



**University  
Hospitals Sussex**  
NHS Foundation Trust

# Orbital fractures

Orthoptic Department  
St Richard's Hospital  
Southlands Hospital

**Patient information**

This leaflet is intended to answer some of the questions of patients or carers of patients, diagnosed with orbital fracture under the care of University Hospitals Sussex NHS Foundation Trust.

## What is an orbital fracture?

The eye socket, or orbit, is a bony cup that surrounds and protects the eye. When one of the bones that forms this bony cup is broken, it is called an orbital fracture.

## How is it caused?

Road traffic accidents, assaults, sports injuries, industrial injuries and falls are all common causes of this type of facial fracture. Some injuries of this nature are preventable by the use of seatbelts when driving and using protective eye wear when at work or playing some sports.

## What are the signs I have a fracture?

Signs and symptoms are going to vary according to the cause and severity of the injury. Commonly experienced problems are:

- **Pain** - to the eye and the soft tissue around it.
- **Double vision** - swelling, bleeding or entrapment of the soft tissue or muscles around the eye can restrict its movement. A nerve injury can also affect the eye's movement. When the eyes are unable to move as a synchronised pair this can lead to double vision.
- **Blurred vision** - a direct blow to the eyeball can cause damage affecting the vision. Depending on the nature of the injury this could be mild and heal itself such as an abrasion to the cornea (front clear surface of the eye), or be severe enough to cause a cataract or traumatic damage to the nerve of the eye.
- **Loss of sensation** - a fracture of the bony wall of the eye socket can result in damage to the nerve responsible for sensation to the cheek, eyelids, upper lip and teeth or the forehead.

- **Bruising** - a 'black eye' with bruising around the injured area. There can be areas of redness on the white of the eye and on the inner lining of the eyelids.
- **Puffy eyelids** - if the bony wall between the eye and the sinus is broken then air can accumulate under the skin. Do not blow your nose while the eye heals to lessen the chance of more air accumulating.
- **Sunken eye** - a broken bone in the eye socket can cause some of the soft tissue in the socket to leak into other areas such as the sinuses. This loss of 'packing' tissue can cause the eye to look like it has sunken or dropped.

## How is it tested?

Testing will usually involve visiting more than one department.

**The Maxillo-Facial Department** - specialises in the diagnosis and treatment of diseases and injuries to the mouth, face and neck. This department co-ordinates testing and management (including surgery if needed).

**Radiology Department** - a CT or MRI scan enables the doctors to see the extent of bony and soft tissue injury.

**Eye Clinic** - if it is suspected that your vision is reduced or that you have a wound or infection to your eyeball or eyelids then an ophthalmologist will be asked to do an examination and help with the management of the eye health.

**Orthoptic Department** – if double vision is noticed then an orthoptist will be asked to assess your eye movements and measure both the eye position and how well they work together.

## How can it be treated?

Treatment depends on the severity and location of the injury.

### Conservative treatment:

For a small uncomplicated fracture with minimal double vision the doctor may advise pain relief, cold compression to reduce the

swelling and a few days rest. Do not blow the nose whilst the eye heals.

### **Emergency surgical intervention:**

If the fracture is more severe, surgical repair might need to be done. Entrapped muscle can lead to nausea, vomiting and a low heart rate, especially in children. These symptoms will result in urgent surgery - usually within 4 days.

### **Delayed surgical intervention:**

In most cases swelling and bruising will start to lessen after a week but fractured bones will take longer to heal. Swelling can make it difficult to examine the eye and its movement - your doctor may decide to reassess you after a week when the swelling has reduced.

### **If delayed surgery is decided upon it will be for the following reasons:**

- To remove bony fragments
- To get rid of double vision and free trapped tissue
- To restore the normal shape of the eye socket and eye position.

Surgery is always a compromise between the best access to the fracture and the potential complications of each approach. Exactly what surgery is done depends on the position of the defect, the age of the person and the existence of other related injuries. Your surgeon will discuss what surgical approach is best if you need to have surgery. If double vision persists after surgery another orthoptic assessment will need to be done - it is possible to help reduce double vision using prisms or a patch.

## **Contact numbers**

**Orthoptist:** St Richard's **01243 831499** Southlands **01273 446077**

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