

# The blocked tear duct: Causes, symptoms, and treatments.

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## Introduction

The human eye is a marvel of biological engineering, and its various components work in harmony to provide us with vision. One such component is the tear drainage system, which ensures that our eyes remain moist and free from foreign particles. At the heart of this system is the nasolacrimal duct. When this duct becomes obstructed, it can lead to a condition known as Naso Lacrimal Duct Obstruction (NLDO).

## Tear drainage system

Tears are produced by the lacrimal glands located in the upper outer quadrant of our eyes. These tears flow across the surface of the eye, providing lubrication, nourishment, and protection. Once they've served their purpose, tears drain into tiny openings called puncta, located on the inner corners of the upper and lower eyelids. From there, they travel through the canaliculi, into the lacrimal sac, and finally down the nasolacrimal duct, which empties into the nasal cavity [1].

## Nasolacrimal duct obstruction

NLDO occurs when there's a blockage in the nasolacrimal duct, preventing tears from draining out of the eye properly. This can result in excessive tearing (epiphora) or even an infection known as dacryocystitis.

## Causes

**Congenital obstruction:** Some babies are born with a membrane at the end of the nasolacrimal duct that prevents tears from draining. This is the most common cause of tear duct obstruction in infants, and it often resolves on its own within the first year of life.

**Age-related changes:** As we age, the puncta can become narrower, leading to partial or complete obstruction.

**Infections or inflammation:** Chronic infections or inflammation of the eyes or nose can cause scarring and narrowing of the duct.

**Trauma:** An injury to the face can damage the tear drainage system.

**Tumors:** Rarely, a tumor near or around the nasolacrimal duct can cause an obstruction.

**Other causes:** Previous surgeries, systemic diseases, or certain medications can also contribute to NLDO [2,3].

## Symptoms

Excessive tearing, mucus or pus discharge from the eyes, redness and swelling of the inner corner of the eye, pain or tenderness around the nose or eyes, recurrent eye infections.

## Diagnosis

A comprehensive eye examination by an ophthalmologist or optometrist can diagnose NLDO. They may also perform a dye disappearance test, where a dye is placed in the eye and its drainage is observed [4].

## Treatment

**Massage:** For infants with congenital NLDO, massaging the area between the eye and nose can help open the membrane blocking the duct.

**Antibiotics:** If there's an infection, antibiotic eye drops or ointments may be prescribed.

**Dilation, probing, and irrigation:** This is a minor procedure where the doctor dilates the puncta and inserts a thin probe to clear any obstruction. The duct is then flushed with a saline solution.

**Balloon catheter dilation:** A balloon is inserted into the duct and inflated to widen it.

**Dacryocystorhinostomy:** In cases where other treatments fail, a surgical procedure to create a new tear drainage pathway may be necessary.

**Intubation:** A silicone tube may be temporarily placed in the duct to keep it open and allow for proper drainage [5].

## Conclusion

Nasolacrimal duct obstruction, while often a benign condition, can cause discomfort and recurrent infections. Early diagnosis and appropriate treatment are crucial to prevent complications and ensure the health of the eyes. If you or someone you know experiences symptoms of NLDO, it's essential to consult with an eye care professional for proper guidance.

## References

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