

INFORMATION FOR PATIENTS

Convergence insufficiency

This leaflet describes convergence insufficiency and the treatment which may be given.

What is it?

Convergence insufficiency is a weakness of convergence (when the eyes are unable to keep looking at an object approaching the nose).

What are the signs and symptoms?

The main symptoms of convergence insufficiency are headaches in or around the eyes, or around the forehead after reading. There can also be blurring of close work, double vision or jumbling of print.

Occasionally, patients experience these problems with distance viewing. The patient's eyes are working so hard for near vision they do not immediately relax when looking in the distance.

This may have been present for quite a few months or years but has become more of a problem recently. It can become more obvious after an illness, injury, or change in workload, i.e., more close work or working with a computer screen.

It can affect patients of all ages from seven to eight years (when schoolwork becomes more concentrated and prolonged) and into adulthood.

What treatments are there?

There are six muscles around each eye; it is the ones closest to the nose, which are failing to pull the eyes in sufficiently.

Convergence exercises are given, as this attempts to get the weak eye muscles working better. Exercises may initially make the eyes feel worse before they feel better and may give rise to more headaches. Treatment times vary, depending on how quickly the convergence improves and symptoms are resolved.

Progress is monitored by the orthoptist on a regular basis.

When is the best time to do the exercises?

It is best to do the exercises when you are not feeling too tired. If you are tired, your eyes will be too, and less effort will be put into the task. Therefore morning, lunchtime and teatime can be the best times, ideally not just before bed.

Exercises are usually set for two to three minutes at a time, for between one and five times a day, depending on the patient. Short bursts of exercise with lots of effort are best.

It is important to relax the eyes afterwards to avoid eye strain, either by closing the eyes or looking in the distance.

What are the exercises?

The following exercises may be set individually or as a mixture of two or more:

- **Spatula/pen convergence**

The head is straight, the eyes looking down slightly fixating on a pen or target as provided, this is brought slowly towards the nose. The target should stay clear and as one image.

If two images appear, move the target slightly further away from the nose until the two images can be joined together.

Then move the target slowly back towards the nose again, trying to keep the image single and clear.

This should be repeated trying to get a little closer to the nose each time.

- **Jump convergence**

The head is straight, the eyes looking down slightly to focus on a near target making it clear and single vision, then swap fixation to a distance target (4 to 6 meters away). Then swap fixation back to the near target again getting this clear and single vision. Repeat this for a few cycles.

Once this is comfortable try moving the near target to a closer distance to the nose and repeat the exercise.

- **Dot card**

The dot card provided should be held at the tip of the nose pointed downwards slightly.

Firstly, fixate on the furthest away dot getting this clear and single, then once this is achieved jump to fixate on the next closest dot and so on towards the nose.

Once clear, single vision can not be achieved, move back to fixate on the previous dot and maintain this fixation. Once comfortable try to fixate closer again.

The eyes do play tricks a little with this test. Any dots behind or in front of the dot you are looking at will go double, this is a normal sort of double vision.

- **Stereograms**

Cats, buckets, circles - this is a further exercise to help bring in the eyes more efficiently.

Stereograms can be frustrating as you will feel you are doing two things at the same time.

The picture given (of either two cats, two buckets or two circles) is held at arms length. A pencil is held with the other hand.

Look at the pencil. Starting with it just in front of the card, slowly move the pencil towards the nose keeping the card still.

To start with, four pictures should appear if you are looking at the pencil.

As the pencil approaches about halfway between the card and the nose, the two middle images should join up. Therefore, you should see just three images.

Stereograms can be very difficult to do as it is very tempting to look directly at the pictures. In this instance only two pictures will be seen - **not three**.

If these exercises are not done, symptoms will probably not improve, and may worsen.

Contact details

If you have any queries about your child's treatment please contact the Orthoptic Department:

- **Email:** Sfh-tr.orthoptics@nhs.net
- **Urgent orthoptic queries:**
 - Telephone: 07768615247, Monday to Wednesday, 8am-4pm
 - Telephone: 07825866704, Thursday to Friday, 8am-4pm
- **For appointment booking/cancellation:**
 - Telephone: 01623 672383

Further sources of information

NHS Choices: www.nhs.uk/conditions

Our website: www.sfh-tr.nhs.uk

BIOS website: www.orthoptics.org.uk

Patient Experience Team (PET)

PET is available to help with any of your compliments, concerns or complaints, and will ensure a prompt and efficient service.

If you would like this information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call the Patient Experience Team on 01623 672222 or email sfh-tr.PET@nhs.net.

This document is intended for information purposes only and should not replace advice that your relevant health professional would give you.

External websites may be referred to in specific cases. Any external websites are provided for your information and convenience. We cannot accept responsibility for the information found on them.

If you require a full list of references for this leaflet, please email sfh-tr.patientinformation@nhs.net or telephone 01623 622515, extension 6927.

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