

reduction and casting of a fracture

what to expect

Your child's fracture (or joint dislocation) has been reduced or "set" in the emergency room. The term reduction means the injury was manipulated or pushed back in to better position. After reducing the fracture, we place it in a molded cast to try to keep it in the improved position. If your child was sedated for the procedure, the emergency room staff will provide you with instructions on caring for them after sedation. This handout is provided to help you care for your child's injury and let you know what to expect in the upcoming weeks.

how do I care for the cast?

Cast care instructions should be provided by the cast tech or hospital staff. **The most important instructions are to keep the cast dry and never put any object down in the cast.** The most reliable way to keep the cast dry is to cover it with a bag or cast protector and take a bath, keeping the cast out of the bath and water. It is very difficult to keep a cast dry in the shower or pool.

what can my child do in the cast?

The physician, physician assistant, or nurse practitioner performing your procedure can give you specific instructions regarding activity restrictions after a closed reduction.

- For the first 24-48 hours after the procedure, keep the injured arm or leg elevated to heart level to decrease the swelling of the limb in the cast. You can think of swelling like water: you want it to run down out of the arm or leg and back to the body.
- It is healthy for your child to move around in the cast, even right away. But, when they are not moving they should elevate their injury.
- In most cases, your child should not bear any weight at all with the injured limb or on the injured limb. Your child should avoid activities that could lead to them falling on the cast. This includes things like running, jumping, riding activities, climbing or sports.
- It is usually okay for them to move their fingers and toes as well as move the cast around with their shoulder or hip. It is also usually okay for them to write with their hand if the cast does not prevent them from doing so.

what problems should I watch out for?

1. **Excessive swelling in the cast:** The risk of this problem is very low and your child's cast may be split along the side to further decrease this risk. Symptoms are: severe pain in the arm or leg at rest even with pain medication, severe pain when your child moves their fingers or toes, poor blood flow to the foot or hand, or feeling that the cast is very tight. If your child develops these symptoms, the first step is to elevate their arm or leg. Then, call us at **937-641-3010** or return to the ER immediately. This problem can often be solved by splitting the cast to allow for more swelling.



what problems should I watch out for? (continued)

2. **Cast slipping off your child's arm:** This is more common in very young children. If your child's toes or fingers seem to be moving up into the cast you should contact the orthopaedic office.

You should also contact the office if your child's cast gets wet, breaks or becomes flexible.

what are the potential risks of my child's injury and procedure?

The physician, physician assistant, or nurse practitioner who performs your reduction and the provider who you see in the office at your follow up can discuss the risks of your child's specific injury with you in detail. The main risk or complication is loss of position of the fracture in the cast. A cast is not a perfect way to hold a broken bone in place. As the swelling from the injury goes down, the muscles that attach to the broken bones can pull the fracture back into a displaced or crooked position over time. In research studies, there is a significant loss of position in the cast as much as 10-20 percent of the time.

When this happens, it is usually not due to anything you or your child did wrong. We will take an X-ray of your child's injury in the cast at their first follow-up visit to check for this. If the fracture does move or shift in the cast, the shift is often mild and we can just watch it closely. Sometimes, we will wedge the cast in the office to change its shape and push on the fracture. Occasionally, we have to repeat the reduction in the operating room or perform surgery to keep your child's fracture in an acceptable position.

If your child has a fracture of their growth plate (also called a physis), there may be a risk of a growth problem at the injury site over time. Other less common problems that can occur after this procedure include severe swelling in the cast, blisters in the cast, cast saw injuries, and stiffness.

how long will he or she be in this cast?

In the emergency department, your child will receive a traditional cast that cannot get wet. This cast will remain in place until the fracture begins to heal and becomes stable.

can my child get a waterproof cast?

The cast that was placed in the emergency department will need to stay in place until further orthopedic physician evaluation. This cast is not waterproof. Your physician will determine when it is time for a second cast. That cast could be waterproof depending on the injury. The material used for waterproof casts is not covered by insurance and is an extra charge.

when should we follow-up?

Please call our office the next business day to schedule a follow-up visit. In most cases, we would like to see you in the office about 7 days after the reduction. This allows some time to see how the fracture is going to do in the cast. If your child has a growth plate fracture that was reduced, it would be best to see them 3-5 days after the injury.

call us for questions or concerns

Dayton Children's orthopaedics and sports medicine: 937-641-3010
If you have an emergency, our physicians are on-call 24/7.

