



CHILDREN'S EYE HEALTH

NASOLACRIMAL (TEAR) DUCT OBSTRUCTION

By Dr Christolyn Raj

What is a tear duct obstruction?

Tears are made in the lacrimal gland and drained through the nose via a tear drainage system (Figure 1).

An obstruction anywhere along this pathway will stop tears from draining naturally through the system. If the tear duct is blocked, there will be a backflow of tears and discharge from the eye. This may affect one or both eyes.

Tear duct obstruction is a very common condition affecting infants and most (up to 90%) will spontaneously recover by 12 months of age.

What are the common causes of tear duct obstruction in children?

A congenital tear duct obstruction occurs when a membrane at the end of the tear duct fails to open normally. Other less common causes include:

- absent puncta (openings) in the upper and/or lower eyelids
- a narrow tear duct system
- infection
- nasal bone displacement

What are the common symptoms of tear duct obstruction in children?

Common signs and symptoms of a blocked tear duct include:

- a constant runny or watery eye
- whitish discharge from the corner of the eye
- encrusting on eyelids and eyelashes
- a red swollen mass on the side of the nose (inflamed tear sac)
- a red and swollen eye (less common)
- irritation

A blocked tear duct may also be associated with symptoms of a coral (a red, inflamed, swollen and tender sore or ulcer that may drain pus).

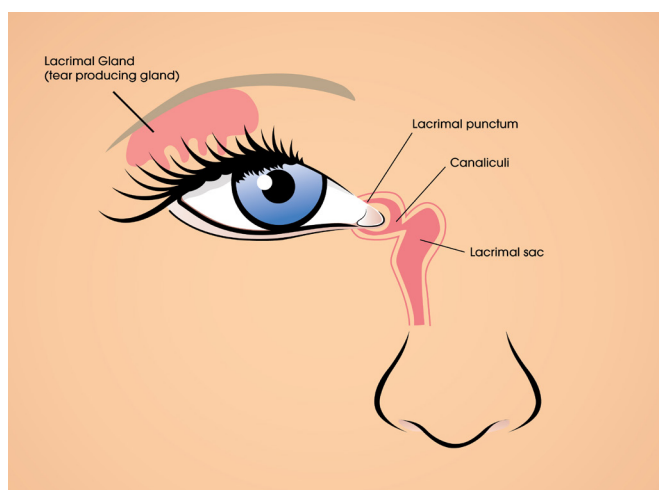


Figure 1: The lacrimal gland and nasolacrimal (tear) duct

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How is a tear duct obstruction assessed and diagnosed?

This is best done by a paediatric ophthalmologist. A history of the watery eye is important for diagnosis. Further testing, such as a topical dye test, may be required to confirm the diagnosis. It is also important to complete a thorough eye exam to rule out other conditions that can appear as a blocked tear duct, such as congenital glaucoma.

How can a blocked tear duct be treated?

In the majority of cases, treatment is not required as the obstruction may spontaneously resolve. You may be educated on hydrostatic pressure massage that can assist in opening the duct. In some instances, a short course of topical antibiotics may be prescribed if an eye infection is present. However, this does not help resolve the obstruction. If the tear duct remains blocked after one year of age, a nasolacrimal duct probing may be performed.

What is involved in nasolacrimal duct probing?

This is usually performed under a general anaesthetic in a hospital as a day procedure. A thin metal wire probe is passed along the tear duct passage to bypass the obstruction and widen the passage (Figure 2).

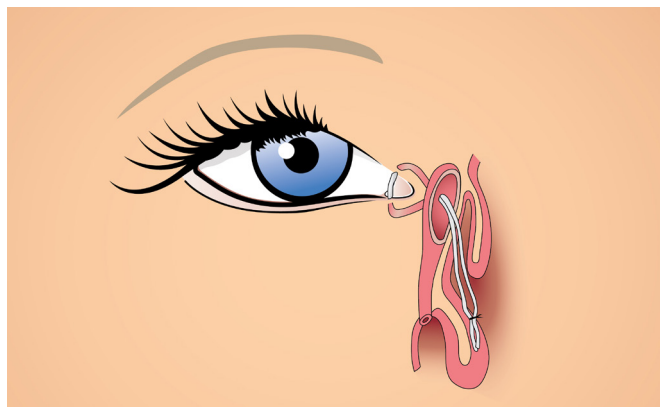


Figure 2: Silicon tubes are used to temporarily keep the tear duct passage open

A special microscope called a nasoendoscope is then used to look at the tear duct and search for any abnormalities in the tear duct passage. In some cases, where the tear duct passage is narrow, temporary silicon tubes may be passed through the tear duct passage to keep the passage open. If these silicon tubes are used, a follow-up procedure 2 months later will be required to remove the tubes.



Dr Christolyn Raj is an experienced ophthalmologist with considerable expertise in cataract surgery, retinal disease and paediatric ophthalmology. She treats paediatric patients at Vision Eye Institute Camberwell.