

## **Entropion:**

Entropion is an uncomfortable or painful condition in which the animal's eyelids roll inward, allowing the eyelashes (or other hair) to rub against the cornea and irritate it. The upper and/or lower eyelids can be involved, and the condition can occur in either one eye or both.

### **Signs**

An animal with entropion will squint and have an excessive amount of tears coming from the affected eye. Some animals will be sensitive to light and will rub at their eyes, particularly when they're outside. Some animals will produce a mucous-like discharge from the eyes. Flat-faced dog/cat breeds, with entropion that involves the inside corner of the eyes, may not show any discomfort -- simply because of their facial structure. In some animals, entropion is never more than a minor annoyance, but in others it can cause painful ulcers and erosions that cause scarring and affect vision. That level of entropion needs surgical correction.

### **Causes**

While any dog can have entropion, there is often a genetic factor. When caused by genetics, entropion can be seen well before a dog's first birthday. Predisposed dog breeds include the Boxer, Bull Mastiff, Cavalier King Charles Spaniel, Chesapeake Bay Retriever, Chow Chow, Cocker Spaniel, English bulldog, Golden Retriever, Great Dane, Irish Setter, Irish Setter, Labrador Retriever, Poodle, Pug, Shar Pei, Springer Spaniel, and St. Bernard. Selective breeding for specific traits (e.g., skull formation, skin folds on the face, and prominent eyes) are thought to be contributing factors to genetic causes, but are most likely not the only genetic base. Selective breeding may have simply exaggerated entropion in breeds that were already prone to it. Entropion can also occur as a secondary condition resulting from scarring of the eyelid, infection, corneal spasms and pain, trauma, or nerve damage. Sometimes it happens after the eyelids lose their normal neurologic function.

### **Diagnosis**

Your veterinarian can diagnose entropion through an ocular exam. A local anesthetic is usually used, to make the examination easier on the animal. Because it's important to determine whether or not there is a corneal ulcer secondary to the entropion, a fluorescein dye may also be used. The fluorescein will stick to damaged parts of the cornea, and show as a bright green area.

### **Treatment**

Medical treatment with antibiotic ointments can decrease damage to the cornea, but it cannot resolve the entropion itself. To fix the eyelid, surgery is needed. If the entropion is significant enough to warrant treatment, the excess skin of the outer lids can be removed in a simple surgery called *blepharoplasty*. (Essentially, this is plastic surgery, so you can tell everyone your pet is having "his lids done.") Excess skin that causes skin folds is also removed, and the eyelids are tightened. Typically, the entropion does not return after surgery, unless the case is quite severe. Recurrence is more common in Shar Peis, due to the breed's excessive facial skin folds. The sutures should be removed in about 10 to 14 days. Some dogs will need to wear an Elizabethan collar to prevent them from rubbing at their sutures.

Young puppies generally only have a minor procedure called lid tacking, rather than the full blepharoplasty. Permanent surgery like the blepharoplasty isn't typically done in puppies who are less than 6 months old, because it's not possible to predict what the (adult) head conformation will be, and the full surgery may not be needed. In lid tacking, temporary sutures are used to roll out the eyelids, and keep the puppies' eyes healthy until these puppies mature and grow into their adult facial features. Entropion can be seen in Shar Peis as young as two or three weeks old, and these Shar Pei puppies do very well with the temporary eyelid tacking.

If the animal has corneal ulcers, those will need to be treated too. Untreated corneal ulcers may scar excessively, impairing vision. Treatment will reduce the incidence of scarring. Treatment usually involves the use of antibiotic ophthalmic ointment. (To administer ophthalmic ointment, place your thumb directly below the eyelid and very gently push, which will cause the lower eyelid to pull away from the eye. Put the ointment in the opened lower lid.)

Dogs with the inherited form of entropion should not be used for breeding. See the recommendations from the Canine Eye Registration Foundation (CERF) for dogs with entropion. Dogs with surgically corrected entropion cannot be shown in conformation classes at dog shows.

### **Prognosis**

Prognosis is excellent if surgery is performed before the cornea is damaged. If the cornea is damaged, then the prognosis depends on the type and severity of damage.