

Patient Education



ARNOLD PALMER HOSPITAL
For Children
Supported by Arnold Palmer Medical Center Foundation

The Orthopaedic Center
at Arnold Palmer Hospital
83 W. Columbia St. Orlando, FL 32806
321-841-3040 f:321-841-3049

BONE REMODELING

When a bone is fractured, it causes bleeding and swelling to the bone as well as the tissue around the bone. This causes a reaction in the body that begins the process of bone healing.



Inflammation

Week 1: A clot forms around the edges of the fracture which holds the bone marrow cells at the site of the fracture. The clot turns into tough scar tissue called a callus that causes the edges of the fracture to become sticky and stay in place.

Week 2-3: Calcium causes the callus over the fracture to become hard making it easy to see on an x-ray.

Week 4-6: The callus fills in the fracture making it stronger than it was before the injury. By this time the bone is healthy and strong.

4-6 months: The callus is reabsorbed into the bone, smoothing out the callus. The bump/callus on the bone can take 6-12 months for it to completely be smooth.



Day of injury

in cast- Early healing

Callus formation

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Example:

14 year old boy with a broken wrist
No attempt has been made to
set the wrist



8 weeks following the fracture:
The bone has healed although it
Remains slightly angulated (crooked)
And slightly translated (shifted)



7 months following the fracture,
The bone has nearly fully remodeled
And will continue to do so.

