



Maidstone and  
Tunbridge Wells  
NHS Trust

# Mechanical deviations - Brown's and Duane's syndromes

**Information for patients and parents**

**Maidstone Orthoptic Clinic:** ☎ 01622 226236

**Medway Orthoptic Clinic:** ☎ 01634 976517

**Pembury Orthoptic Clinic:** ☎ 01622 226236

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## What is Brown's Syndrome?

Brown's Syndrome is a condition you are born with where one eye cannot move upwards when looking towards the centre of your forehead.

### Potential causes

We don't completely understand why Brown's Syndrome happens. There are six muscles on the outside of each eye which allow us to move our eyes in many different directions.

Most of the muscles run in a straight line from the back of the eye socket and attach to the eyeball. One of the muscles, called the superior oblique muscle, is particularly long and it changes direction at a sharp angle before it attaches onto the top of the eyeball. At the point where it changes direction, the muscle runs through a pulley/hole made of a small ring of cartilage attached to the bone.

Some doctors think that the muscle is too short, or that it gets stuck at the point where it changes direction, causing the muscle to not work properly. Others believe that Brown's syndrome may be caused by abnormal development of other tissue in the socket, which prevents a normal superior oblique muscle from turning the eye upwards.

### Will it affect my child's vision?

For most children, Brown's Syndrome does not cause any problem with visual development.

The condition is usually unnoticeable, unless you are trying to look upwards. Some people with Brown's syndrome may move their head up or to the side when trying to look up.

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## Who can diagnose it?

The Orthoptist and Ophthalmologist will be able to diagnose Brown's Syndrome by observing your child's eye movements.

## What to expect at your child's appointment

You will be seen routinely (varying between every 3 months – 1 year) at the eye clinic by an Orthoptist to make sure your child's vision is developing normally.

Although most people with Brown's syndrome will have normal vision, sometimes glasses are needed. If your child is found to have weaker vision in one eye they may benefit from eye patching treatment to treat the weaker vision. The Orthoptist will be able to advise you on this if it is necessary.

Usually nothing else is needed to treat an eye with Brown's Syndrome. In some children, the problem improves on its own as they get older, and often it is simply less noticeable as children get taller and don't have to look upwards as often.

## Duane's Retraction Syndrome

### What is it?

Duane's Retraction Syndrome (Duane's Syndrome) is an eye condition where one or both eyes have difficulty moving in a horizontal direction.

### What causes it?

There are six muscles that help move our eyes into all different directions. To allow the eyes to move, the brain has to send messages through nerves to the muscles. In people with Duane's Syndrome, the nerves are wired incorrectly so the messages from the brain go to the wrong muscle. This results in the eyes not moving into the position you want them to. As well as affecting the eyes moving in different directions it can also cause the eye to move back into its socket when attempting to look into a particular direction.

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## Will it affect my child's vision?

Most children with Duane's Syndrome can see very well. When you look straight ahead, usually no one can tell you have Duane's Syndrome. People may notice that your eyes don't move around properly.

## Who can diagnose it?

The Orthoptist and Ophthalmologist will be able to diagnose Duane's Syndrome by observing your child's eye movements.

## What to expect at your appointment

Your child will need to come to the eye clinic to check their vision is developing normally. Sometimes, we will give your child glasses or, in young children, an eyepatch for a few hours a day, to help improve the vision if they have weaker vision in one eye.

Usually no other treatment is needed. If Duane's Syndrome causes problems, such as head posture or a large squint when looking straight ahead, an operation on the muscles which control eye movement can improve this. An operation cannot make your eye movements normal.

## General Advice

- In school - liaise with your child's school / teachers to ensure your child sits at the appropriate distance from the board and is facing the board / teacher. If the Orthoptist / Ophthalmologist have made any further recommendations explain these to the school.
- Ensure your child's glasses fit properly and are up to date with the correct prescription.

Your Orthoptist will be able to answer any other questions you may have and offer any other advice and support you require.

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## Further information and advice can be obtained from:

**NHS 111**  
**NHS Choices online**

 **111**  
[www.nhs.uk](http://www.nhs.uk)

**MTW NHS Trust is committed to making its patient information accessible in a range of languages and formats. If you need this leaflet in another language or format please ask one of your clinical care team or the Patient Advice and Liaison Service (PALS). We will do our best to arrange this.**

Maidstone and Tunbridge Wells NHS Trust welcomes all forms of feedback from our service users. If the standard of service you have received from the Trust does not meet your expectations, we want to hear from you. Please speak with the ward manager or the nurse in charge in the first instance, or you can contact the **Patient Advice and Liaison Service (PALS)** on:

**Telephone:**      01622 224960 or  01892 632953

**Email:**             [mtw-tr.palsoffice@nhs.net](mailto:mtw-tr.palsoffice@nhs.net)

**or visit their office** at either Maidstone or Tunbridge Wells Hospital between 9.00am and 5.00pm, Monday to Friday.

You can be confident that your care will not be affected by highlighting any areas of concern or making a complaint. The Trust will retain a record of your contact, which is held separately to any medical records. If you are acting on behalf of a patient, we may need to obtain the patient's consent in order to protect patient confidentiality. More information on PALS or making a complaint can be found on the Trust's website: [www.mtw.nhs.uk](http://www.mtw.nhs.uk) or pick up a leaflet from main reception.

Issue date: March 2025  
Database reference: RWF-HNK-ORT-LEA-PAT-4

Review date: March 2029  
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