

## EPIPHORA (EXCESSIVE TEARING)

### INTRODUCTION

Epiphora, or excessive tearing, is the overflow of tears from one or both eyes. Epiphora can occur all the time or only sometimes. It can be split into two categories. Either too many tears are produced or not enough of the tears are cleared. The following information will focus on tears not being cleared.

### ANATOMY

The part of your body that makes tears is the lacrimal apparatus (See Figure 1). It is a system of tubes and sacs. It begins at the outer corner of your eyes in the lacrimal gland. This is the gland that produces tears. Tears then wash across the surface of the eye from the outer to inner corner, protecting, moistening and cleaning the outer layer of the eye. The upper and lower eyelids each have a single opening near the inner corner. These openings are on slightly raised mounds called puncta (See Figure 2). Each punctum drains tears into a tube called the canaliculus. There is an upper and lower canaliculus. Each of these small tubes drains tears into a larger tube called the common canaliculus. The common canaliculus delivers tears to the lacrimal sac, which is under the inner corner of the eye near the nose. The duct then drains tears from the lacrimal sac into the nose. Tears enter the nasal cavity through an opening near the bottom known as Hasner's valve.

Too much tearing can result from problems that happen anywhere along this path. A common area to see obstruction is in the nasolacrimal duct.

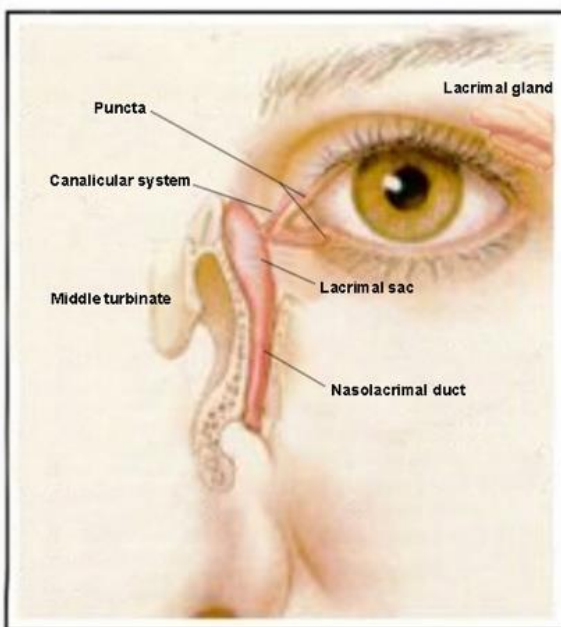


Figure 1. Tears originating from the lacrimal gland cross over the eye into the canalicular system on their way to the nasal cavity

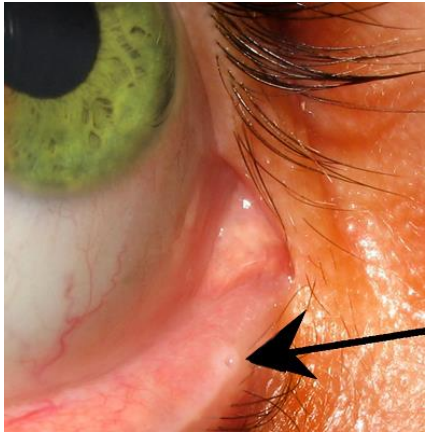


Figure 2. Punctum of the lower eyelid, indicated by the black arrow

### **CLASSIFICATION**

Duct obstruction is either primary or acquired. Primary duct obstruction is the result of an unknown cause. In acquired duct obstruction, blockage can be caused by infection, inflammation, trauma to the face, or surgery.

### **PATHOLOGY**

Primary duct obstruction mostly occurs in middle-aged people. Changes in hormone levels and loss of bone (osteoporosis) are factors that may contribute.

Many forms of bacteria can cause infection and inflammation of the duct. When this occurs, scarring can happen causing either narrowing or total blockage of the duct.

Diseases in which the body attacks its own normal tissue (autoimmune) can cause severe inflammation and narrowing of the duct.

Injury to the eyelids can occur in accidents or during surgery to correct facial deformities. Injury of the duct can lead to scar tissue and blockage.

Lastly, injury to the duct can occur during sinus surgery procedures. Many times, this is recognized at the time of surgery and can be repaired by performing a Dacryocystorhinostomy (See Dacryocystorhinostomy).

### **SYMPTOMS**

Patients with epiphora complain of too much tearing. Many times, the tearing is clear in nature. Some patients complain of too much mucus discharge from the eye, or sticky or crusty discharge in the morning when waking up. Some patients develop infection of the lacrimal apparatus; this is known as dacryocystitis.

It is important to tell your physician if you had recent surgery, such as sinus surgery, or recent trauma to your face. Recent colds or sinus infections are also important. Your physician should be informed if you have any other body-wide symptoms if there is no clear cause for the epiphora. In addition, tell your physician if you are using any eye medications.

## PHYSICAL EXAM

An exam of the eyes often shows either overflow of tears down the cheek or a buildup of tears along the lower lid. In patients who have dacryocystitis, the area between the eye and the nose can be tender. When pressing on the area, pus or mucus may move into the eye. The eye should be examined for dryness, and the eyelid for looseness or other changes.

## WORK-UP

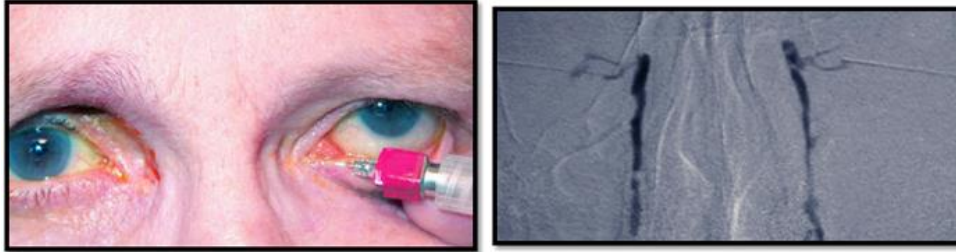


Figure 3. Dacryocystogram. A – Injection of stained saline into the punctum, B – Images of the dye within the lacrimal apparatus

A number of studies may be done by your physician to understand the nature of the obstruction. A thin strip containing fluorescein (a fluorescent dye) can be placed at the corner of the eye. When this orange filter paper mixes with tears, it turns bright green. After a few minutes, it should be seen in the nasal cavity with a small nasal camera (See Nasal Endoscopy) or by blowing your nose onto tissue paper. If it is not, your doctor may try to gently open the drainage pathway and inject saline or fluorescein-stained saline into the duct to see if it enters the nasal cavity. Lastly, a special x-ray called a dacryocystogram (See Figure 3), may be performed to determine where the obstruction is located. This test is not commonly performed.

## TREATMENT

The treatment of epiphora due to nasolacrimal duct obstruction is typically surgery (See Dacryocystorhinostomy). Other causes of too much tearing may require different treatments, such as the use of eye drops or surgery of the eyelid.

## SUMMARY

Epiphora can be a significant issue for patients. If you have excessive tearing from a blocked tear duct, a simple procedure called a DCR may relieve your problem.

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