



WRIST AND FOREARM FRACTURES

FRACTURE DESCRIPTION

- Your child has a RADIUS +/- ULNA FRACTURE which is a fracture of one or both bones in the forearm
- These are one of the most common fractures of childhood.
- These fractures can be
 - Undisplaced (bones are in perfect alignment) or minimally displaced (the bones are in a good alignment) (see figure 1) OR
 - Displaced (the bones are out of alignment) (see figure 3)
- If the bones are in perfect or good alignment, your child will need a cast or a splint to keep the bones still and minimise pain while the fracture heals
- Sometimes if the bones are out of alignment, this can sometimes be managed in a cast without realigning the bones
 - Some bend at the fracture site is often accepted, due to fracture remodelling (see figure 3A to C, and read Fracture Healing and Remodelling Information Sheet)

Anatomy and xray examples

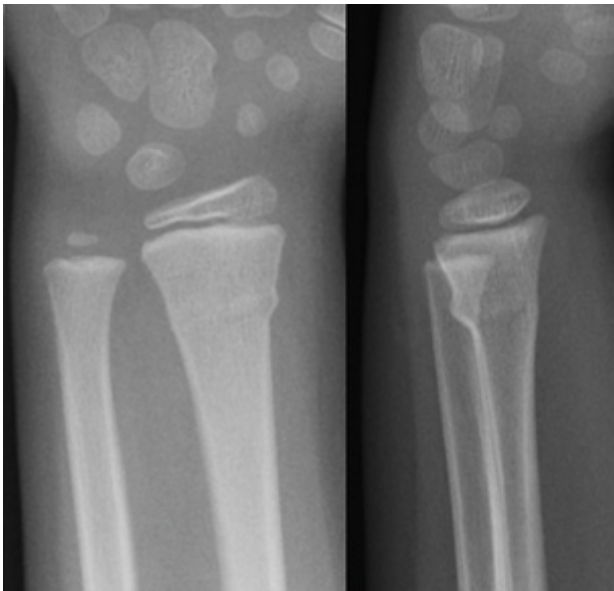


Figure 1. Xrays of a minimally displaced distal radius wrist fracture (Buckle fracture)



Figure 2. Example of a displaced radius and ulna wrist fracture

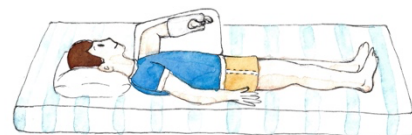
- If the bones are out of alignment, your child may need an operation to straighten the bones
 - If the fracture is unstable after realignment, wires, rods or a plate and screws may be necessary to keep the bones in the correct alignment
 - After the procedure, your child will need a cast while the fracture heals

MANAGEMENT

- Your child can usually go home the same day if there are no problems with circulation, feeling or movement of the fingers
- If an operation is required to realign the bones, your child may be required to stay overnight for monitoring

WHEN YOU GO HOME

- Fractures can be painful and swell, especially in the first few days.
- Simple pain medication such as paracetamol and ibuprofen are usually effective
 - Give regularly for the first few days, following the directions
 - Give a dose before bedtime to allow a good sleep
- When resting, the wrist and hand should be elevated above the level of the heart (centre of the chest) to minimise swelling
- A sling will be provided so that your child can keep the hand elevated when mobile or at school; occasionally, you may want to keep your child at home for the first few days
- Encourage frequent finger movement
- Check that your child has normal finger movement and feeling, and that the fingers are pink, during the first few days.
- See Cast Care for Children's Arms Information sheet



Fracture Remodelling



Figure 3A to C. Xrays of the child in Figure 3 which was managed without re-alignment of the bones. This is an example of bone remodelling in children

(Scott et al. Closed Treatment of Overriding Distal Radial Fractures without Reduction in Children. JBJSA 2012; 94:246-52)

Figure 3A. 3 days post fracture (from figure 3)

