

CLAVICLE (COLLARBONE) FRACTURE: Infant, Child, or Adolescent

△ GENERAL INFORMATION

The *clavicle* (collarbone) is the bone that connects the arm with the trunk. The clavicle is one of the most frequently broken bones in children (Fig. 1).

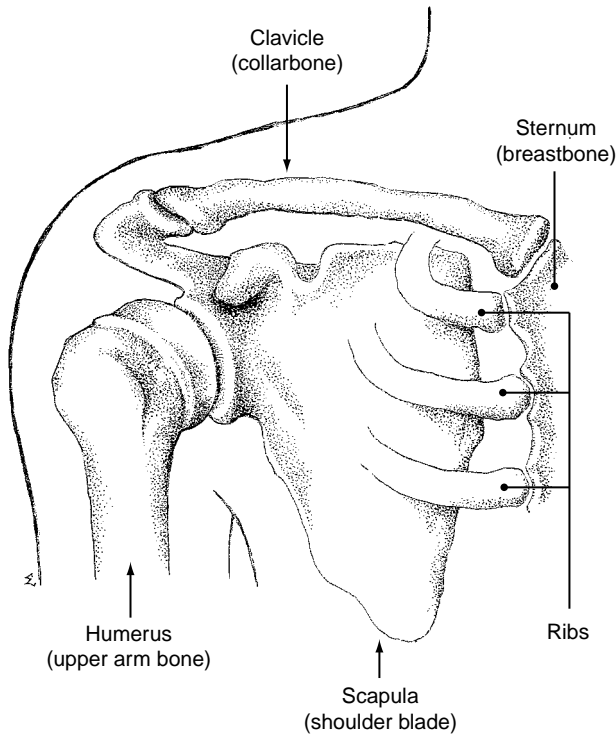


Figure 1. Normal bone anatomy of the shoulder area.

COMMON SIGNS AND SYMPTOMS

Infants

- The clavicle may be deformed.
- Usually there is swelling over the fracture.
- The infant doesn't want to move the arm because of the pain. This is sometimes called "pseudoparalysis," but very rarely is anything wrong with the nerves.

Children or Adolescents

- There is pain and swelling over the fracture.
- The clavicle usually shows some deformity.
- There is painful motion at the shoulder joint.

DIAGNOSIS

History

Infant

- Commonly, there is a history of a difficult birth.

Child or Adolescent

- Most commonly, there is a history of a fall on an outstretched arm or a direct injury to the middle of the clavicle.

Physical Examination

Infant

- Sometimes when examining the infant gently, the broken bone can be felt crackling under the skin.
- The infant won't move the arm.

Child or Adolescent

- Often the broken bone can be felt under the skin.
- The clavicle may be crooked.
- When the shoulder is moved, there is pain over the fracture.
- X-rays of the clavicle show the fracture, which can be as follows (Fig. 2):
 - It can be fractured, but not through and through (this usually is referred to as a *greenstick fracture*) (A).
 - It can be a through and through fracture but can have one of the following appearances:
 - It is not out of place (B).
 - The clavicle is bent at the fracture (C).
 - The broken ends of the clavicle have slid over each other but are still touching (D).
 - The broken ends are widely separated from each other (E).

The above variations are important because they determine the type of therapy that is necessary.

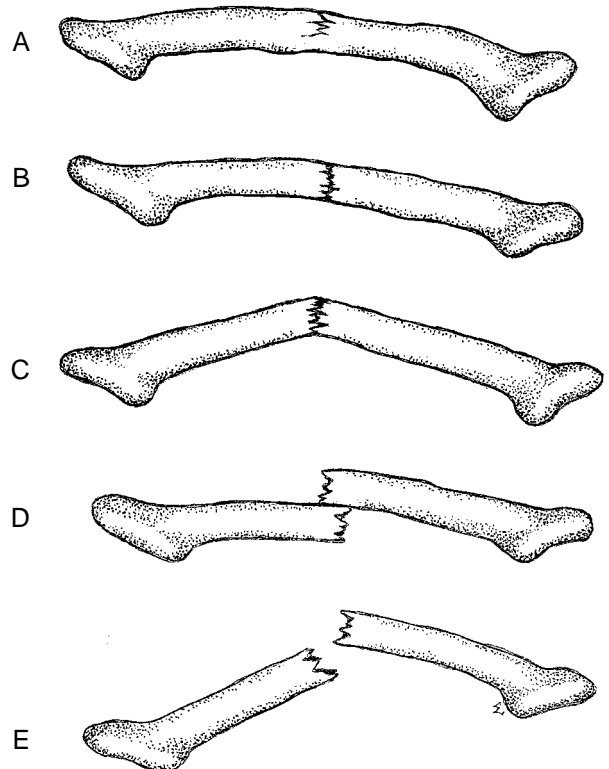


Figure 2. The most common types of fractures in an infant or a child.

○ **TREATMENT: No Operation**

Infant

- If there are no symptoms, no specific orthopedic treatment is necessary. The infant should be handled gently, however.
- If there is pain on touching the fracture site or there is pseudoparalysis, the arm is immobilized by pinning the shirtsleeve on the injured arm to the body of baby's shirt with a safety pin for 1 or 2 weeks until the tenderness disappears.

Note: The arm will be examined carefully and repeatedly for any neurologic problems, especially in those infants who do not move the arm.

Child or Adolescent

- A bandage (called a *figure of eight*) is applied. The purpose of this bandage is to pull the shoulders back. It helps prevent the clavicle from moving too much.
- The above therapy does not require an anesthetic; it is done on an outpatient basis.
- Usually the figure-of-eight bandage is kept on for 2 weeks. If pain is still present after 2 weeks, the bandage is kept on for another week or so longer.
- Usually physical therapy is not required.
- Full range of motion can be expected once the pain from the fracture disappears.
- Any deformity of the clavicle usually corrects itself with time.

⊕ **HOME CARE**

- Pain medicine is required only occasionally.
- The figure-of-eight bandage needs to be checked every day to see that it is snug. The buckles in the back need to be adjusted as necessary.
- Check the elbow, wrist, and hand to see that they move as well as those in the unaffected arm.
- Check the fingers twice a day to make certain there is no change in color.
- The figure-of-eight bandage presses against the moist

skin in the armpit, which can irritate the area. Use some gauze with ordinary rubbing alcohol on it to keep the area clean.

○ **TREATMENT: Operation**

- An operation is rarely required and only in the following instances:
 - When a nerve is caught in the fracture area.
 - When the fracture does not heal, usually because the broken ends were too far apart.
 - When the fracture is an outer end (distal) fracture through the growth plate with significant displacement and deformity.
 - The operation is done under general anesthesia.
 - An incision is made that can be closed in a cosmetically pleasing fashion.

POSTOPERATIVE CARE

- At the completion of the operation, your child will be taken to a recovery room and observed. After the blood pressure, pulse, and breathing are normal, the child usually can be taken home that same day. Occasionally, a 1- or 2-day hospital stay is necessary.
- Arrangements will be made for medicine, instructions on care, and the postoperative office visit.

⊕ **HOME CARE**

- Pain medicine is required only occasionally.
- Sponge bathe. Let's discuss when tub baths or showers are appropriate.
- Keep the dressings dry. If they get wet, replace them with clean, dry ones.

📞 **CALL OUR OFFICE IF**

- There is a change in color of the fingers, or the fingers or wrist cannot be moved as well as those on the unaffected arm.
- Any unusual signs or symptoms develop.