.
- Compound – the bone breaks along with a break in the skin. Sometimes the bone sticks out through the opening in the skin. This can also be called an “open” fracture.
- Comminuted [buckle or torus (incomplete fractures or bulging of cortex)] – the bone breaks into 2 or more bone fragments (pieces).

**In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.**

# Fracture care, continued

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## What is the treatment?

Treatment depends on the type of fracture, your child's age and health, and whether or not there are any other injuries. Your child's doctor wants to prevent the broken bone from moving in order to:

- Allow the bone to heal by keeping it still and aligned.
- Reduce damage to the tissue around the broken bone. This includes nearby blood vessels and nerves.
- Decrease pain.

Ways to prevent the bone from moving may include:

- Putting on a cast or splint.
- Putting in hardware like screws, rods, plates or pins into the broken bone.
  - The doctor will do this during surgery.
  - Your child will get anesthesia. Anesthesia is medicine to put him into a deep sleep, so they do not feel anything.
  - The hardware may be on the inside or outside of the body.
  - If there is hardware outside the body, the doctor will remove it when the bone heals.

## Why do fractures not always show on X-rays?

Not every fracture shows up on X-rays, especially non-displaced fractures.

- Children can have broken bones and still have normal X-rays.
  - A bone can break but not bend or move out of place. This can happen with non-displaced or greenstick fractures.
  - When this happens, it can be hard to see the fracture on X-ray.
- It is also hard to see a fracture if it happens on the bone's growth plate (the part of a child's bone where it grows).
  - Fractures can look like clear lines on X-ray.
  - Parts of a normal growth plate also look like clear lines on X-ray.
  - This means that doctors may not be able to see a fracture that happens on the growth plate.

Since fractures can be hard to see at first, the doctor may tell you that your child's X-ray looks normal but treat your child in case the fracture shows up on X-ray later.

As the fracture heals, your child's body lays down extra calcium, bone cells and blood vessels to rebuild the bone.

- Calcium shows up well on X-rays. After 7 to 10 days of rebuilding, there is enough calcium around the fracture that it shows up on X-ray.
- **This is why one doctor may say that your child does not have a fracture, and then later, another doctor says your child does have one.**

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# Fracture care, continued

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## How long will it take my child's fracture to heal?

Fractures take several weeks to several months to heal.

- The time it takes depends on:
  - The type of fracture, especially if it is an open fracture.
  - Which bone is broken.
  - How bad the injury is.
  - The age of the child.
- Pain most often stops long before the fracture is healed. Your child will be able to begin some activity before the fracture heals all the way.
- Even after removing the cast or splint, your child may need to limit activity (like sports, PE, running and jumping) until the bone is solid enough to use normally.

## When should I call the doctor?

Call your child's doctor **right away** if your child:

- Has so much pain that you cannot comfort them, even after giving pain medicines.
- Complains of numbness or tingling in their fingers or toes.
- Has more swelling around their fingers or toes.
- Has a fever higher than 101.5°F

Also call your child's doctor if you have any questions or concerns about how your child looks or feels.

## What follow-up care is needed?

Follow-up with your child's doctor as advised.

## How can I help prevent fractures in the future?

A few tips are listed below to help prevent a fracture from happening again.

### For babies and toddlers:

- Always use a baby or child car seat each time your child rides in a vehicle.
- Use baby gates at the top and bottom of stairs.
- Do not use baby walkers.
- Do not leave your child alone in a high place, such as a changing table, bed, sofa or chair – **not even for a second**. Use safety straps in highchairs and grocery carts.

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# Fracture care, continued

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## For kids and teens:

- Always use a booster seat or seat belts each time your child rides in a vehicle.
- Use helmets, pads and safety gear as needed when your child plays sports.
- Make sure your child gets enough calcium and vitamin D to build strong bones.
- Have your child get plenty of exercise to help them stay strong and fit.

**For more details, please ask your child's nurse for either the Splint Care or Cast Care teaching sheet.**

**This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.**

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