



University
Hospitals Sussex
NHS Foundation Trust

Duane's Retraction Syndrome

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 Duane's Retraction Syndrome under the care of University Hospitals Sussex NHS Foundation Trust.

What is it?

Duane's retraction syndrome is a condition where the eyes are unable to move fully in the horizontal (side to side) direction. Patients are born with the condition, however, it may be detected at any age.

Why does it occur?

The condition happens during a baby's development in the womb. There is a disruption in the growth of the nerves from the brain to the eyes. This means the wrong eye muscles contract/tighten on eye movement as the nerves are connected abnormally. There is no way to prevent this.

What does it look like?

There are different types of Duane's syndrome and how much the eye movement is affected will vary from person to person.

- Outward movement of the eye away from the nose is affected, or;
- Inward movement of the eye towards the nose is affected, or;
- Both inward and outward movement of the eye is affected.

In most cases only one eye is affected but it is possible to have both eyes affected by this condition.

How will the condition affect me/my child?

Depending on how the eye movement is affected, people with Duane's syndrome may develop a compensatory head posture. This means that they will turn their head/face to one side to

minimise the effect of condition or to enable them to use their eyes together. This is normal and does not need to be discouraged.

Some people with Duane's syndrome can use their eyes together normally when they are looking straight ahead and their eyes only misalign when they look to the side. In these cases people will prefer to move their head rather than their eyes when looking to the side.

The eye looks smaller sometimes, is this normal?

The other main feature of Duane's syndrome is 'globe retraction'. This means that when the affected eye is moved towards the nose the eyeball (globe) moves backwards into the eye socket and the eye will appear smaller. This happens because more than one muscle contracts/tightens at the same time and pulls the eye backwards. You may also notice that the eye shoots up or down in this position.

Are there any symptoms?

Patients who have Duane's syndrome do not generally complain of any symptoms; however double vision can sometimes occur when attempting to look to one side.

Are there any other problems?

There is some evidence of other problems like deafness being associated with Duane's. Our paediatric team recommends that if you have any concerns please ask your GP for advice.

Will I/my child need to wear glasses?

There is no evidence to suggest that people who have Duane's syndrome are any more likely to need glasses than the rest of the population.

How is it treated?

It is not possible to cure Duane's syndrome as we cannot influence how the nerves and muscles are connected. For most people with Duane's syndrome no treatment is necessary and they do not tend to experience any symptoms. Children are seen every six months or so to ensure their vision and 3D vision is developing normally. If not, we can treat this with patching (an eye patch is worn over the better seeing eye for a few hours per day).

Will I/my child need an operation?

Surgery is not generally needed in Duane's syndrome but may be considered if:

- A significant and uncomfortable head posture is required.
- There are symptoms of double vision which are significantly impacting on daily activities.
- There is severe 'globe retraction'

Surgery is not always effective as the eye muscles are not properly supplied by the nerves. Individual cases can be discussed if the above symptoms are present.

Useful websites

www.squintclinic.com

If you have any other questions about Duane's syndrome or your/your child's treatment please speak to your orthoptist.

Contact numbers

Orthoptist: St Richard's 01243 831499 Southlands 01273 446077

Ref. number: 2218 ORT08
Publication date: 03/2022
Review date: 03/2024

© University Hospitals Sussex NHS Foundation Trust Disclaimer:
The information in this leaflet is for guidance purposes only and is in no way intended to replace professional clinical advice by a qualified practitioner.

