

## Elbow

# Osteochondritis dissecans (OCD) of the Elbow

- OCD is an injury to the capitellum (crease in your elbow on the thumb side of the Humerus bone).
- OCD is a “pathologic lesion affecting articular cartilage and subchondral bone with variable clinical patterns”.
- This typically occurs in growing or skeletally immature gymnasts who repetitively impacts/pounds on their elbows. Gymnasts who are done growing and have closed growth plates, are unlikely to have this injury.
- OCD can occur throughout the body but is more commonly found in the elbow, knee, or ankle.
- Gymnasts will complain of posterior (back) lateral (outside) elbow pain on the capitellum, and may have mechanical signs and symptoms (feeling like their elbow catches or locks), or a loss of motion with flexing and extending the elbow can occur.



### How do you get this?

Osteochondritis dissecans (OCD) is a condition that is believed to occur from repetitive impact or trauma (specifically a hyperextended elbow with a valgus loading force) on skeletally immature or growing athletes. At the end of bones there is a structure called cartilage (this is the shiny end of the bone), and with repetitive impact this causes a lack of blood flow (nutrients and healthy substances cannot reach certain areas to cause healthy bone to grow) to the bone and cartilage. This lack of blood flow then leads to an injured bone, pain, and sometimes breakage/pieces (loose bodies) of bone.

### Physical Exam

On exam, you may have tenderness to palpation (touch) on your elbow in the area of the capitellum, decreased motion with flexion/extension, feeling like your arm getting “locked” or “stuck” (mechanical symptoms), and possibly swelling or inflammation.

## Diagnostic Images

X-rays are the first step in identifying OCD. If an abnormality is found on x-ray, then an MRI is ordered next. The MRI will help determine the stage of the OCD lesion and what treatment is best.

## Stages of OCD

There are a few different medical staging classifications for OCD but the most important thing to determine is if the OCD is considered stable or unstable.

- **Stable:** A stable OCD means the bone is still attached and there are no loose pieces.
- **Unstable:** An unstable lesion means the bone is partially attached or not attached at all (a loose body).

## Non-Operative Treatment

### • **Brace:**

- Elbow hinged brace or sleeve 23 hours a day.
- Brace can be removed for Physical Therapy (PT) and showers/bathing.

### • **Physical Therapy:** (Brace can be removed for this)

- Strength: Wrist/forearm, shoulder (rotator cuff and periscapular), biceps, and triceps.
- Modalities: Massage, e-stim, heat, ice.
- Other: Proprioception/balance, posture, thoracic mobility, and avoidance of hyperextended elbows.

### • **Avoid:**

- All impact/pounding/weight bearing on your affected elbow.

### • **Activity:**

- No true gymnastics for 6-12 weeks-pending Medical Provider and treatment/staging.
- If you have clearance from a Medical Provider you potentially can work on lower body skills, conditioning (ex: core, back, legs), skills that do not use your arms (ex: aerial, back tuck, etc...), and PT exercises as guided by your Physical Therapist or Athletic Trainer.

## Operative Treatment

Operative treatment may include loose body removal, internal fixation of an unstable osteochondral fragment, marrow stimulation, and/or osteochondral grafting.

Consider having your gymnast work with a Sports Psychologist or Mental Performance Coach.

## Injury Prevention

Injury prevention exercises should focus on proper technique when applying weight on your hands. Avoid hyperextension of your elbows when performing skills, and building strong shoulder and wrist muscles.

## Injury Prevention: Proper Technique

### Incorrect:

- Fingers/wrists pointing out
- Elbows hyperextended



### Correct:

- Fingers/wrists pointing in or inward
- Elbows straight and NOT hyperextended

