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Popular Article

# Cherry Eye in Dogs: What It Is, Why It Happens, and How to Treat It

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## Introduction

For many dog-owners, spotting a bright red, cherry-like lump at the inner corner of a dog's eye can be alarming. This condition, commonly called as "cherry eye," refers to the prolapse of the third eyelid gland (also known as the gland of the nictitating membrane) in dogs (Figure 1 a and b). Although it looks dramatic, the condition is treatable. Veterinary studies are increasingly shedding light on its causes, best management practices and outcomes. In this article, we will explore what cherry eye is, its breed predisposition, what researches say about its causes (including the recent genetic studies), how it is diagnosed and treated, its post-operative recovery and prognosis, and what owners can do to support their dog's eye health.

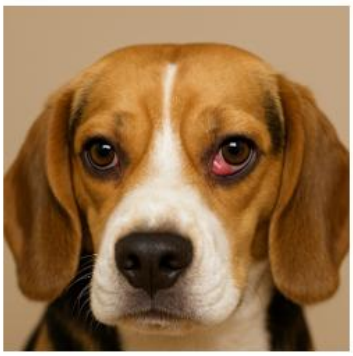

**Figure 1a.** Cherry eye in a Beagle- the red bump in the dog's left eye.

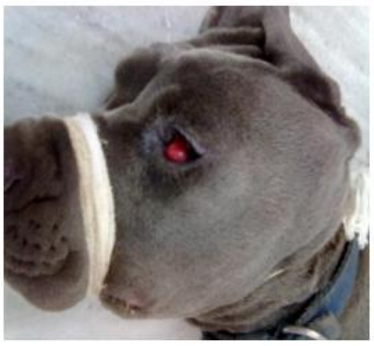

**Figure 1b**. Cherry eye in an American Bully's left eye.

## What Is Cherry Eye?

In dogs, in addition to the upper and lower eyelids, there is a third eyelid (the nictitating membrane)

located on the medial (inner) side of the eye. Within that third eyelid is a tear-producing gland, sometimes called the accessory lacrimal gland. When that gland is displaced or prolapsed out of its normal anatomical location, the red tumour-like mass becomes evidently visible — hence the term "cherry eye." The gland's displacement often appears as a red or pink rounded mass near the inner corner of the eye (medial canthus). It is not a tumour, rather the gland tissue protruding out. Because the gla nd contributes significantly to tear film production (some estimates suggest 25–30% or more of basal & reflex tear production), its displacement or removal can have long-term consequences for ocular surface health (Levitt *et al*., 2023; El-Kasapy, 2023).

**Why Does Cherry Eye Occur?**

**Anatomical and Breed Predisposition**

A weak or abnormal connective tissue anchoring the gland is considered a major anatomical risk factor (Arora *et al*., 2023).

Historically, cherry eye has been associated with certain breeds (especially brachycephalic or flat-faced breeds) and young dogs (often under 1 year of age). For example, in a study of ten dogs undergoing treatment, younger animals (mean age ~ 9–11 months) were affected (Arora *et al*., 2023). Breed predisposition is widely reported, although exact percentages vary with study, breeds such as the English Bulldog, American Bulldog, Beagle, Cocker Spaniel, Shih Tzu, Lhasa Apso, and other brachycephalic types are often cited (Arora *et al*., 2023; El-Kasapy, 2023). The condition may be unilateral (one eye) or bilateral (both eyes) — and in some cases, an eye unaffected initially may become affected later (PetMD, 2022).

**Genetic and Molecular Insights**

In recent years, genomic studies have provided novel insight into underlying predisposition. For example, a genome-wide association study (GWAS) of 12 dogs with cherry eye versus hundreds of brachycephalic controls found 52 SNPs exceeding chromosome-level significance, and 16 exceeding genome-wide significance. The study identified a region on canine chromosome CFA3 (positions ~15.6–15.9 Mb) containing genes such as KIAA0825, FAM172A, and NR2F1, the latter of which is linked to ocular development (Zeng *et al*., 2025). Functional enrichment of 240 genes revealed involvement in neurodevelopment and ocular development pathways. Another study described the insertion of the retrogene FGF4L1 as associated with prolapsed gland of the third eyelid in dogs, highlighting the potential role of developmental connective tissue structures (Freyer *et al*., 2024). Collectively, these findings support the hypothesis of a heritable predisposition and likely multiple genes and pathways involved, instead of simple environmental cause.



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**Additional Contributing Factors**

Inflammation of the third eyelid, trauma, or conjunctival irritation may exacerbate or precipitate gland prolapse. Chronic irritation can weaken the connective tissue support; some authors also suggest that increased orbital or eyelid anatomical pressure (in brachycephalic breeds) may play a role (El-Kasapy, 2023). However, the fundamental predisposition appears structural/genetic rather than strictly acquired.

**Clinical Signs and Diagnosis**

**What Owners Observe**

Typical clinical signs for cherry eye include:

- A distinct red or pink mass at the inner corner of the eye (medial canthus) — the visible gland.
- Eye discharge (often clear to mucoid), tearing (epiphora), irritation or pawing at the eye.
- The third eyelid may be more visible and may appear swollen or thickened.
- In severe cases, secondary ocular surface disease (such as conjunctivitis or corneal ulcer) can occur (Sebbag *et al*., 2023). It is important to note that the visible protrusion itself is not painful per se, but the secondary effects (irritation, dry eye) can lead to discomfort (PetMD, 2022).

