

Paediatric information: medicines

Atropine treatment for Amblyopia (lazy eye)

What is amblyopia?

Amblyopia (pronounced amb-lee-oh-pee-ah) or 'lazy eye' develops in childhood and results in reduced vision in one eye. It happens when one eye is used less than the other between birth and seven years of age. This leads the brain to prefer the better eye.

What are the causes of amblyopia?

Amblyopia is caused by:

- A turn in the eye (strabismus or squint)
- A difference in the glasses prescription between the two eyes
- An obstacle blocking the visual stimulation to the eye, such as a droopy eyelid or cataract (cloudy lens). The amblyopia may still continue after the obstacle has been removed.

Treatment of amblyopia

Glasses can help and should be worn all the time if prescribed. There are two treatment options for stimulating the vision

in the weaker eye by temporarily reducing the use of the good eye:

- Patch to cover the good eye. If glasses are worn, the patch should be worn under the glasses, but sometimes, when the vision has started to improve, the patch can be worn on the glasses.
- Eye drops (1% atropine sulphate) to blur the vision in the good eye. The drops are used twice a week for example, Wednesday and Sunday.

How do the drops work?

The drops relax the focusing muscles of the eye, which blurs vision in the good eye during the treatment. The drops also relax the muscles of the eye which enlarges (dilates) the pupil - the central black area in the middle of the iris, the coloured part of the eye (see diagram).

Photograph of dilated right pupil



Points to remember

- Store atropine in safe place out of the reach and sight of children.
- Store at room temperature (<math><25^{\circ}\text{C}</math>).
- Do not use drops after the expiry date written on the packaging.
- Do not re-use single dose unit preparations (“minims”). Use once then discard.
- Do not let anyone swallow the medication.
- Before and after giving drops, it is important to wash and dry your hands.
- You only need to place one drop in the eye.
- Inform your child’s school about the use of atropine and the enlarged pupil.

What should I tell the pharmacist, orthoptist or doctor?

Tell the pharmacist, orthoptist or doctor if your child is allergic to any medication or if

your child has any other eye condition, particularly glaucoma.

What are the side effects?

Atropine causes blurred vision which can last up to two weeks after finishing treatment. The eye may also be more sensitive to light.

If your child has a turn in the eye (squint) you may notice the squint occurs in the other eye whilst using atropine. Do not worry, when the squint swaps from side to side it often means the lazy eye is starting to see better.

Rarely, once the vision has improved in the lazy eye, the previously “good” eye may then become lazy and need treatment. With careful monitoring by the orthoptist this is very uncommon.

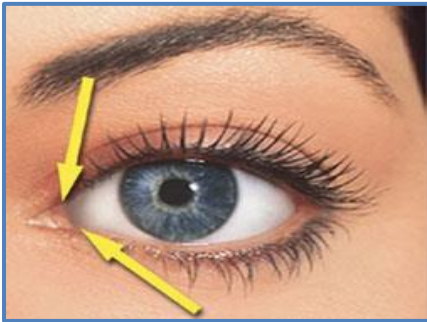
As with most medicines, some side effects may occur with atropine drops, although most children do not have any problems.

Possible side effects in the eye are: mild stinging and redness of the eye after putting the drops in; allergy to the drops when the eye becomes very red and itchy; very rarely, increased eye pressure, but usually only if there is already a problem with the health of that eye.

General side effects are rare and occur when small amounts of the medicine are absorbed into the body from the eyes.

These include: dry mouth and skin, redness of the cheeks, irritability and difficulty sleeping, high temperature, difficulty passing urine, constipation and an increased heartbeat. To help protect from this, you can press on the tear ducts on the inner side of the eyelids for a minute during and after putting in the drops (see diagram).

Photograph to show where to press the eyelids following drops



If your child experiences symptoms that you think are due to the drops, stop the atropine and contact your pharmacist or doctor.

What happens next?

Your child will have regular appointments whilst being treated. As vision improves the use of atropine may be changed or replaced with a patch under the instruction of the orthoptist.

Most cases of amblyopia are treatable but the success of treatment depends on the vision at the start of treatment, age and using the treatment as instructed. It is important to treat amblyopia as early as possible to get the best possible vision.

If it is not treated, the vision in that eye will be permanently damaged. It is very important that you try really hard to follow the instructions given by your child's doctor or orthoptist. Amblyopia is best treated before seven years of age and later attempts to treat might not be successful.

We know that children do not always understand why they need drops and treatment can be difficult. Your orthoptist is very experienced in dealing with children who have amblyopia and can advise you about carrying out the treatment at home as effectively as possible.

If you need to speak to the orthoptist, please contact the Moorfields' service where your child is being seen:

Moorfields Eye Hospital, City Road
Phone: 020 7566 2161 (Monday to Friday)

Moorfields at St George's
Phone: 020 8266 6120 (Monday to Friday)

Moorfields at Ealing
Phone: 020 8967 5766 (Tuesday and Wednesday, ask for the orthoptist)

Moorfields at Northwick Park
Phone: 020 8869 3160 (Wednesday and Friday, ask for the orthoptist)

Moorfields at Homerton
Phone: 020 8510 5018 (Friday, ask for the orthoptist)

Moorfields at Potters Bar
Phone: 01707 653 286 (Wednesday)

Moorfields at Bedford
Phone: 01234 792 290 (Monday to Friday)

Moorfields at Croydon
Phone: 020 8401 3485 (Monday to Friday)

Moorfields at Darent Valley Hospital
Phone: 01322 428 100 ext. 4646


Information online:
www.orthoptics.org.uk
www.3M.com/uk/opticlude
www.eyefive.co.uk

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Moorfields Eye Hospital NHS Foundation Trust
City Road, London EC1V 2PD
Phone: 020 7253 3411
www.moorfields.nhs.uk

Moorfields Direct telephone helpline
Phone: 020 7566 2345
Monday-Friday, 9am-9pm
Saturday, 9am-5pm
Information and advice on eye conditions and treatments from experienced ophthalmic-trained nurses.

Patient advice and liaison service (PALS)
Phone: 020 7566 2324 or 020 7566 2325
Email: pals@moorfields.nhs.uk
Moorfields' PALS team provides confidential advice and support to help you with any concerns you may have about the care we provide, guiding you through the different services available at



Moorfields. The PALS team can also advise you on how to make a complaint.

Your right to treatment within 18 weeks

Under the NHS constitution, all patients have the right to begin consultant-led treatment within 18 weeks of being referred by their GP. Moorfields is committed to fulfilling this right, but if you feel that we have failed to do so, please contact our patient advice and liaison service (PALS) who will be able to advise you further (see above). For more information about your rights under the NHS constitution, visit www.nhs.uk/choiceinthenhs.