EDUCATION AND TAKE-HOME INSTRUCTION

Bicortical Distal Radius Fracture

Boston Children's Hospital
Orthopedics & Sports Medicine

BostonChildrens.org/OrthoUrgentCare | 617-355-6021

What is a bicortical distal radius fracture?

The radius is one of the two long bones of the forearm, extending from the elbow to the wrist. A bicortical fracture occurs when the bone breaks through both cortices (both sides of the bone). If you think of the bone as a tree trunk, the fracture line goes through the bark on one side of the tree, and all the way through the trunk and out through the bark on the other side.

How is this injury treated?

Bicortical 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 facture 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 probably wear a cast once the bone has been put into proper position. The first cast is usually a long arm cast that comes up above the elbow, but sometimes we may use a short arm cast.

If a reduction is needed, your child will probably start with a bivalved (split) cast to leave room for swelling. 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.

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 surgery or a reduction if we feel it is needed.

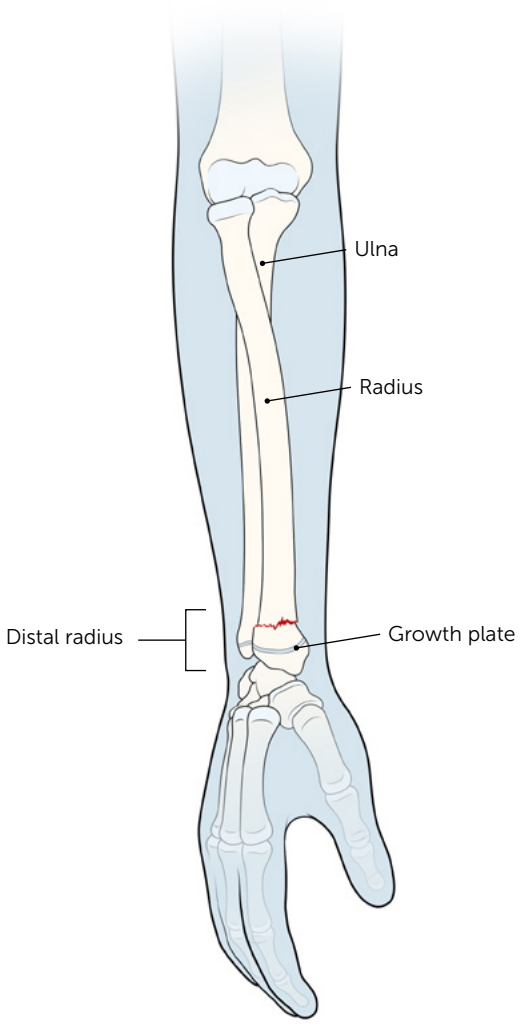
Swelling in the fingers is common. Help your child keep their arm and hand lifted or resting above their heart to help with swelling.

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 recovery time after the cast comes off. Once the cast is off, your child should use their arm regularly to bring back full strength and motion while they wait to return to sports and other activities.

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 in a short arm cast, they will probably stay in that cast for four to six weeks.

Will my child need physical therapy or treatments after 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 should come back for x-rays once a week for the first 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 replace the first cast with a new cast if it has gotten too loose for an overwrap to work well.

Your child will likely have more x-rays during the four- and six-week follow-up appointments. They may not need x-rays at the four-week appointment if everything has been going well.

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 wrist 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

Produced by Boston Children's Hospital Orthopedics and Sports Medicine Center. For more information or to request an appointment visit **BostonChildrens.org/OrthoUrgentCare**.

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