

## Osteochondritis Dissecans (OCD)

### What is osteochondritis dissecans?

Osteochondritis dissecans (OCD) is a disease that affects growing articular cartilage (hyaline cartilage) and its underlying bone (subchondral bone). Rapid growth of cartilage with failure of its deep layer to ossify (to mineralize and become bone) results in areas where the cartilage becomes abnormally too thick without proper support of the underlying subchondral bone. This thickened cartilage will eventually crack and begin to separate from the underlying bone. With continued growth and normal activity these cracks enlarge and a cartilage flap separates from the underlying bone resulting in a flap of cartilage floating free within the joint. The movement of this cartilage flap and the exposure of the underlying bone to joint fluid results in inflammation, pain and lameness. Chronic inflammation can result in permanent degenerative changes in the joint including the development of osteoarthritis. OCD is most commonly diagnosed in young, rapidly growing, large-breed dogs. OCD lesions are most commonly found in the shoulder, but the elbow, ankle and knee joints can also be affected.

### Diagnosis

A diagnosis of OCD is made by performing a thorough physical exam and identifying an OCD subchondral bone defect on x-rays. Dogs typically have lameness that can be localized to a joint during an orthopedic exam. Direct visual inspection of the joint with arthroscopy is utilized in many cases during corrective surgery.

### Treatment

OCD lesions are treated by surgical removal (debridement) of all free / loose cartilage flaps / fragments. Abnormal tissue within an OCD defect is next removed until healthy bone is encountered. Debridement of the abnormal tissue promotes neovascularization (new blood supply) and permanent healing of the defect with reparative cartilage (fibrocartilage). The prognosis after surgical debridement varies greatly depending on which joint is affected and how chronic the condition is. The shoulder carries the best prognosis after surgery with the knee having the poorest.

