

Ophthalmology department

# Convergence exercises

## Information for patients, relatives and carers

### Introduction

Your orthoptist has recommended a course of eye exercises to help improve your eyes' ability to converge (pull in together to see a near object). When performed little and often throughout the day, the exercises can help relieve the symptoms of eye strain and blurred or double vision for close-up work.

### What is convergence?

When looking at a near object our eyes move close to each other to maintain binocular fixation (clear viewing of an object). When both eyes move towards the nose together it is called convergence. Reduced convergence will result in discomfort for close-up work and causes symptoms such as:

- headaches
- eye strain
- blurred vision
- irregular double vision
- fatigue (tiredness) after continued efforts at close-up work

The orthoptist will show you some simple exercises to help improve convergence and relieve these symptoms.

Please make sure you wear any glasses that you would use for close distances when doing these exercises.

Make sure you allow your eyes to relax for a few minutes after doing the exercises, by closing them or looking in the far distance.

### Step one: pen convergence (smooth convergence)

- hold a target, such as the point of a pen, at arm's length in a slightly lower position to the tip of the nose. You should be able to see the target as one single image.
- bring the target slowly and steadily towards the tip of your nose, keeping it single.
- the 'break point' is when one eye turns outwards, and you see two images, or the target appears to jump to the side.
- the aim is to try to keep the target single for as long as possible and, just before the 'break point', hold fixation on the target for 10 seconds.
- normal convergence is when you can keep the target single up to the tip of the nose

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Repeat this procedure for \_\_\_\_\_ minutes \_\_\_\_\_ times a day.

## Step two: jump convergence

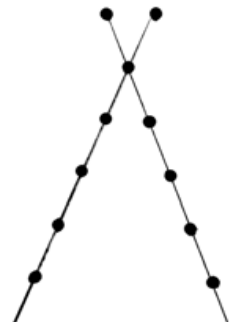
### Basic method

- look into the distance at a target and then back at your near target (point of pen/small picture)
- when looking at your distance target, slowly bring the near target closer to your nose in small steps and repeat the process
- try to always keep this near target single and for as long as possible just before the 'break point' (see pen convergence exercise above)

Repeat this procedure for \_\_\_\_\_ minutes \_\_\_\_\_ times a day.

### Dot card method

- hold the card with the dots given to you by the orthoptist on the tip of your nose and sloping away from you
- now fix your gaze on the furthest dot and try to make it single. The two lines should join at the top and appear as an inverted letter V
- now move your gaze to the second from furthest dot, making sure you can also make this single. The dot in front and behind of this dot will appear as double, giving you the appearance of a letter X
- each dot should be seen single and clearly for the count of 5 seconds before moving on to the next dot
- if the two lines separate or the dot you are focussing on becomes double, move back to the previous dot, and try again
- once the dot nearest your nose has been reached and you are able to maintain a single clear dot you have successfully completed the dot card exercise. The lines should now appear as a letter V
- dot cards treat convergence insufficiency more effectively than simple pen convergence exercises by ensuring correct alignment of your eyes

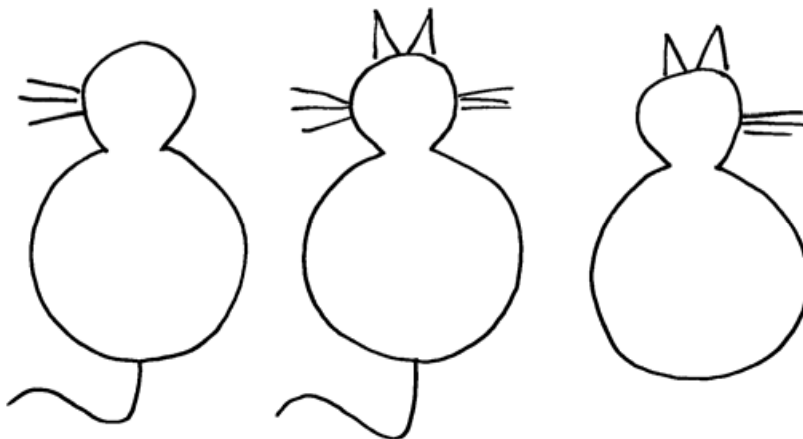


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Repeat this procedure for \_\_\_\_\_ minutes \_\_\_\_\_ times a day.

## Stereograms (cats/buckets)

- hold the stereogram card at arm's length at eye level
- in your other hand, hold a pen midway between the card and your nose
- three images should be visible on the card, but if you can see four images the position of the pen needs to be adjusted until you see three images.



- the middle image should be a complete cat with ears, tail and whiskers, and the bucket should appear in 3D form
- once the middle image is achieved, try to make it as clear as possible. This will be difficult at first but will become much easier with practice
- once stereograms can be performed with ease you can try removing the pen and attempt to view the complete middle cat/3D bucket without it

Repeat this procedure for \_\_\_\_\_ minutes \_\_\_\_\_ times a day.

## How often should I do these exercises?

These convergence exercises should be performed 'little and often'. It is important that after each exercise session you relax your eyes by closing them or looking at a faraway object for a short while.

## Who do I contact for more help or information?

Please do not hesitate to contact the orthoptic department if you have any queries or concerns:

Western Eye Hospital orthoptic department: Telephone **020 3312 3256** (Monday to Friday, 08.30 to 16.30)

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