

Some people with ataxia experience problems with vision. Ataxia UK's Research Projects Manager Dr Julie Greenfield reported on a conference on neurological sight problems at the Glaxo Neurological Centre in Liverpool.

The conference started with an overview of the anatomy of the eye and explanation of different types of vision problems from a consultant ophthalmologist (a doctor who specialises in the diagnosis and treatment of eye diseases). An area at the back of the brain (the occipital lobe) controls vision, the optic nerves connect the eyes to the brain, and there are other nerves that control the muscles that move the eyes. People with neurological disorders may experience vision problems if these nerves are not functioning properly; this can include reduced visual acuity (ie: seeing things less accurately), a reduced the visual field or problems with colour vision or contrast.

An optometrist (a specialist in eye movement disorders) then outlined some of the problems people may have with controlling eye muscles. The nerves and muscles on the left and right hand sides need to be in balance for correct vision – if the two eyes are not pointing at the same object, the result is double vision. Damage to nerves (caused by stroke, MS, neurosurgery and so on) can prevent the muscles from working properly.

People with damage to more than one nerve may have additional problems managing smooth pursuit (a following movement of the eyes) or saccades (fast fixation and re-fixation on objects, which is particularly important for reading).

The optometrist described some ways these problems can be tackled. Prisms attached to glasses (temporarily or permanently) can help to move images together to form one image. Medications such as baclofen and gabapentin can sometimes help, although she is not very convinced that they are effective for everyone. Botulinum toxin (Botox) injections into eye muscles can correct the balance between the eyes I asked about the injections and she explained that it is quite a simple technique and from her experience people generally say that it isn't that painful. It is only done to one eye, while the other one is patched, in order to achieve balance. She added that this procedure was best for people in wheelchairs (to avoid balance problems), and that the effect is temporary (a few months) but some people do go back for repeat injections.

Finally, eye surgery can make the eye muscles symmetrical, either by strengthening or weakening them. Throughout all this, group clinics are a useful way to offer patients reassurance and the opportunity to meet other people with the same problems. She also described nystagmus (involuntary jerking or shaking of eyes), which some people with ataxia experience – sometimes accompanied by oscillopsia (people feel like the world is moving and is all a blur). Most people with nystagmus have a "null point" where the eye moves less and their vision improves. Finding it often requires turning the head to one side, and/or sitting to one side of a screen or blackboard, or moving a book onto a stand. Again, prisms can help move the image to a part of the eye which is not affected (this is particularly the case for people who find it worst when they are looking straight ahead). A few people have been helped by surgery to alter the position of the muscles which move the eye; this doesn't tackle the nystagmus but does help them to

hold their head at a better angle for the “null point”.

One of the main messages that came out of this meeting was the need for a multidisciplinary team made up of different specialists to help people with neurological problems, as well as the need for communication between healthcare professionals. Although this does happen in some places, it is not universal.

The Ataxian 143; 2003: 9

PS – individual’s experiences

An Ataxian reader wrote to us in 2004:

“Recently my optician prescribed me yellow tinted glasses (75% amber) with prism as well as my usual prescription for both distance and reading, and they really have improved my sight.

I’ve had spinocerebellar ataxia from birth (SCA number unknown). I used to have good eyesight but over the last few years developed problems with smooth pursuit and eye coordination, and find tracking movement difficult. Everything goes blurry and things move around. I also have inner ear problems and vertigo, with the world spinning. I have found yellow glasses do not lessen vertigo but makes the world sharper and in focus. My eyes get less tired – I used to have to just close them.

I don’t know if this would be of any use to anyone else with ataxia but thought I would let you know in case it would help anyone else with similar eye problems.

The Ataxian 148; 2004: 16

A recent article in *The Ataxian* helped me make up my mind about my spectacles. While I was on holiday, I bought some clip-on sunglasses and they were an amber colour. As soon as I put them on, I noticed everything looked sharper and clearer. When I read the letter [in *The Ataxian* 148], it confirmed me in my decision to have a tint put in my next spectacles. I also have to have a prism.

The Ataxian 149; 2005: 10

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