

LACRIMAL DRAINAGE SURGERY

Lacrimal drainage surgery is performed to relieve symptoms of **watering or mucous discharge** due to obstruction of the lacrimal (tear drainage) system. In some cases, if left untreated, patients with an obstructed lacrimal system can suffer a severe infection with abscess formation (**“acute dacryocystitis”**).

Most cases of lacrimal obstruction occur for unknown reasons.

Known causes include:

- *Congenital malformation* of the lacrimal drainage system
- Severe forms of *conjunctivitis*
- *Some older glaucoma drops or chemotherapy agents*
- *Previous surgery or trauma*

In children, surgery is performed under general anaesthesia, whilst **in adults** surgery can be performed under local anaesthetic with sedation or general anaesthetic depending on the type of surgery being performed. Most patients can go home on the day of surgery.

In children it is usually possible to overcome the obstruction by simple **probing** of the lacrimal system, which takes about 10 minutes. In recurrent cases, **silicone tubes** are usually placed for up to 6 months to expand the lacrimal system to a more normal size. This procedure involves the use of a nasal telescope and usually takes a half to one hour. A newer technique involves the expansion of the lacrimal duct with a balloon (**Balloon Dacryoplasty**). In rare cases, these procedures fail, and **surgical bypass** of the obstructed lacrimal system is required.

In adults the procedure may be performed **endoscopically** (using a telescope to perform surgery up the nose) or via a 1.5 cm (2/3 inch) **skin incision** on the side of the nose near the inner corner of the eye. The decision as to which method is used will depend on a number of factors including:

- The patient's age and medical status
- Patient preference
- The anatomy of the nose on the side to be operated on
- The cause of the obstruction
- Prior trauma or surgery

In brief, the **lacrimal “sac”** is identified and an opening is made in the bone on the side of the nose to allow the sac to be joined directly through to the lining of the nose. A flexible silicone stent may be placed through the tear duct system depending on the specifics of the case. This is usually removed 4-6 weeks later in the rooms. Anti-scarring drugs may be used on the surgical site in some cases. This operation is called **“Dacryocystorhinostomy” (DCR)** and takes approximately 45-60 minutes. Bilateral (both side) surgery can be performed at the same time if necessary.

The specific method of surgery and the reasons for it will be discussed in detail with you prior to your surgery so that you are fully aware of what procedure will be performed.

POST-OPERATIVE CARE

If a skin incision is required, the eye is usually padded until the following day. **Swelling and bruising** is usual after skin surgery but can vary considerably. Factors associated with greater swelling and bruising include increasing age, aspirin and other anticoagulant use and a history of previous surgery.

If a skin incision is used the dressing is removed the morning after surgery unless otherwise instructed. The eye and suture line are bathed with **saline or cooled boiled water** at least twice daily. **Antibiotic drops** are applied to the eye three times daily, and oral antibiotics taken 4 times daily for 5 days. **Crushed ice or frozen peas, cold packs, or cool gel face masks** (available from most chemists) can be applied to the eye for 15 minutes at least 4 times daily for the first 5-7 days. This reduces swelling and bruising and can be continued for as long and as often as it seems to provide some benefit.

Surgery via the nose is not usually associated with swelling or bruising. In addition to the above treatment, a saline nasal spray is used four times daily for 1-2 weeks to reduce nasal congestion and crusting.

Forceful nose blowing is avoided for the first week, as this may precipitate bleeding.

The incision/scar is usually almost invisible to the casual observer from the beginning but may feel slightly thickened or irregular for up to three months. **Severe pain is very rare** after lacrimal surgery – you should notify the hospital or surgeon if you experience more than mild to moderate pain.

Make-up should be avoided until after suture removal. Ask your surgeon when it is safe to return to using it.

Driving can be undertaken once you are happy with the vision and comfort in the eye(s). Patients may fly on commercial airlines as soon as they wish to after surgery.

Patients are advised to **avoid heavy physical activity** (ie bend and lifting, digging, strenuous exercise) for the first week. Walking, reading, watching TV and light domestic duties can be performed when you feel able.

Do not use aspirin or blood-thinning medications for the first 5 days after surgery unless you have discussed this with the doctor prior to surgery.

RISKS AND COMPLICATIONS

Lacrimal surgery is generally safe with few complications if performed properly by an experienced lacrimal surgeon. Potential risks include:

- **Infection** is very uncommon and treatable with oral antibiotics in almost all cases.
- **Nasal bleeding** occurs in many patients, but is minimal in most. More severe bleeding requiring nasal packing and admission to hospital occurs in 1-2% of cases.
- **Surgery is successful in up to 95% of cases** depending on the cause of the watering. If the likely success rate is different in your case the reasons for this will be discussed with you.

LESTER JONES TUBES

In some cases, the lacrimal canaliculi are scarred, absent or non-functional, meaning that standard lacrimal drainage surgery will not work.

In this situation a **permanent bypass tube** is inserted to allow tears to drain through to the nose, bypassing the abnormal canaliculi. These tubes are called **Lester Jones** tubes after their inventor and are made of medical grade Pyrex. The surgeon may place the tube at the time of your DCR or at a subsequent procedure depending on your specific problem. They are placed through a narrow tract which contracts around the tube while it heals. A suture is placed around the tube for 3-4 weeks to secure it while the tract is healing.

In general, the tubes are well tolerated but as in any operation, problems and complications can occur. These can include:

- Air back-flushing into the eye with nose blowing
- Mucous discharge from the nose to the eye
- Blockage of the tube
- Displacement or loss of the tube requiring repositioning or replacement
- Irritation

Your surgeon will explain how to look after the tube and will arrange a regular schedule of review to check and clean the tube as necessary.