

Clumber Spaniel - Genetic health concerns you should be aware of when looking for a Clumber.

PDP1

Pyruvate Dehydrogenase Phosphatase (PDP1)

The mutation in the gene causing canine pyruvate dehydrogenase phosphatase (PDP1) deficiency in Clumber and Sussex Spaniel dogs was identified by Cameron, J.M., et al (2007). The authors reported that 20% of the current Clumber and Sussex Spaniel population are carriers for a null mutation in PDP1. The disease is characterized by exercise intolerance and post-exercised collapse.

PDP1 is inherited in an autosomal recessive mode therefore, in order to be affected, the animal must inherit two copies of the gene, one from each parent. Dogs without any copies of the diseased gene or carriers with one copy of the PDP1 deficiency form of the gene will be clinically normal but the carrier will pass the affected gene to approximately half the offspring. (from VetGen website)

Ectropion and Entropion

Ectropion and entropion in dogs are both conditions that can affect a dog's eyelids. They have opposite symptoms: dogs who have ectropion have eyelids that roll outward, whereas dogs with entropion have eyelids that curve inward. Both eyelid changes are problematic for the cornea: with entropion, the lid rubs against the cornea, causing irritation; and with ectropion, the cornea is exposed and can easily become irritated. Discover more about why these conditions occur, their symptoms, and treatment options.

Causes of Ectropion and Entropion in Dogs

Both of these eye conditions are heavily linked to genetic factors, and some breeds are predisposed. Entropion is common among Retrievers, Spaniels, Great Danes, many terriers, and Bulldogs. Among others, the following breeds are prone to developing ectropion: Basset Hounds, Bulldogs, Retrievers, Spaniels, Cocker Spaniels, and Bloodhounds. Often, when the conditions are inherited, the symptoms are seen when dogs are a year or younger.

Other causes of ectropion include trauma to the eye, complications from treatment of entropion, and fatigue. It can also be a result of hypothyroidism. Entropion can occur as the result of other diseases, as well as genetic causes.

Symptoms

With both ectropion and entropion, you'll observe that your dog's eyes appear red and irritated. The main observable symptom will be the dog's eyelids: if they curve inward, this is a symptom of entropion, and if they curve outward, this is a symptom of ectropion.

Other symptoms of ectropion include discharge, watery eyes, and conjunctivitis. With entropion, some of the common symptoms are watery eyes, conjunctivitis, and pain, which will result in the dog rubbing at their eyes with their paws. Watch also for the hairs by the eye to be wet and matted down as a result of the excessive tearing and discharge.

Treatment Options

Ectropion is the more mild condition, and can often be managed with eye drops, which keep the eye moist, and ointments. In some severe cases, surgery may be helpful in correcting the problem.

Entropion can be treated with surgery, with ointments and drops often used both before and after. The surgery

will remove part of the eyelid, tightening it so that it will fit properly, and not roll outward. Note that one of the big risks of this surgery is removing too much tissue, causing ectropion to develop. Often, the surgery will be done in two phases to prevent that outcome.

With both entropion and ectropion, the prognosis for the dog post-treatment is very good. (From Wikipedia)

Canine Hip Dysplasia

Normal Hip Anatomy

In the normal anatomy of the hip joint, the root (the thigh bone) is connected to the pelvis at the hip joint. The almost spherical end of the femur head (the caput, or caput ossis femoris) fits into the acetabulum (a concave socket located in the pelvis). The bony surfaces of the femur head and of the acetabulum are covered by cartilage. While bones provide the strength necessary to support body weight, cartilage ensures a smooth fit and a wide range of motion. Normal hip function can be affected by congenital conditions such as dysplasia, discussed in this article, trauma, and by acquired diseases such as osteoarthritis and rheumatoid arthritis.

Dysplastic hip anatomy

In a hip suffering from dysplasias, two things are commonly abnormal. First, the caput is not deeply and tightly held by the acetabulum. Instead of being a snug fit, it is a loose fit, or a partial fit. Secondly, the caput or acetabulum are not smooth and round, but are misshapen, causing abnormal wear and tear or friction within the joint as it moves.

The body reacts to this in several ways. First, the joint itself is continually repairing itself and laying down new cartilage. However, cartilage repair is a relatively slow process, the tissue being avascular.

So the joint may suffer degradation due to the abnormal wear and tear, or may not support the body weight as intended. The joint becomes inflamed and a cycle of cartilage damage, inflammation and pain commences. This is a self-fueling process, in that the more the joint becomes damaged, the less able it is to resist further damage. The inflammation causes further damage. The bones of the joint may also develop osteoarthritis, visible on an X-ray as small outcrops of bone, which further degrade the joint.[2]

The underlying deformity of the joint may get worse over time, or may remain static. A dog may have good X-rays and yet be in pain, or may have very poor X-rays and have no apparent pain issues. The hip condition is only one factor to determine the extent to which dysplasia is causing pain or affecting the quality of life. In mild to moderate dysplasia it is often the secondary effects of abnormal wear and tear or arthritis, rather than dysplasia itself, which is the direct causes of visible problems.

Causes and effects

A Labrador Retriever standing with hind legs close together to compensate for hip dysplasia.

In canines, it can be caused by a femur that does not fit correctly into the pelvic socket, or poorly developed muscles in the pelvic area. Large and giant breeds are most susceptible to hip dysplasia (possibly due to the BMI of the individual animal[3]), though, many other breeds can suffer from it. For a list of top 100 breeds affected, by percentage, visit the OFA Here: http://www.offa.org/stats_hip.html.

To reduce pain, the animal will typically reduce its movement of that hip. This may be visible as "bunny hopping", where both legs move together, or less dynamic movement (running, jumping), or stiffness. Since the hip cannot move fully, the body compensates by adapting its use of the spine, often causing spinal, stifle (a dog's knee joint), or soft tissue problems to arise.

The causes of hip dysplasia are considered heritable, but new research conclusively suggests that environment also plays a role.[5] To what degree the causality is genetic and what portion environmental is a topic of current debate. Environmental influences would include overweight condition, injury at a young age, overexertion on hip joint at a young age, ligament tear at a young age, repetitive motion on forming joint (i.e. jogging with puppy under the age of 1 year). As current studies progress, greater information will help provide procedures to effectively reduce the occurrence of this condition.

In dogs, the problem almost always appears by the time the dog is 18 months old. The defect can be anywhere from mild to severely crippling, and can eventually cause severe osteoarthritis.[6]

It is most common in medium-large pure bred dogs, such as Newfoundlands, German Shepherd Dogs, Retrievers (such as Labradors, Tollers, or Golden Retrievers), rottweilers and mastiffs, but also occurs in some smaller breeds such as spaniels and pugs and occasionally. (From Wikipedia website)