



The eyes of children

Observe your children's eyes to detect
vision problems

Fondation Asile des aveugles
A gift of sight, a gift for life.
CCP 10-2707-0

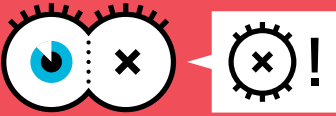
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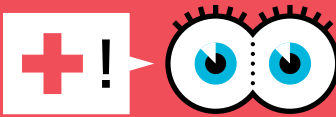
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University department of ophthalmology
Fondation Asile des aveugles



Even when they can't see well, children rarely complain about a problem with their vision.

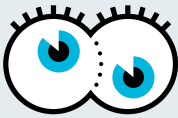


Early detection is important because, if eye problems are not corrected, they can lead to permanent vision loss.

How can you recognise a vision problem?

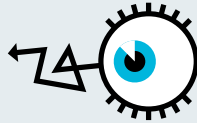
If you notice any of these signs, consult your paediatrician or an ophthalmologist (working with an orthoptist if possible).

How are your child's eyes?

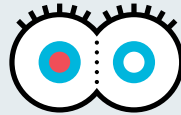


Not aligned, always or occasionally squinting.

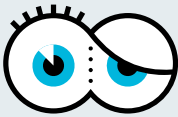
If your child permanently or suddenly starts squinting, seek urgent consultation!



Very unstable, moving all the time



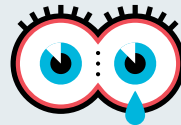
In a flash photograph, one eye has a red reflection, the other a white reflection



One eyelid almost completely covers an eye

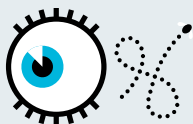


The eyelids are red, swollen or crusty

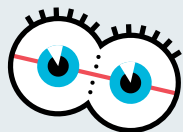


They are watery or red (irritated)

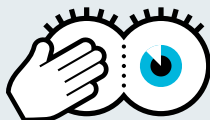
What does your child do?



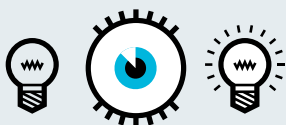
They don't look at you,
or follow moving objects



They tilt their
head abnormally



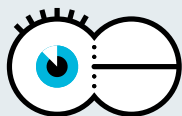
They shut or cover
one eye



They don't react
when passing from
darkness to light



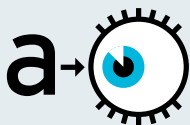
They rub their eyes
a lot



They frequently blink



They're bothered
by bright

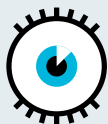


They have difficulty reading,
or need to hold things very
close to their eyes



They squint

What does your child say?

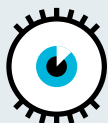


"My eyes itch "
"My eyes hurt "
"I can't see very well "

After doing work up close or after school, they say:



"I've got a headache "
"I feel dizzy "
"I feel sick "

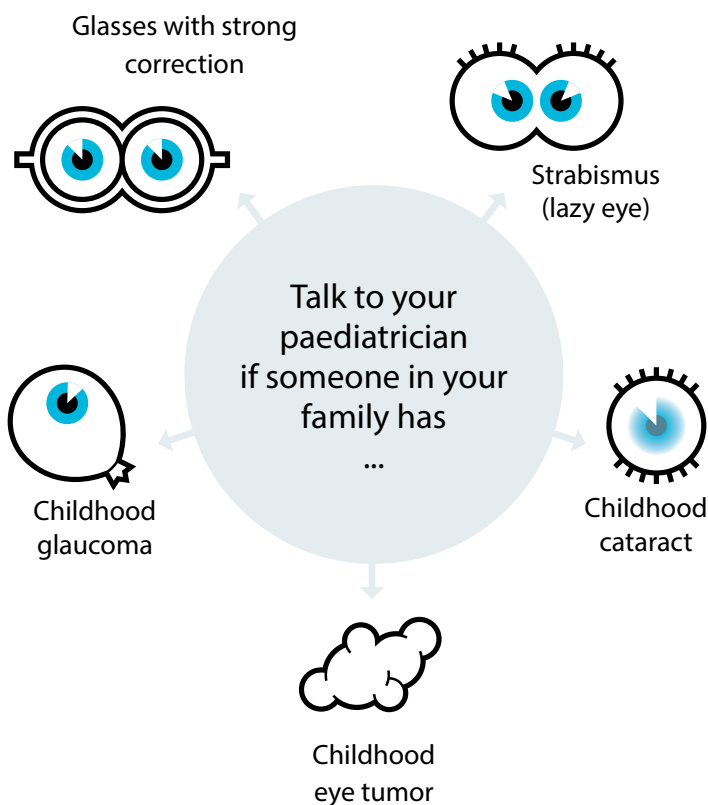


"Everything's blurry "
"I'm seeing double "

Remember that
poor eyesight
can easily
go unnoticed !

