



# Orthoptic eye exercises

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**Exercises to improve the co-ordination of your eyes.**

**You do not need to perform all exercises.**

**Your orthoptist will identify which are right for you.**

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## Why has the orthoptist recommended eye exercises?

Orthoptists recommend eye exercises if you are struggling to focus your eyes due to a weakness of:

*Convergence:* moving both eyes inwards to view near objects.

*Accommodation:* focusing the lens of the eye to see clearly.

*Fusion:* the ability to combine images from each eye into one.

This can cause double vision, blurred vision, eye strain, and headaches.

The exercises your orthoptist suggests will be related to your symptoms.

All exercises should be performed with both eyes open and focused on the viewing target.

## Which exercises should I perform?

- ☐ Smooth convergence \_\_\_\_\_ minute(s), \_\_\_\_\_ a day, see page 3
- ☐ Jump convergence \_\_\_\_\_ minute(s), \_\_\_\_\_ a day, see page 4
- ☐ Dot card \_\_\_\_\_ minute(s), \_\_\_\_\_ a day, see page 5
- ☐ Near stereogram \_\_\_\_\_ minute(s), \_\_\_\_\_ a day, see page 6
- ☐ Distance stereogram \_\_\_\_\_ minute(s), \_\_\_\_\_ a day, see page 7

## **Remember to relax your eyes after exercising**

Relax for the same amount of time that you have spent exercising. If you have exercised for 2 minutes, relax for 2 minutes.

Relax by closing your eyes or looking away from the area where you experience symptoms. If you have performed convergence exercises, do not begin close work or use a screen immediately afterwards.

## **What to look for if you cannot see double vision**

If you have eye alignment problems which began in early childhood, your brain may have learned to ignore double vision. This is usually a good thing and we don't want you to try to see double.

Most orthoptic exercises use double vision as a cue to focus your eyes together. If you can't see two of things, you will need to find your own cue to focus your eyes.

Sometimes people know their eyes are no longer aligned and working together because things look or feel different. Here are some ways people describe this:

- Blurred or unclear vision
- Loss of depth perception
- Discomfort of one or both eyes
- Feeling that one or both eyes have moved
- Loss of background double vision
- Loss of the field of vision of one eye or on one side

This is different for everyone and it may take some practice to learn how this looks for you. If you are struggling, you may need someone to watch the co-ordination of your eyes as you exercise.

## Smooth convergence

This exercise aims to improve your strength and co-ordination at near, by slowly increasing the convergence of your eyes.

You will need a small target for this exercise, such as a pen, pencil, or small toy. Your target should be something you can hold in your hand and easily see with each eye. You will need to move this object close towards you.

- Hold your target at a comfortable distance, where you have single vision. The target should be directly in front of you and slightly below eye level.
- Move the target towards your nose. Your eyes should move together to follow the target.
- Keep your eyes on the target, try to maintain single vision. If you reach a point where this becomes too difficult, pause for a moment. If you can't recover single vision, move it slightly further away and try again.
- When you are able to control the double vision, hold the target still for around 10 seconds before continuing.
- Move the target as close as you can while maintaining single vision.

Stop when you have exercised for as long as recommended. Allow equal time for your eyes to relax.

There is information on page 2 on how to relax your eyes following exercises.

As your convergence improves, this exercise will become easier. If you are finding the exercise easy, hold the target a bit closer to your eyes next time you start.

## Jump convergence

This exercise aims to improve the co-ordination of your eyes, by quickly switching between near and distant viewing targets.

You will need a small object, such as a pen, pencil, or small toy, to use as a near target. You will also need an object or picture to use as a distant, still target around 4 to 6 metres away. Your targets should be easily visible with each eye.

You can modify this exercise to improve your accommodation by using a detailed target. Your orthoptist will discuss this with you if needed.

- Hold your near target at a comfortable distance, where you have single vision. The target should be directly in front of you and slightly below eye level.
- Start by looking at the distant target, then quickly look to the near target.
- If you notice double vision, try to bring the two images together into one.
- When you're able to see only one near target, look back towards the distant target.
- Continue jumping between the two targets, controlling any double vision you notice before looking towards the next target.
- When you are able to do this without noticing double vision, try moving the near target slightly closer.

Continue for the duration of time recommended by your orthoptist.

Stop when you have exercised for as long as recommended. Allow equal time for your eyes to relax.

There is information on page 2 on how to relax your eyes following exercises.

As your convergence improves, this exercise will become easier. If you are finding the exercise easy, you can make it more difficult next time you start. Try holding your near target a bit closer or moving further away from your distant target.

## Dot card

The aim of this exercise is to improve convergence and control of double vision. Your orthoptist will give you a dot card for this exercise. One side has a line with dots placed at regular intervals. This is the side you will need to use.

Before you start, gently bend your dot card along the line of dots. There is a crease in the card to help with this.

Hold the card close to your eyes. The line should point out away from you.

Try not to move the card away from you, as this will make the exercise too easy.

