

# Information for patients and carers

## Home exercises: Smooth convergence

Treatment of convergence insufficiency

A decorative graphic at the bottom of the page consisting of three overlapping, wavy bands of blue. The top band is a light blue, the middle is a medium blue, and the bottom is a dark blue.

## What is the aim of this exercise?

The aim of this home exercise is to be able to watch a pen move slowly all the way to the end of your nose, whilst seeing a single pen.

## How do I perform this exercise?

Please note that these are only basic instructions for this exercise and adjustments may be made by the orthoptist based on your individual need. The orthoptist will demonstrate how to perform this exercise and advise you on how often and how long the exercise should be performed during your appointment. The orthoptist will also discuss the importance of relaxing your eyes after exercising (please see the 'Home exercises: Relaxation' leaflet for more information).

**Note:** For the purposes of these instructions, a pen is described. The instructions are the same whether a pen or stick/ other target is used.

## Instructions

**It is probably best to get somebody to read these instructions to you as you do the exercise:**

1. Keeping your head held straight, hold a pen at arms-length in front of you, at eye level.
2. Focus on the tip of your pen and make sure it is single.
3. Move the pen slowly towards your nose. Make sure that the pen stays single, for as long as possible.
4. If the pen goes double (i.e., if you see 2 pens) stop moving the pen immediately but continue to look at it and use your eye muscles to 'pull' the images together to make one pen again. Once you see the pen as single, try to keep it single for at least 10 seconds.

5. If you are unable to make it single again, despite trying hard to do so, try taking the pen back a short distance (2cm or 3cm) away. Then try to keep the pen single at this position and attempt to bring the pen forwards again.  
**Note:** don't go back to the beginning each time the pen doubles up. You need to work hard around the area where the pen starts to go double. This will help to improve your convergence (ability to 'pull' your eyes in without extra effort).
6. Repeat the process of stopping, trying to use your eyes to make the pen single again, and then continuing as before.
7. Whilst doing this exercise, if you happen to notice that you can see double of other objects in front of or behind the pen, do not worry. This is a normal phenomenon called 'physiological diplopia'. Just ignore it and remember to concentrate on the pen and make this single.
8. Remember to RELAX your eyes after the exercise (please see the 'Home exercises: Relaxation' leaflet for more information).

## Key points to remember:

- Try to make sure that you make a conscious effort to pull your eyes in to look at the pen. It may feel as though you are going 'cross-eyed' whilst trying to do this. This is normal and is necessary to achieve results
- This exercise will get increasingly difficult as the pen gets closer to your nose
- As with any form of new exercise, your eyes may feel more tired or uncomfortable and you may get a headache when you first begin exercising. This is because you are using muscles that are not used to working as hard as they should be. This is normal and it will get easier as the muscles get stronger

- Try not to ‘make the pen single’ by closing one eye or blinking. This will not exercise the eye muscles. Just blink normally during the exercise
- It is a challenging exercise, but practise will make it easier. Don’t give up!

## Are there any alternatives to convergence exercises?

Generally, it is better to try and improve convergence by exercising the eye muscles. In some cases, a small prism can be fitted to the glasses to help with your symptoms.

## What will happen if I do my exercises, but my symptoms do not get better?

If your symptoms do not improve, the orthoptist will arrange for you to see an ophthalmologist (eye doctor).

**It is important that you attend your Orthoptic appointments as advised by the orthoptist to monitor whether the exercises are helping to improve your condition and adjust the exercises given as needed. If you are unable to attend an appointment, please call our appointments team on telephone number: 01772 524010.**

## Contact details

Should you require further advice or information please contact the Orthoptic team on telephone number: **01772 522417** (Monday to Friday between 8.30am to 4.40pm). If the Orthoptists are not available when you call, there is a 24-hour answerphone where you may leave a message.

Orthoptic Department:  
Broughton Suite (near the main entrance),  
Royal Preston Hospital,  
Sharoe Green Lane,  
Preston.  
PR2 9HT

## Sources of further information

[www.lancsteachinghospitals.nhs.uk](http://www.lancsteachinghospitals.nhs.uk)

[www.nhs.uk](http://www.nhs.uk)

[www.accessable.co.uk](http://www.accessable.co.uk)

[www.patient.co.uk](http://www.patient.co.uk)

[www.squintclinic.com](http://www.squintclinic.com)

[www.orthoptics.org.uk/patients-and-public/](http://www.orthoptics.org.uk/patients-and-public/)

**Follow us on social media @lancshospitals**

**Lancashire Teaching Hospitals NHS Foundation Trust is not responsible for the content of external internet sites.**

All our patient information leaflets are available on our website for patients to access and download:

[www.lancsteachinghospitals.nhs.uk/patient-information-leaflets](http://www.lancsteachinghospitals.nhs.uk/patient-information-leaflets)

Lancashire Teaching Hospitals is a smoke-free site. Smoking is not permitted anywhere on any of our premises, either inside or outside the buildings. Our staff will ask you about your smoking status when you come to hospital and will offer you support and advice about stopping smoking this will include Nicotine Replacement Therapy to help manage your symptoms of withdrawal and the opportunity to speak to a nurse or advisor from the specialist Tobacco and Alcohol Care Team.

If you want to stop smoking, you can also contact Smokefree Lancashire on Freephone **08081962638**

**Please ask a member of staff if you would like help in understanding this information.  
This information can be made available in large print, audio, Braille and in other languages.**

**Department:** Orthoptic and Optometry  
**Division:** Surgery  
**Production date:** November 2023  
**Review date:** November 2026  
**JR 1052 v1**