

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 all ages of patients 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 again.

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 three to five 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, either by closing the eyes or looking in the distance (the end of the room), for a few seconds. This relaxes the muscles and avoids "cramp".

What are the exercises?

The following exercises may be set individually or as a mixture of two or more. The total time exercises are performed for should be three to five minutes:

- **Spatula/pen convergence**

The head is straight, the eyes looking down slightly. A spatula with a letter/dot/picture on it is brought slowly towards the nose. The target should stay as one image.

If two images appear, move the spatula slightly further away from the nose until the two images join together.

Then move the spatula slowly back towards the nose again, trying to keep the image single and as clear and close as possible.

This should be repeated another four times, trying to get a little closer each time.

- **Jump convergence**

The head is straight, the eyes looking down slightly.

A spatula with a letter/dot/picture on it is brought towards the nose. You should intermittently look in the distance whilst bringing the target closer to the nose. So you are looking from a distance to a near object (only move the near object towards the nose whilst looking at the distant object).

Again, the aim is to get as close to the nose as possible and have one clear target.

- **Dot card**

This is a card where the eyes gradually look along dots that are drawn on a line, starting at the dot furthest away.

The dot card is placed on the tip of the nose, tilted slightly upwards. The dot which you are looking at should be single, before you progress onto a closer dot.

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, and the lines should appear to cross through the dot that is being looked at. This is a normal sort of double vision.

The dots are usually numbered to monitor progress. It is possible to go backwards and forwards along the dots or count to 10 at each one.

- **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 half way 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 please ring the Orthoptic Department:

King's Mill Hospital

01623 622515, extension 3365 or 6655
Monday to Friday, 9am-4pm.

Newark Hospital

01636 681681.

Useful contacts

www.orthoaptics.org.uk

Further sources of information

NHS Choices: www.nhs.uk/conditions

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

King's Mill Hospital: 01623 672222

Newark Hospital: 01636 685692

Email: sfh-tr.PET@nhs.net

If you need this information in a different language or format, please contact the PET (as above).

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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