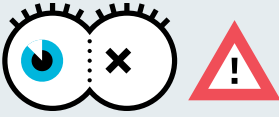
Are there visual problems in the family?

If a child's parents, brothers or sisters have a visual problem, the risk for the child's vision is also higher.



In such cases, a check-up with an ophthalmologist is recommended during the first year of life.

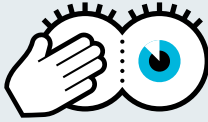
A simple preliminary eyesight test



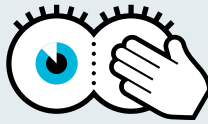
If only one eye can't see well, the child will adapt and the problem can go completely unnoticed. It is therefore important to check whether the child sees the same way with both eyes.

For babies:

Cover one eye ...



Then the other ...



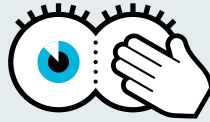
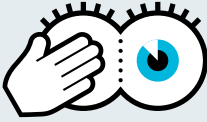
Do they react in the same way
on both sides?



Do they always cry when you cover
the same eye?

In older children:

Cover one eye ...



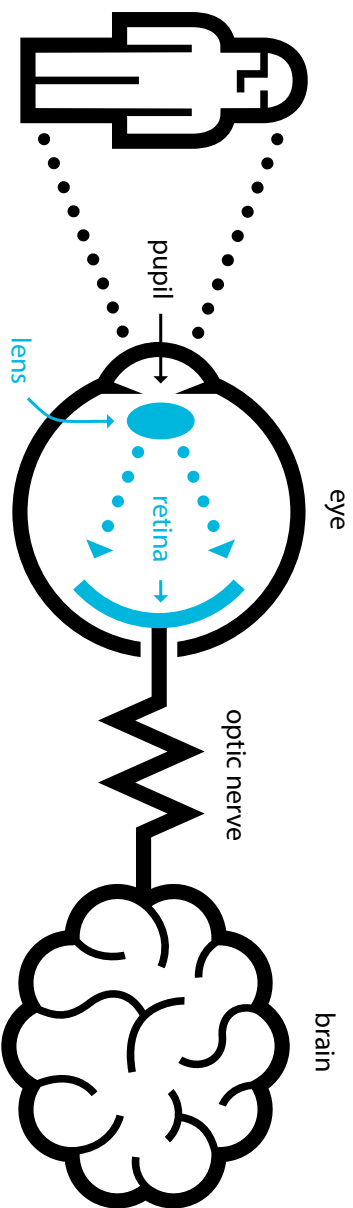
Then the other ...

Can they see the smaller images
with both eyes?



Perform the test at the back of this
brochure (make certain they do not peek
through their fingers!)

Consult your paediatrician
or ophthalmologist if you
have the impression there
is a difference in vision
between the two eyes



How is vision formed?

How does a child's vision develop?

A child's vision is not mature at birth. It develops progressively until they start school.



Birth: Vision is blurry (5% of adult vision) and in black & white. New-borns mostly see very high-contrast objects up close, and their visual field is very narrow.



2-3 months: Babies can fix their gaze, follow the face of their mother then follow objects, and respond to smiles. They can perceive differences in colours.



3-9 months: The 2 eyes learn to work together, which enables the baby to see in 3 dimensions (3D). They begin to see details.



1 year: Vision is still blurry, estimated at 30-40% of an adult's vision. Coordination between the child's eyes and hands improves.



4 years: The retina is fully developed, but vision is still only about 60%.



