

Duane Syndrome

Here are some strategies to help schools meet the needs of children with Duane Syndrome. The needs of children and young people with Duane Syndrome can be met through Quality First Teaching and simple strategies used in the classroom. In the majority of cases these children and young people do not require specialist interventions from a Qualified Teacher for Visual Impairment. The information in the universal section of the Mainstream Core Standards for VI will also be useful.

What is Duane Syndrome?

The movement of our eyes is controlled by three pairs of external muscles. In Duane syndrome some of them do not work as they should, as there appears to be a 'mis-wiring' of the nerves to the external eye muscles.

Duane syndrome is present from birth. It does not get better nor does it get worse. It cannot be improved by surgery, although surgery does sometimes take place to deal with some aspects. Usually Duane syndrome affects just one eye, most often the left, although in some children it can affect both eyes. It is more commonly found in girls than in boys.

Many children with Duane syndrome just have problems with their eye movements but it is important that they are checked to see if they have any other visual impairment as some can be associated with the syndrome. As with all children they may require glasses for long-sightedness, short-sightedness or astigmatism. They must also be checked for any hearing problems or developmental difficulties, as these too can sometimes be associated with Duane syndrome.

Typical Duane Syndrome (Type I)

In the typical Duane syndrome, there is normal adduction (eye movement towards the nose) but reduced abduction (eye movement away from the nose). This results in double vision to the left or the right or to both sides depending on the affected eye/s. The central vision will be normal and is most likely to provide 3D vision.

Duane syndrome affecting left eye – this means that when the child looks to the left their left eye is unable to move in that direction and remains looking directly ahead and the eye opening may widen. This will look like a left convergent squint, but it is not. The child will have double vision to the left. It may also be noticeable in some children when the left eye looks to the right, it is able to do so, but it may appear to be deeper set, the eye opening may narrow or the eye may move up or down.

Duane syndrome affecting right eye – this is the opposite of the above. The right eye is unable to move look to the right and remains looking directly ahead and the eye opening may widen. This will look like a right convergent squint, but it is not. The child will have double vision to the right. It may also be noticeable in some children that when the right eye looks to the left, it is able to do so, but it may appear to be deeper set, the eye opening may narrow or the eye may move up or down.

Duane syndrome affecting both eyes – this means both of the above take place. This will look like an alternating convergent squint, but it is not. The child will have double vision to the left and to the right but good central vision. For a pupil with Duane syndrome it is important for the school to know which eye is affected or if both eyes involved, since this will determine the best position for seating the child within the class and the best position for individual support.

General Strategies

- Find out which eye is affected by Duane syndrome.
- There can be a tendency to bump into objects in their peripheral field on the affected side with younger children.
- Standard curriculum materials are appropriate as the child can then utilize their central vision
- If there is a hearing impairment seek advice from a Teacher for Hearing Impairment.
- Individual support should be from the side where they have their best vision or from directly ahead. For children where both eyes are affected, individual support must be from directly ahead.

Position in The Room

- Work out the best position for individual support.
- Sit the pupil centrally or where they can use their best vision to see the board.
- Sitting at the back of the group can sometimes be easier than the front.
- In large group situations or when sitting in the classroom children with Duane syndrome should be positioned where they can view the teacher or the board without having to adopt an unusual head posture.

Writing

- Encourage the child to position their writing materials where they get their best view.

Reading

- Children with Duane syndrome do NOT require large print materials unless they have another visual impairment as well.
- Individual copies of books or worksheet would be beneficial as sharing will be more challenging for the child.

Social skills and mobility

- Some aspects of team games in PE may be challenging.
- A head posture to view to the side is an excellent strategy but it may be a good indication of inappropriate positioning.
- They should be encouraged to turn their head to view people to the side where they have double vision. This is an excellent social skill, but it may be difficult to maintain if they are required to consistently share items