



# The Elbow

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The elbow is a hinge joint that connects the upper arm to the forearm. This joint has two motions: it bends and straightens your arm. This joint helps you open and close doors, bring food to your mouth, reach into cupboards and many other tasks. The pointed part of the elbow is called the olecranon process and it is a bony prominence on the ulna.

## Bones:

- Humerus (upper arm bone)
- Radius (outer forearm bone)
- Ulna (inner forearm bone)

## Muscles:

- Triceps: straightens the elbow, located on the back of the humerus
- Anconeus: a very small muscle on the back of the elbow joint that also helps straighten the elbow
- Biceps: bends the elbow, located on the front of the humerus
- Brachialis: bends the elbow
- Brachioradialis: bends the elbow

## Ligaments:

- Ulnar collateral ligament: located on the inside portion of the elbow
- Radial collateral ligament: located on the outside portion of the elbow

## Common Pediatric Pathologies of the Elbow:

- **"Little Leaguers Elbow" aka medial apophysitis:** This injury occurs when excessive throwing causes the tendons and ligaments in the elbow to become overworked and if further aggravated, these tendons and ligaments can begin to tear away from the bone. This tearing action can sometimes even take bone fragments along with it. Pain is typically noted at the bump on the inside of the elbow.
- **Osteochondritis Dissecans:** Occurs when there is a loss of blood supply to part of the cartilage within the elbow joint. This injury can also be caused by repetitive throwing. It can cause pain on the outside of the elbow. There may be swelling and limited range of motion with this injury.
- **"Nursemaid's elbow" aka radial head subluxation:** This injury occurs when there is a slight separation between the humerus and radial head. It typically occurs when an adult suddenly pulls on a child's hand, such as to keep them out of danger, or when swinging a child around. This injury causes pain when the elbow is moved. This injury typically occurs in young children ages 1-4 but can occur up to 6-7 years of age.
- **Elbow fractures:** Elbow fractures in children can be caused by fall on an outstretched arm, fall onto the elbow, and direct hit to the elbow. These injuries can be caused during sports or while playing at a playground. Some symptoms are pain, swelling around elbow joint, inability to straighten arm, and numbness in hand.

## How to Keep Them Strong

**Push-ups:** Lay with face, palms, and toes facing down, keeping elbow straight and back and legs straight. Slowly lower to the ground by bending the elbow and then push back up by straightening elbow. You can make this easier by doing them against a wall or doing them on your knees.

**Plank walk outs:** Grab a stability ball and roll out onto on your belly, keeping palms down and elbows straight and use hands to walk out and back. You can even play a game- and walk hands out and in with each turn.

**Wheel barrow walks:** With someone holding your feet, hold your body straight and your elbows straight and palms down and walk around on your hands about 10 feet forward.

**Bicep curls:** Holding a soup can in your hand, slowly bend and straighten your elbow to work your biceps.