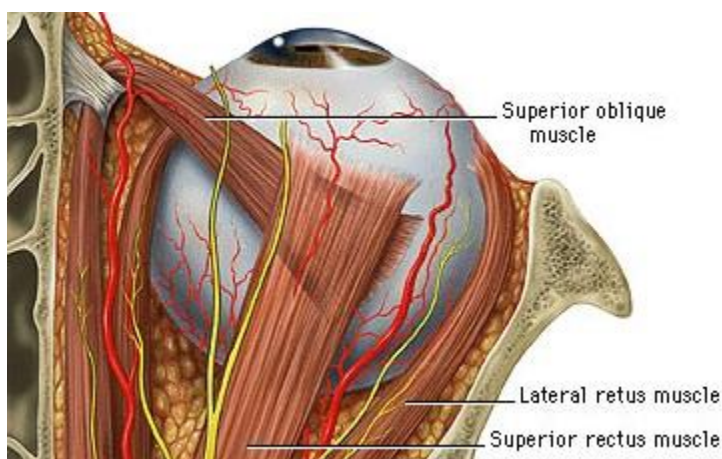


# Brown Syndrome

## [PRINT VERSION](#)

### WHAT IS BROWN SYNDROME?

Brown syndrome is a problem with one of the muscles on the outside of the eye (the superior oblique muscle). The muscle or tendon in Brown syndrome is not able to move freely and becomes stuck (Figure 1). The superior oblique muscle normally helps move the eye downward. When the eye is not looking down, this muscle relaxes, but in Brown syndrome, the relaxed muscle is tight or stuck and the eye is unable to move normally. The affected eye is “tethered” or held down by the tight superior oblique tendon. It is most noticeable when the affected eye is looking in towards the nose and up. A Brown Syndrome is most commonly congenital, or present at birth, but may be acquired, beginning later on in life. It is usually only seen in one eye and interestingly is more common in the right eye than the left eye for reasons that are unknown.



**Fig. 1:** Diagram showing the superior oblique muscle.

### WHAT DO THE EYES OF PATIENTS WITH BROWN SYNDROME LOOK LIKE?

The eyeball itself looks normal but its movement is limited when looking in towards the nose and up. During this eye movement, the eye with Brown syndrome appears to look down or straight ahead while the unaffected eye looks up (see Figure 2). Although this is not painful, it can cause double vision and children may avoid looking in certain directions. For this reason, patients with a Brown syndrome will sometimes hold their chin up or turn their head to avoid looking in the direction that causes their eyes to see

double. Often the higher eye is thought to be the eye with the problem, but it is actually the lower eye that has problems moving.



**Fig. 2:** Picture of a child with Brown syndrome in the right eye (eye on the left side of the picture).

## WHAT CAUSES BROWN SYNDROME?

The exact cause of Brown syndrome is unknown. Most commonly it is congenital, meaning a child is born with it. Brown syndrome can also come on after surgery, trauma, sinus infections or as a part of an inflammatory disease. Trauma can cause a Brown Syndrome if a blunt object hits the eye socket in the upper inside corner near the nose. Surgeries for the eyelid, sinus, eyeball (retinal detachment) and teeth have also been linked to acquired Brown syndrome. Inflammation of the area where the superior oblique attaches to the eye socket, from adult and juvenile rheumatoid arthritis, systemic lupus erythematosus and sinusitis can cause Brown syndrome as well.

## IS BROWN SYNDROME HEREDITARY?

Hereditary cases of Brown syndrome (where it runs in families) are rare. Most cases come on without a family history (sporadic).

## HOW IS BROWN SYNDROME DIAGNOSED?

The typical sign of Brown syndrome is a limited ability to look upward and inward with the affected eye(s). The most common way this is found in children is when parents notice that the child tilts their head or lifts their chin up to focus. When the child looks up at the parents, the parents will also see that the eyes are not moving well together, as shown in figure 2. Brown syndrome may be more noticeable in children since they often look upward toward adults. Occasionally, the affected eye can get “stuck” after looking up or down for long periods of time. When the eye becomes unstuck, a clicking sound is often heard and the child may feel pain. In other cases the Brown Syndrome can be so mild that it is not noticed for several years. In these mild cases, the eyes are often straight when looking straight ahead.



A complete eye exam with an ophthalmologist can confirm the diagnosis of Brown Syndrome.

### **DOES BROWN SYNDROME AFFECT ONE OR BOTH EYES?**

Ninety percent of patients with Brown syndrome have only one affected eye, more commonly the right eye.

### **DOES BROWN SYNDROME CAUSE EYE PROBLEMS BESIDES ABNORMAL EYE MOVEMENTS?**

In the more severe cases of Brown syndrome, some children will have difficulty using their eyes together, which can result in poor depth perception and/or [amblyopia](#) (blurry vision in one eye). This is because the child is unable to keep the two eyes straight when looking straight ahead or even when tilting their head.

### **ARE THERE DIFFERENT KINDS OF BROWN SYNDROME?**

Brown syndrome can come in different forms. In mild cases there is only a problem when the eye tries to look up. In moderate cases, the eye has a hard time looking up AND it tends to move downward as it moves inward toward the nose. In severe cases the eye turns downward when the patient looks straight ahead and has a really hard time moving.

### **CAN BROWN SYNDROME GET BETTER WITHOUT TREATMENT?**

In both acquired and congenital cases, Brown syndrome has been seen to go away on its own. In congenital cases, the eye movement problem is more likely to stay the same and less likely to go away without treatment.

### **HOW IS BROWN SYNDROME TREATED?**

Treatment type depends on the cause and how bad the problem is. Close monitoring alone is usually a good treatment in mild cases. Vision in each eye and the ability to use both eyes at the same time (binocular vision) should be watched closely in young children to make sure there are no problems with development. Watchful waiting may also be recommended for Brown syndrome that is new, from an injury or comes and goes. In cases of Brown syndrome caused by inflammation, possible treatments may include steroid injections, steroids by mouth and other medications that suppress the immune system. Non-steroidal anti-inflammatory medicines (like ibuprofen) have also been used to treat acquired Brown syndrome.



Surgical treatment is usually recommended if any of the following are present: eyes are not straight when looking straight ahead, double vision, problems using both eyes together, poor vision in one eye, or large head tilt. More than one surgery may be needed and surgery on the eye without Brown syndrome may be recommended.

Speak with your ophthalmologist if you have more questions about Brown Syndrome.

For more scientific information on Brown syndrome please see:

[https://eyewiki.org/Brown\\_Syndrome](https://eyewiki.org/Brown_Syndrome)

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