

Orthoptic Department

Convergence Insufficiency

What is convergence?

Convergence is the ability to pull both eyes inwards in order to view an object up close.

What is convergence insufficiency?

Convergence insufficiency (CI) is a weakness/inability to converge and keep your eyes in the near position.

What are the symptoms?

These include:

- Headaches
- Eye strain
- Blurred vision
- Fatigue/Double vision when carrying out near tasks

How can we treat convergence insufficiency?

Sometimes glasses can help in the treatment of CI.

Usually exercises are given to improve and consolidate convergence of the eyes.

In some severe cases, a prism can be prescribed to relieve symptoms for close work.



Convergence Exercises

Smooth Convergence

- Hold a target no larger than the size of your thumb at arm's length (usually a pen/stick)
- Slowly move the target closer towards your nose keeping the target single and clear.
- If the image splits into two, hold it steady and try to re-join the images
- If you cannot get single vision then move the target back 1-2cms and try again.
- Repeat exercises for minutes daily.

Jump Convergence

- Use a pen or stick held at arm's length
- Find an object in the distance to look at (about 6m away), which is directly behind the pen/stick you're holding up.
- You will notice that the pen appears to split into two (double). This is normal.
- Look back at the pen and it should appear single again.
- Then look at the distant object and while doing so move the pen 2-3cm closer.
- Now look back at the pen and try to keep it single.
- Repeat this, each time moving the pen a little closer to you.
- When you can no longer keep the pen single, return it back to arm's length and repeat the test.
- Repeat exercises for minutes daily.

Dot Card

- Hold the card so that it is touching the tip of your nose with the line of dots in front of you.
- Look at the furthest dot away. Keep it clear and single.
- Move your eyes to the second dot. If the eyes are converging correctly, the second dot will now appear single and the dots in front

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and behind this one will appear double. The line will now look like an 'X' pattern.

- Hold each dot single for 5 seconds before moving to the next dot.
- Continue down each dot until you can reach the one closest to your nose.
- Repeat exercises for minutes daily.

Near Stereograms

- Hold the card at arm's length and a pen in the other hand.
- Place the pen in the centre of the card between the two pictures.
- Look at the pen while gazing at the card at the same time. You should be aware of the images on the card whilst still looking at the pen.
- Move the pen slowly towards you, stopping halfway between the card and your nose.
- You should see four pictures initially and then the middle two pictures should join together. For example, you will see a whole cat with ears and a tail.
- Repeat exercises for minutes daily.

Distance Stereograms

- The same card can be used again at arm's length but looking at a distant target (about 6m away)
- Stare over the top of the card at the picture. Initially you will see four pictures, and then the middle two will merge to form three.
- Keep the middle picture clear.
- Repeat exercises for minutes daily.

For all exercises you must relax your eyes after completion. Look far into the distance or close your eyes for a few moments. It is advised to not do close work immediately after exercises.

Patient Information

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