Myopia treatment

Your child has been diagnosed with progressive myopia. There was no available treatment until recently, but new research has shown that atropine eye drops can have an inhibitory effect on myopia.

When is your child eligible?

Children from the age of four who have high myopia and children whose myopia increases by -1 or more per year are eligible for atropine eye drops. Most children with myopia do not require this treatment. The orthoptist or ophthalmologist will inform you if your child is eligible for this treatment.

What is myopia?

Nearsightedness (or myopia) is a refractive error of the eye; the eye is too long, focusing on nearby objects in front of—instead of on—the retina and causing objects in the distance to be blurry. Objects that are close appear sharp, hence the name "nearsightedness". Negative glasses or contact lenses can correct myopia to make everything appear sharp again. Myopia usually develops between the ages of six and twelve. As the eye grows and increases in length, the degree of myopia also gradually increases. It usually stabilizes from about 25 years of age. Myopia is hereditary, meaning that if you or the other parent are myopic, your child has a higher chance of becoming nearsighted.

Risks of high myopia

Most cases of myopia are associated with a long eye. An average eye is 23 mm long; a myopic eye can be as long as 30 mm. An eye length of more than 26 mm or a lens stronger than -6 is so-called high myopia and can lead to thinning of the retina. After the age of 40, high myopia can cause problems such as wear, bleeding, detachment of the retina and a greater risk of cataracts and glaucoma (high eye pressure). As the corrective strength of the lens increases, so does the risk of these conditions. Glasses, contact lenses, laser treatment or an artificial lens implant do not reduce these risks.

Myopia correction

Myopia is most often corrected with glasses; older children can choose to wear contact lenses. An orthoptist or ophthalmologist can precisely determine the required prescription with an eye drop test. While your child is still growing, their eyes will be tested regularly. The rate at which a person's eyesight decreases varies greatly, but glasses always require adjustment from time to time.

Treatment of the increase in myopia

There are several ways to slow down the growth of a child's eyes. There are environmental factors that we can influence, and treatment with atropine eye drops is possible.

Environmental factors

Research has shown that reading a lot and for long stretches causes myopia to increase faster. We recommend always holding books, tablets, phones or game consoles at least 30 centimeters away from the eyes and taking five-minute breaks after every 30 minutes of intense, close-range work. There are also indications that children who spend a lot of time outside (more than two hours a day) have less severe myopia. Being outside a lot may reduce the chance of myopia.

Treatment with atropine drops

Scientific research has shown that atropine eye drops are the most effective for inhibiting myopia progression. The World Organization for Paediatric Ophthalmology and Strabismus (WSPOS) recommends prescribing atropine 0.01% eye drops for this purpose.

Is Atropine Dangerous?

Atropine is a toxic substance when taken orally in high doses, so it is important to ensure that the eye drops are kept out of children's reach. Atropine has been used as an eye drop for centuries. Several large studies in which atropine was used for long periods showed no serious consequences. Nevertheless, it is important to recognize the possible side effects.

Side effects of atropine

Possible side effects include photosensitivity and blurry vision. General physical side effects occur in less than 1% of children and may include red eyes, fever, rash, fast heart rate, dry mouth and behavioral disturbances. If your child suffers from any of these physical side effects, stop treatment immediately and contact us. Because the risk of side effects is so low, especially with a dose as low as 0.05% atropine, the drug can be used safely to treat myopia.

Note: atropine 0.05% (0.5mg / ml) is not a standard dosage, but a much lighter one. Please check whether you have received the correct dosage at your pharmacy.

Treatment of children with atropine

If your child has been prescribed treatment with atropine eye drops, you should apply the drops to both eyes every day. Choose a fixed time of day. In some cases, a child may only be nearsighted in one eye, in which case only that eye needs to be instilled. If your child wears contact lenses, they must be removed before treatment; they can be put in again after 30 minutes. Your child will require regular check-ups by the orthoptist or ophthalmologist. Duration of the atropine treatment depends on your child's age and prescription and is assessed at each check-up. If your child experiences a rapid increase in myopia despite treatment, a decision may be made to prescribe a higher dose of atropine. This is not without consequences—your child will have blurry vision when looking at objects that are

near and will become more sensitive to light. Bifocals and, potentially, self-tinting lenses are necessary to treat this side effect.
Atropine is prescribed to slow down the growth of the eye. It does not improve your child's vision. It also does not replace the need for glasses, contact lenses or an eye patch to treat a lazy eye.

Finally

We hope this brochure has provided you with sufficient information about atropine eye drops used to treat myopia. If you have any questions regarding the information in this brochure, please ask your ophthalmologist or orthoptist.

Contact

If you have any questions, please contact the ophthalmology outpatient clinic on (040) 888 63 60, available on working days from 08:30 - 12:00 and 13:00 - 16:30.
For emergencies outside office hours, please contact the Emergency Department, MMC location Veldhoven on 040 888 88 11.