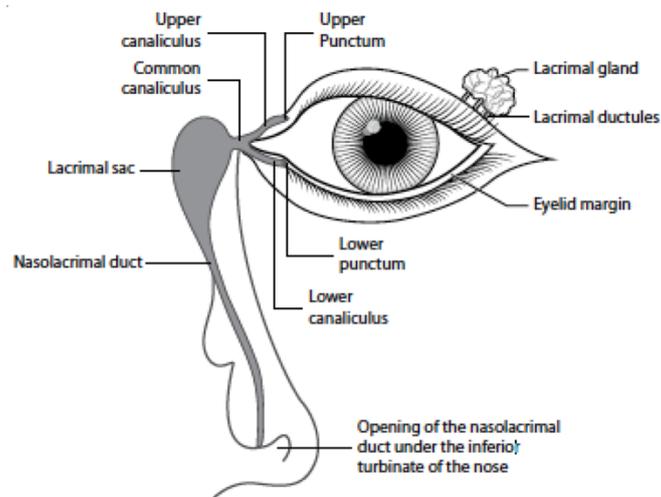


# Congenital Nasolacrimal Duct Obstruction

## The nasolacrimal drainage system

Tears are produced continuously from the lacrimal gland and eyelid margins and are drawn into a small hole in the inner corner of each upper and lower eyelid called the punctum. They lead into small tubes known as the canaliculi, which in turn drain into the lacrimal (tear) sac. This lies under the skin between the corner of your eye and your nose and leads into the nasolacrimal duct which drains into the lower part of the nasal cavity.



## Congenital nasolacrimal duct obstruction: a brief introduction

During the development of a foetus the nasolacrimal duct starts as a cord and gradually becomes a pipe. The last bit of the pipe to open is usually a thin membrane covering the bottom end of the duct as it opens into the nose (the 'valve of Hasner'). In around 20% of infants this membrane has not opened by the time of birth on one or both sides. This is called Congenital (from birth) Nasolacrimal Duct Obstruction (CNLDO). Therefore, the tears cannot drain from the eye and it is very common to see new born babies with a watery or sticky eye. The membrane opens up in most neonates in the first days or weeks of life. However, in some, it can take longer, and they continue to have a watery and sticky eye.

## What are the signs of a congenital nasolacrimal duct obstruction?

There is typically an accumulation of sticky white tears at the inner corner of the eye. Sometimes there is a bit of a swelling on the side of the bridge of the nose, which develops because the lacrimal sac

becomes full of stagnant tears. There may be more profuse discharge if the baby gets a cold. From time to time the obstructed tears may become infected in which case there will be more pus and it might turn a green or yellow colour.

### **What is the treatment for congenital nasolacrimal duct obstruction?**

- Whilst the obstruction is present it can be helpful to massage over the lacrimal sac area. This is found on the side of the bridge of the nose, where a glasses pad would sit. Massage may help to push tears through the obstruction and also may reflux the tears back on to the eye, reducing the likelihood of them getting infected in the lacrimal sac.
- CNLDO will resolve without intervention in 90% of cases within the first year of life. Therefore, usually no surgical intervention is required unless the neonate is getting very frequent infections (green/yellow purulent discharge), or an abscess develops in the nasolacrimal sac.
- Around half of the remaining 10% of babies over the age of 12 months with CNLDO, will get better without intervention between the age of 12 and 24 months. However, by the age of 12 months, the continued watering and stickiness can start to become quite troublesome to the baby and their parents and therefore we usually offer intervention.
- The intervention for a blocked tear duct is a procedure called 'Syringing and Probing'. This requires a short general anaesthetic and passing a metal probe down the tear duct and through the obstruction. This can be done with 'endoscopic guidance', which is looking inside the nose to see that the metal probe emerges from the correct place at the bottom of the nasolacrimal duct.

### **What are the advantages and disadvantages of Syringing and Probing?**

#### Advantages

- Syringing and probing is a relatively quick and safe procedure.
- It successfully overcomes the blockage in around 95% of procedures.

#### Disadvantages

- Syringing and probing requires a general anaesthetic in a very young baby.

- It is possible that the probe will not pass down the tear duct and create what we call a false passage (i.e. a pathway in the wrong the place). As far as we know, false passages heal without any ill-effects, but the blockage of the tear duct has not been resolved.

### **What to expect after syringing and probing**

After syringing and probing you can expect the following:

- There may be a little bit of bleeding from the nose
- There may be a little bit of pain, although this typically goes away very quickly.
- If the procedure has been successful, you can expect the watering and stickiness to resolve almost immediately

### **What other procedures are done for CNLDO?**

- Stenting: occasionally, particularly if repeat syringing and probing is required we pass a silicon stent (a flexible rod) into the tear duct. We leave the silicon stent in place for a few months to try to ensure the duct remains patent and then remove the stent. Some types of stent can be removed in the clinic, while other stents require a further very quick and light general anaesthetic for removal.
- Dacryocystorhinostomy (DCR) surgery: very occasionally, if the tear duct is completely blocked and getting continually infected and cannot be cured with probing, we carry out an operation to directly connect the tear duct sac to the inside of the nose, bypassing the blocked nasolacrimal duct. This is a common procedure in adults with blocked tear ducts, but only occasionally carried out in babies.

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