**Transcript:**

**Glaucoma in Pets**

Hi, this is Dr. Karen Becker, and today we’re going to discuss glaucoma, which is increased intraocular pressure or increased pressure within your pet’s eye. The cells of the eye produce a clear fluid called aqueous humor that provides nutrients to tissues inside the eye and also helps to maintain the eye’s shape. Basically, it’s a fluid-filled ball. The aqueous humor is fluid inside the eye whereas tears are the fluid that, of course, lubricates the outside of the eye, the cornea.

The aqueous humor drains through a kind of sieve in the eye out into the bloodstream. And a good balance of aqueous production and drainage is what keeps the pressure inside the eye normal. If the drain becomes clogged, either partially or completely, then the fluid production continues and the pressure will build up inside the eye. That’s the definition of glaucoma. The increasing eye pressure, if left untreated, will cause the eye to enlarge. It will also misshape the eye and cause irreversible blindness.

**Two Types of Glaucoma in Pets**

Glaucoma is either primary or secondary in pets. Primary glaucoma is inherited. It’s very rare in cats but it does occur in many breeds of dogs, including the Cocker Spaniel, Basset Hound, Chow, Jack Russell, Shi Tzus and Siberian Huskies. Primary glaucoma typically starts in one eye, but in most cases it will eventually affect both of the eyes.

Secondary glaucoma occurs with other eye diseases that inhibit drainage of the aqueous humor inside the eye. These diseases include inflammation of the eye (which is called uveitis), advanced cataracts, cancer of the eye, lens displacement, and chronic retinal detachment.

Secondary glaucoma in cats is almost always a result of chronic uveitis. Needless to say, increasing pressure inside the eye causes pain. The pressure can get much higher in dogs and cats than it does in humans. We can assume that this means that glaucoma is probably much more painful for pets than it would be for you.

**The Signs of Glaucoma in Pets**

The pain is felt as a headache most likely. In fact even up to a migraine status of a headache, but as most of you know, it can be difficult to tell when your dog or cat is hurting. You may notice that your pet does not want to play, is irritable, maybe his appetite is off. You may also notice that dogs will head press or rub or paw at his eye or face. Sometimes, they rub their faces against furniture or another object in your home. Some pets will have fluttering of the eyelid, even some squinting, or even holding their eyes closed.

Another sign is a dilated pupil in the affected eye. If you see one pupil being bigger than another, you need to be suspicious of glaucoma. Glaucoma typically strikes one eye at a time. If you notice that you
are seeing one eye bulge or looks a little different, you should be suspicious of glaucoma occurring and, of course, make an appointment with your veterinarian.

Needless to say, loss of vision is another symptom and oftentimes what will bring patients to the veterinarian. Unfortunately, permanent blindness can occur within a matter of hours in cases of rapidly developing glaucoma, where the pressure becomes very high very quickly.

**Diagnosis and Treatment of Glaucoma in Pets**

Often, by the time the pet owner realizes that there’s a problem with glaucoma and in terms of a diagnosis occurring in one eye, oftentimes vision is already gone, which means the pet has already gone blind by the time that the pet presents to the veterinarian. Loss of vision in one eye is not oftentimes obvious because, of course, cats and dogs can compensate very well with the good eye. Sometimes, you don’t even know that they’re blind.

Treatment in this case involves relieving pain caused by the blind eye and trying to prevent or halt the progression of disease in the other eye. A stretched or enlarged eye is obviously a symptom, but again, by the time most pet owners notice that there could be some slight bulging or the eye could be a little bit bigger, the dog is oftentimes already blind.

What’s very important is to determine why the animal has the glaucoma occurring in the first place, because treatments and prognoses differ. If your vet suspects glaucoma, unless he or she is an expert in eye diseases and has the specialized ophthalmic equipment, the next step is to visit the veterinary ophthalmologist – the sooner the better in most cases.

A veterinary ophthalmologist uses specialized tools and equipment that can determine what kind of glaucoma is occurring in your pet and, of course, potentially the root cause. In the case of secondary glaucoma, it’s really important that you identify and treat the underlying cause whenever possible. Oftentimes, an eye with glaucoma looks normal to the pet owner, but on closer inspection and with the right tools, sometimes veterinarians can discern if the eye is cloudy in the cornea or bloodshot or has some secondary changes.

Treatment depends on the cause and severity of the disease, but the goal, of course, is to remove the pressure in the eye as quickly as possible to help reduce the production of the aqueous humor and to increase drainage in the affected eye. There are a number of medications used to treat glaucoma. Some of them are used topically in the pet’s eye and some of them are given orally. Unfortunately, medical treatment of the condition in pets is not nearly as successful as it is in people.

Long term control of primary glaucoma in a blind eye is usually, unfortunately, involves removing the eye, which provides the very best relief for the dog. Obviously, slowing degenerative changes is a good way to help reduce the likelihood of glaucoma occurring. Antioxidants such as beta-carotene, vitamin E and C, as well as nutraceuticals such as lutein, astaxanthin, and rutin can all be used to reduce the amount of damage that occur to the cells of the eye.

**What You Can Do to Prevent Glaucoma in Pets**
Reducing stressors in your pet’s life is also important in order to help manage the oxidative damage that’s occurring throughout the whole body, including your pet’s eyes. Eliminating pressure to your dog’s neck is also important, because we don’t want to increase intercerebral pressure or intraocular pressure through any type of tight collaring or harnessing system. We really recommend that any dog that has glaucoma – or if you have a breed that could be at risk of glaucoma – that you leash your pet with a harness that fits around his torso versus anything that’s around the neck.

For aging pets and at-risk breeds, we recommend that you proactively monitor your pet’s eye pressure at your veterinarian’s biannual veterinary wellness exam. Oftentimes, identifying early subtle pressure changes that can be addressed medically before glaucoma crisis occurs is the very best way to ward off a fulminant glaucoma crisis.