

## Buckle Fracture

### What is a buckle fracture?

Buckle fractures are one of the most common fractures experienced by children. This type of fracture is a break in the bone that can only be found in children who are still growing. A child's bone is more prone to injury because it is softer and weaker than fully mineralized adult bones. When a child falls, extreme force is placed on the bone causing it to compress and 'buckle' at its weakest point. This is similar in mechanism to crushing a soda can, in which the force of standing on the can causes its walls to ripple.

### What are the signs and symptoms?

*Symptoms of a buckle fracture can be different for each individual.*

*Some of these include:*

- ✓ Increased pain and swelling at the site of the injury.
- ✓ Intense pain that does not resolve, after a known fall has occurred.
- ✓ A specific, localized area of pain that hurts to the touch.
- ✓ Increased pain with movement of the joint.
- ✓ Pain is typically relieved with anti-inflammatory medication (Motrin, Advil).



### How do you diagnose it?

The only way to definitively diagnose a buckle fracture is to obtain an x-ray. Usually your doctor will order several views of the involved bone and determine if a fracture is present.

### How do we treat it?

Once a buckle fracture has been diagnosed, your child will be placed in a cast for approximately 3-4 weeks. When you return for your follow-up visit, the cast will be removed and your doctor will determine if another x-ray is needed. Typically, an x-ray is only necessary if your child is still experiencing pain and discomfort at the fracture site. If your child is not experiencing any pain at their follow-up visit, the fracture has adequately healed and an x-ray is not needed.

After the cast is removed, the joint will be stiff. Your child should be encouraged to start moving the joint and doing range of motion exercises by bending, straightening and rotating the joint. A removable, velcro wrist brace may be given to your child, and if so should be used for 2-3 weeks **during sports only**.

### References:

Children's Hospital Colorado Sports Medicine Program for young athletes  
American Academy of Pediatrics  
American Medical Society of Sports Medicine