

Distal Radius Growth Plate Fracture



What is a growth plate fracture of the distal radius?

The radius and the ulna are the two long bones of the forearm, extending from the elbow to the wrist. The physis is the growth plate at the ends of these bones. Growth happens in the physis up through adolescence. A growth plate fracture of the distal radius is a fracture line that intersects the physis.

Salter-Harris is a numbering system used to classify the location of the fracture on the bone. The Salter-Harris number tells us what kind of fracture your child has, but it does indicate how severe the fracture is.

How is this injury treated?

Growth plate fractures can be, or become, unstable fractures. This means the bone either has moved or might move. The first step is to determine if the fracture is stable and if the bone is in the right place to heal properly.

If the bone has moved too far, it will likely need to be set back into proper position. This is called a reduction and is usually done in the emergency department. Surgery may be needed to make the bone stable and put it in the right position to heal if the fracture is too unstable.

Your child will be treated with casting once the bone has been put into proper position. They will usually start with a long arm cast that comes up above the elbow.

In order to leave room for swelling, your child will probably start with a bivalved (split) cast on their arm. The sides of the cast are taped with cloth medical tape. You can buy this tape at a pharmacy if it begins to peel off. You may also use cloth athletic tape or duct tape, but avoid these if your child has a latex allergy. The cast is held tightly in place from the inside, so it should not fall apart if the tape starts to peel. We usually do not use a waterproof cast for the first cast because of swelling.

Swelling in the fingers is common. Help your child keep their arm and hand lifted or resting above their heart to reduce swelling.

Will my child be in pain?

Soreness is usually at its worst in the first few days through the first week. Pain from soreness can be treated with acetaminophen (Tylenol®) or ibuprofen (Advil®) as needed. **Always talk with your provider about allergies your child may have before giving over-the-counter medication.**

We may prescribe a small amount of prescription pain medication after a reduction if we feel it is needed.

Can my child be active?

The cast provides some protection, but a blow to the arm could move the fracture out of place or make the injury unstable.

Your child should not participate in activities where there is a risk of falling or getting a direct hit to the arm. This includes activities like:

- playing on playground structures (i.e. jungle gyms or swing sets)
- contact sports like basketball, hockey or soccer
- horseback riding, ice skating or skiing

How long will my child be out of sports?

We will assess your child and make recommendations based on how the fracture looks and the potential injury risks of the sport your child plays.

Your child probably will not play contact sports or do playground activities for eight to 12 weeks, including some recovery time after the cast comes off. Once the cast comes off, your child should be using their arm to bring back full strength and motion while they wait to return to other activities once the bone is strong enough.

Salter-Harris Fractures



How long will my child need a cast?

The most common timeline for casting is four weeks in a long arm cast, followed by two weeks in a short arm cast and two weeks in a wrist splint. If your child started with a short arm cast, they will probably stay in that cast for four to six weeks. Your child will likely have more x-rays during the four and six-week follow-up appointments.

Will my child need physical therapy or treatments after bracing/casting?

Your child probably will not need physical therapy and should get back to full strength and movement within one to two weeks after the cast comes off.

When should I follow up?

Your child will typically need x-rays once a week for the first one to two weeks. The muscles in the arm put tension on the bone, even though your child is in a cast and cannot move much. This tension can make the bone drift out of the correct position. We watch closely for this so we can treat it early if it does happen.

If the first cast was split and everything looks good at the one-week appointment, we overwrap that cast. This means we put a new layer over the cast to close it off, which keeps it from getting too loose as swelling goes down. Sometimes we carefully replace the first cast with a new cast if it has gotten too loose for an overwrap to work well.

Your child may need longer-term follow-up to watch for signs of a growth plate injury. This is called physeal arrest, and means that the growth plate may close off due to the injury. There are treatments we can use if this happens. Your child should come back at six or 12 months (or possibly both) for an x-ray if your provider thinks there is a risk for a growth plate injury.

When should I contact the office?

Call us if your child has:

- pain that increases quickly and without warning
- swelling with no new fall or injury
- new redness and warmth around the area with new fevers, chills or nausea (feeling sick)
- pain that does not get better after taking acetaminophen (Tylenol®) or ibuprofen (Advil®)
- numbness and inability to wiggle fingers

These could be signs of a different problem, and we may direct you to take your child to our clinic or the emergency department.

Notes