**Veterinary Examination and Diagnosis**

A veterinarian will perform a clinical ophthalmic examination, including:

- A detailed history including breed, age of onset, unilateral vs bilateral involvement and prior ocular trauma or disease.
- Visual inspection of the protruding gland and assessment of the third eyelid mobility.
- Schirmer's tear test (STT) to assess lacrimal (tear) production; baseline STT values in dogs are typically ~15-25 mm/min (El-Kasapy, 2023).
- Fluorescein dye test to assess for corneal ulcers or epithelial defects (Sowmya *et al*., 2024).
- Possibly intraocular pressure measurement (tonometry) and evaluation for underlying conjunctivitis or ocular surface disease.

  Accurate diagnosis is key — sometimes the protrusion can be mistaken for a tumour or conjunctival fold, so proper identification of the gland is essential.



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**Treatment Options**

**Why Is Treatment Important?**

Although the gland is not malignant and the visual appearance may be the primary concern initially, failing to treat the condition can lead to long-term issues: decreased tear production, ocular surface damage, dry eye (keratoconjunctivitis sicca, KCS), chronic conjunctivitis and corneal ulceration (Levitt *et al*., 2023; El-Kasapy, 2023). Studies have shown that dogs who had the gland excised (rather than repositioned) had significantly higher risk of developing KCS later in life (Levitt *et al*., 2023). Therefore, modern veterinary ophthalmology favours gland repositioning (rather than removal) when feasible.

**Surgical Techniques: Repositioning vs Excision**

- **Morgan's Pocket Technique (Burial Technique):** One of the most widely used surgical methods. A pocket is created in the third eyelid's conjunctiva (above and below the gland), the gland is tucked into the pocket, and the conjunctival incisions are sutured over the gland so it remains in correct anatomical location (Yaygıngül *et al*., 2020; Arora *et al*., 2023).
    - The pocket technique preserves the gland and its duct system, and thereby helps maintain tear production. El-Kasapy (2023) reported that dogs treated with pocket technique regained near-normal tear production within ~2-3 weeks and one month post-surgery their STT values approximated normal levels.
    - Arora *et al*. (2023) compared Morgan's pocket with complete gland excision in ten dogs: no recurrence was observed in the pocket-technique group, whereas excision carried risk of KCS.
    - A 2025 Brazilian study reiterated the high success rate and ease of application of Morgan's pocket technique (Yener *et al*., 2025).
- **Anchoring Techniques:** Variations include anchoring the gland to peri-orbital tissues or the ventral rectus muscle insertion (Sapienza *et al*., 2014). These aim to secure the gland in place but can carry higher risk of restricted mobility of the third eyelid (Sowmya *et al*., 2024).
- **Excision (Removal) of the Prolapsed Gland:** Historically, removal was common. However, because the third eyelid gland provides a large portion of tear production, removal is now considered sub-optimal unless repositioning is not possible. El-Kasapy (2023) documented that excision reduced tear production by ~38-44% and those dogs are at higher risk of KCS.



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**Postoperative Care**

After surgery, typical care includes:

- Elizabethan collar (cone) to prevent rubbing/scratching the eye.
- Topical antibiotics or anti-inflammatory eye drops/ointments as prescribed.
- Instructions to avoid swimming, rough play or other trauma during healing.
- Monitoring of tear production (STT) and ocular surface.
- Follow-up examinations to detect recurrence or onset of dry-eye changes.

**Prognosis and Long-Term Considerations**

When treated appropriately (especially with gland repositioning), the prognosis is very good. Most dogs return to normal ocular health within weeks and lead normal lives without major issues.

However, there are several long-term considerations:

- **Dry eye (KCS):** Because the third eyelid gland contributes significantly to tear film, dogs in which the gland removal was done (or where the gland function is compromised) are at higher risk of developing KCS later in life (Levitt *et al*., 2023).
- **Bilateral involvement:** Even when one eye is treated, the contralateral eye may become affected later (PetMD, 2022). Owners should monitor for signs.
- **Corneal damage or ulceration:** In cases with delay in treatment, chronic irritation or tear deficiency may lead to corneal ulceration — a more serious issue (Sebbag et al., 2023).
- **Recurrence:** Although low with modern techniques (e.g., 3–5% in some studies), recurrence can happen — especially if the surgical technique was imperfect, post-op care was not adhered to, or the dog rubbed the eye (El-Kasapy, 2023).

**Prevention and Owner Guidance**

Because cherry eye appears to have a strong genetic and anatomical basis, true prevention is limited. However, dog owners can take the following steps:

- **Early detection:** Regular veterinary check-ups for breeds at risk (brachycephalic, young dogs) can catch early gland prolapse.
- **Prompt veterinary attention:** If a red mass appears in the eye, especially in a predisposed dog, early intervention increases the chances of uncomplicated correction.
- **Protecting the eyes:** Minimising ocular trauma (e.g., from rough play, foreign bodies, scratching) may reduce secondary aggravation.



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- **Choosing a responsible breeder:** Breeders of predisposed breeds may aim to avoid breeding dogs with a history of cherry eye, although specific heritability parameters are still being elucidated (Zeng *et al*., 2025).
- **Postoperative vigilance:** Owners should adhere to veterinary instructions, prevent eye rubbing, and watch for signs of the other eye becoming affected.

**Take-Away for Dog Owners**

Owners of dog breeds that are at risk of getting a cherry eye (e.g., English Bulldog, Beagle, Shih Tzu, Lhasa Apsos), must keep an eye out for any unusual redness or protrusion of the third eyelid gland. If the condition is encountered, appointment with a veterinary ophthalmologist should be arranged without any delay. Repositioning techniques (such as the Morgan pocket method) rather than removal of the gland should be enquired for. Postoperative advice must be followed closely (including limiting eye rubbing, using cones/collars if required, and applying eye drops). With timely care, the affected dog can continue a normal, happy life.

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