

## **Osteochondrosis**

Osteochondrosis is an orthopedic disorder of growing horses. It is failure of ossification of the growth plates and/or subchondral bone (bone beneath the cartilage). In other words, the cartilage that is present in growing horses affected with osteochondrosis does not ossify into bone like it normally should. Therefore, there is a thickened layer of cartilage that does not receive adequate blood supply and nutrients. This predisposes the cartilage to damage. There are two types of osteochondrosis lesions that can develop. One lesion, osteochondrosis dissecans, is a dissecting osteochondrosis fragment of the cartilage. The second lesion, referred to as a subchondral bone cyst, is a cystic lesion that develops underneath the outer layer of the cartilage.

Osteochondrosis is most commonly seen in young horses between the age of four months to two years old. It becomes apparent at this time due to the forces exerted on the abnormal cartilage which results in disruption of the joint surface. The most common clinical sign that is seen is lameness of the affected limb with or without joint effusion of the affected joint. All joints can be affected, but this disease is most commonly seen in the stifle, hock, shoulder, fetlock, and cervical spine.

The exact cause of osteochondrosis is unknown; however, it is thought to be multifactorial. Suspected factors that are thought to contribute to this disease include rapid growth, genetic predisposition, nutritional mismanagement, and trauma. It is believed that rapid growth stimulated by a high-energy diet can contribute to the disease. Reducing the energy intake may help reduce the incidence of the disease. It is also thought that diets high in phosphorous and calcium may induce osteochondrosis. Excess trace minerals, in particular zinc and copper, may contribute to the development of the disease.

Osteochondrosis is diagnosed by clinical signs and radiographic changes. Radiographs will show an irregularity or lucency in the subchondral bone at the articular surface and possibly bone fragments loose in the joint if it is an osteochondrosis dissecans lesion. There is variability in the radiographic changes which may make diagnosis difficult. The severity of the lesions on radiographs may not correlate with lesions seen grossly.

Options for treatment of osteochondrosis lesions include rest, controlled exercise, intra-articular therapy, and surgery. The appropriate treatment option depends on the severity of the lesion, the location of the lesion, and the intended use of the horse. It is best to discuss the options with your veterinarian on an individual basis to determine the ideal therapy.

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