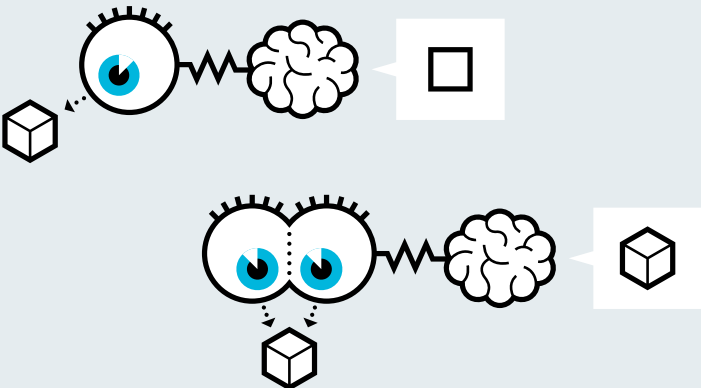
7 years: Vision corresponds to that of an adult (100%), but its "final" development continues.

Why is it important that both eyes see well?



Both eyes are in competition throughout the entire development of vision. If one eye sees less well than the other or is lazy, it may be "neglected" by the brain, which will only use information supplied by the "good" eye. This is called amblyopia, and affects 5 to 10% of children.

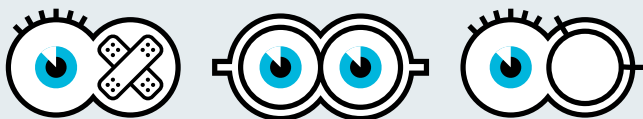
Since both eyes are side by side, they supply the brain with two slightly offset images. The brain puts them together, and creates a 3D image. Both eyes are required to see the surroundings well.



What should you do if one eye sees less well ?

How is amblyopia treated ?

Treatment is composed of 3 parts :



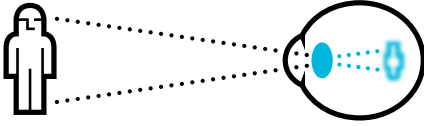
1. Provide the eye with an image: operate on an eyelid if it covers the eye completely, remove an opacity in the transparent parts of the eye (for example, cataracts) etc.
2. Make the image clearer: use glasses if necessary
3. Force the brain to use the "weaker" eye: most usually by covering the "better" eye with a patch for a few hours every day

Above a certain age, it is no longer possible to teach the brain to "see" with both eyes.

Early detection is therefore essential.

The earlier treatment
is started,
the faster and more
effective it is.

Examples of vision problems

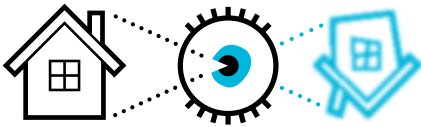
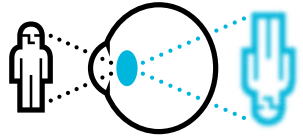


Myopia

The eye is too long, and distance vision is blurry.

Hypermetropia

The eye is too short, and near vision is blurry. Up to a certain extent, the eye can compensate by making an adjustment (accommodation), but this can cause fatigue or even a squint.

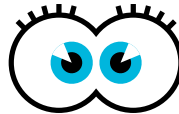


Astigmatism

The "window" of the eye, the cornea, has an irregular shape which creates a blurry image.

Strabismus

The eyes are not aligned: one eye looks inwards, outwards or vertically.



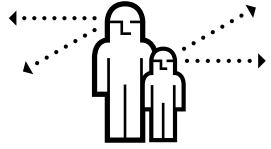
Cataract

The "lens" of the eye is opaque, which creates a blurry image.

Each of these problems can lead to amblyopia, poor vision in one eye.

How do you choose glasses for children?

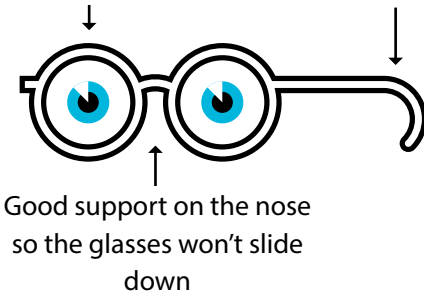
A child's "world" is in front of them, but it's also a little above them: they look up to see you, for example. What's more, they move around a lot more than adults!



Three elements are essential:

Large glasses, so the child can always see through the lens, even when looking up

Good support behind the ears



Good support on the nose so the glasses won't slide down



Beware of sunlight!

The crystalline lens of the eye is transparent up to 9 years of age and does not protect the eye from rays of sunlight. Children should wear sunglasses whenever they are exposed to sunlight, for example at the seaside or in the mountains.

Eyesight test for children

Cover one eye, then the other... Can your child see the small images on one side better than the other ?



A range of ophthalmological tests exist, which enable you to determine whether visual acuity is adequate. This is a free interpretation of standardised tests, and serves only for detect a difference in vision between the two eyes.