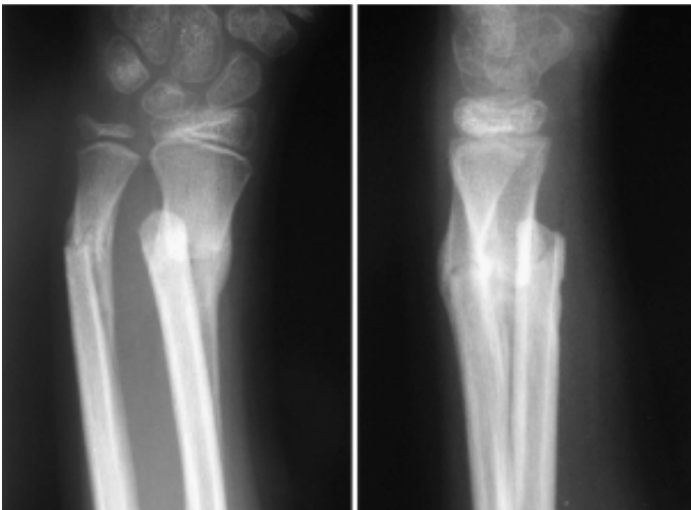


Figure 3B. 7 weeks post fracture
The bones have healed in the position they were aligned in

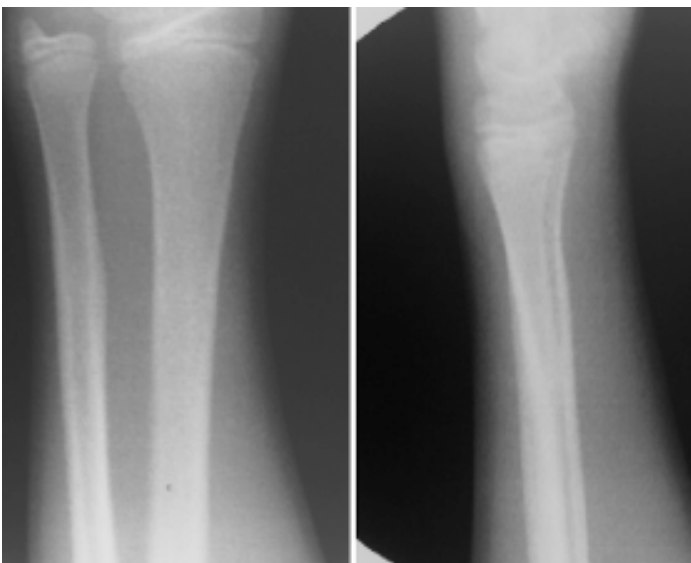


Figure 3C. 2 years post fracture
The fracture has healed completely, and the bone has realigned itself

FOLLOW UP

- Your child may have an xray 7 -14 days after the fracture, to ensure the alignment is still satisfactory
 - Sometimes the after the swelling has subsided, the cast can become loose and the fracture can move position
 - If your child's fracture is very stable (undisplaced or minimally displaced), there will be no need for further xrays
- If your child has wires, your child will have the wires removed 4 weeks after surgery (see **Wires and Wound Care for Children Information Sheet**)
- In general, splints or casts remain on for 4 to 6 weeks depending on your child's age and the displacement of the fracture
- Generally, your child will be asked to refrain from high-risk activities 2-6 weeks after the cast is removed. However, it takes a high impact trauma to re-fracture the bone

WHAT TO EXPECT

- See **Cast Removal Information Sheet**

WHAT CAN GO WRONG

- Nerve damage
 - Nerves near the fracture site can be stretched or damaged
 - Usually this is a stretch of the nerve and this recovers with time, especially once the fracture is in the correct alignment
- Swelling
 - Swelling can be severe with these fractures
 - Your child may be monitored overnight in the hospital after an operation
- Infection
 - Any metal placed in the body is at risk of infection
 - This is rare in children, and antibiotics are not required unless there are signs of infection (**Wires and Wound Care for Children Information Sheet**)
- Stiffness
- Refracture
 - This is rare, and usually occurs in forearm fractures.
 - These can happen even a year after the original fracture
- Malalignment of the fracture
 - Occasionally the fracture can heal in a position that causes the arm to look bent
 - This usually recovers due to the remodelling process
 - Rarely, this will require surgery when the child is older