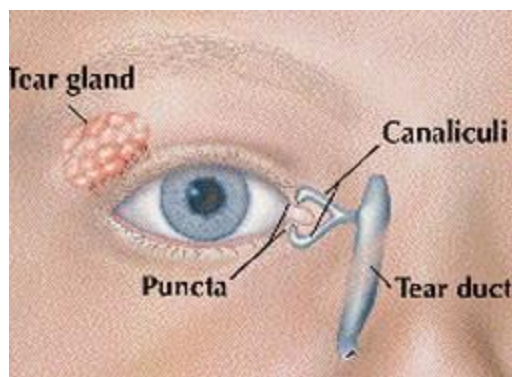


Nasolacrimal Duct Obstruction

Tears are made in the lacrimal gland, which sits in the upper outer corner of the eye socket. Normally, tears coat the eye to keep it moist and then drain into tiny openings in the eyelids called puncta. Each eyelid (upper and lower, near the nose) has one punctum, which looks like a small dot. From there, tears travel through small channels (canaliculi) into the **nasolacrimal duct**, which drains into the nose.

When this system is blocked, tears cannot drain properly. This is called a **nasolacrimal duct obstruction (or tear duct obstruction)**. Instead, the tears build up on the eye, causing watery eyes and sometimes discharge.

Figure 1: Tears normally drain through the puncta into the nasolacrimal (tear) duct and then into the nose.



What causes nasolacrimal duct obstruction in children?

The most common cause is a thin membrane at the end of the duct (called the valve of Hasner). This is present in about half of newborns but usually opens on its own shortly after birth. Other causes include:

- Missing puncta (upper or lower eyelids)
- Narrow tear duct system

- Infection
 - Incomplete development of the duct where it fails to connect with the nose
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How common is it?

More than 5% of infants have symptoms of a blocked tear duct in one or both eyes. Most (about 90%) clear on their own during the first year of life.

What are the signs and symptoms?

Blocked tear ducts usually show up in the first month of life. Signs include:

- Tears pooling on the eye and spilling onto the cheek
- Crusting or yellow-green discharge on eyelids and eyelashes
- Eyelids stuck together, red, or swollen

Crusting and discharge happen because normal bacteria on the eyelid are not being “washed away” through the duct. In rare cases, a more serious infection called **dacryocystitis** can develop.

Can a tear duct block off and on?

Yes! Symptoms can come and go. They often get worse when a child has a cold, allergies, or nasal congestion, because swelling inside the nose makes it harder for tears to drain. Wind and cold weather can also increase tearing.

How is it diagnosed?

A history of tearing and discharge starting very early in life strongly suggests a blocked tear duct. An ophthalmologist can confirm the diagnosis in the office. It is important to check for less common but serious causes of tearing, such as [childhood glaucoma](#).

What is the treatment?

Most cases go away on their own within the **first year of life**. In the meantime, treatments may include:

- **Tear duct massage (Crigler massage):** using firm downward pressure over the duct to help push out mucus/tears and open the membrane.
- **Antibiotic eye drops or ointment:** used only if there is significant discharge or crusting. These help control infection but do not open the duct. Long-term use is discouraged.

If the blockage does not improve after age **12 months**, or if symptoms are severe, a procedure such as **probing** may be recommended.

Tear duct massage (Crigler massage)

Parents can do this at home. Use firm pressure with a finger in a downward motion over the inner corner of the eye (see Figure 2). This helps push out mucus/tears and may open the blocked membrane.

Figure 2: Tear duct massage is performed with firm downward pressure.



Tear duct probing

Probing is a simple procedure where a thin wire-like probe is passed through the tear duct into the nose to open the blockage. Sometimes the duct is widened further using irrigation, a balloon, or a small tube/stent to help keep it open.

- **Infants under 1 year:** some ophthalmologists may perform probing in the office with numbing drops.
- **Older children:** general anesthesia in the operating room is usually needed for safety.

Probing is usually very successful. If the first attempt does not work, it can often be repeated. Rarely, a more complex surgery (dacryocystorhinostomy, DCR) may be needed to create a new drainage pathway.

Complications: dacryocystitis

This is a rare but serious infection of the tear duct. Signs include a painful, red, swollen bump near the duct with yellow-green discharge, along with fever or fatigue. **This is a medical emergency** and requires antibiotics (often by mouth or IV) and sometimes hospitalization.

Dacryocele (or dacryocystocele/amniocele)

If the duct is blocked in both the upper and lower parts, fluid can become trapped, forming a bluish bump near the inner corner of the eye. This often appears in the first 6 months of life and is called a **dacryocele**.

It can be linked with cysts inside the nose, which can cause breathing problems, especially if both eyes are affected. Because of this, early surgery may be needed. If a dacryocele becomes infected (dacryocystitis), IV antibiotics and hospital care may be needed.

Figure 3: Dacryocele in an infant with dacryocystitis.



More information on nasolacrimal duct obstruction can be found at:

[Eyewiki](#)

[American Academy of Ophthalmology](#)

[American Academy of Pediatrics](#)

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