- Start by looking at the dot furthest from you. It should look like two lines are extending towards this dot. This looks a bit like a triangle or letter 'A'.
- Look at each dot, one by one, moving along the line. As you move closer, the lines will start to form a cross or 'X' shape, with one dot in the middle.
- If you start to see two dots in the centre of your vision or if one line seems to disappear, you are no longer using both eyes together. Try to focus your eyes to bring the two dots and lines back together.
- Maintain single vision on each dot for around 10 seconds before continuing.
- If you reach a dot where you are unable to maintain single vision, try moving back to the previous dot.
- When you feel able, move on to the next dot. Don't worry if you can't manage this yet - this will get easier with time.
- When you are able to converge to view the closest dot, the lines will form a 'V' shape. Focus on controlling double vision here until it becomes easier.

Stop when you have exercised for as long as recommended. Allow equal time for your eyes to relax.

There is information on page 2 on how to relax your eyes following exercises.

## Near stereograms

The aim of this exercise is to make it easier to use both eyes for close work.

This information leaflet also describes *distance stereograms* – found on page 6.

*Do not confuse these exercises*, as performing the wrong exercise can make your symptoms worse.

Your orthoptist will provide a stereogram card for this exercise. The stereogram shows two similar pictures with slightly different features. When combined, they make a third picture with both features.

For example, the cat stereogram shows two cats – one with a tail and one with ears. Together they make a third cat with both a tail and ears. Your stereogram may have different pictures, but can be used in the same way.

You will also need a near viewing target. This should be a small object that can be held in one hand.

- Hold your stereogram at arm's length, at around eye level.
- Hold the target between you and the stereogram.
- Look at the target. You should see one target with things in the background becoming double. This is normal double vision; we need to be able to see this to use the stereograms.
- Keep focusing on the target. Without looking away from your target, keep your attention on the stereograms. You should see two cards and four pictures.
- Try to join the stereogram pictures together until the cards overlap and there are three pictures. The central picture should have features of both pictures.
- Keep looking at your target and keep the third image together.
- Try to keep the image together for the duration of time recommended by your orthoptist. This will take some practice, but will get easier with time.

Stop when you have exercised for as long as recommended. Allow equal time for your eyes to relax.

There is information on page 2 on how to relax your eyes following exercises.

## Distance stereograms

The aim of this exercise is to make it easier to use both eyes for distance viewing.

This information leaflet also describes *near stereograms* – found on page 5.

*Do not confuse these exercises*, as performing the wrong exercise can make your symptoms worse.

Your orthoptist will provide a stereogram card for this exercise. The stereogram shows two similar pictures with slightly different features. When combined, they make a third picture with both features.

For example, the cat stereogram shows two cats – one with a tail and one with ears. Together they make a third cat with both a tail and ears. Your stereogram may have different pictures, but can be used in the same way.

You will need a distance viewing target, at least 3 metres away. This should be a still object or picture, which you can comfortably see with each eye.

- Hold your stereogram at arm's length, at around eye level.
- Look beyond your stereogram card at your distant target. You should see one target, with the stereogram card becoming double. This is normal double vision; we need to be able to see this to use the stereograms.
- Keep focusing on the target. Without looking away from your target, keep your attention on the stereograms. You will see two cards and four pictures.
- Try to join the stereogram pictures together until the cards overlap and you can see three pictures. The central picture should have features of both pictures.
- Keep looking at your target and keep the third image together.
- Try to keep the image together for the duration of time recommended by your orthoptist. This will take some practice, but will get easier with time.

Stop when you have exercised for as long as recommended. Allow equal time for your eyes to relax.

There is information on page 2 on how to relax your eyes following exercises.

## Eye strain

It is normal to feel some discomfort while performing orthoptic exercises. This will get easier as your co-ordination improves. However, the exercises should not be so difficult that they cause eye or head pain.

It is important not to over exert yourself. This can make your symptoms worse. Do not perform your exercises more frequently or for longer than recommended. Do not push yourself to exercise if you are feeling very tired or unwell.

If your exercises feel easy but your symptoms are not improving, you may not be performing them correctly. Make sure you keep both eyes open and do not move your head away from your viewing target.

## Try to be consistent with your exercises

If you cannot find time to exercise for as long or as often as recommended, please try to exercise briefly at least once a day. Performing your exercises for a short time every day is more effective than exercising for a long time once a week. Do not try to compensate for exercises missed on previous days.

Many people struggle to fit exercises and relaxation into their daily schedule. If this is also a problem for you, then please discuss it at your next appointment. Your orthoptist can help to find a plan that works for you.

## Contact us

If you have any questions please ring 0118 322 7169, and select option 1, then option 2 or email [rbb-tr.orthopticsreading@nhs.net](mailto:rbb-tr.orthopticsreading@nhs.net), Monday to Friday between 8:30am and 4:30pm. Orthoptic Department, Level 2 Eye Block, Royal Berkshire Hospital.

To find out more about our Trust visit [www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

**Please ask if you need this information in another language or format.**

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