



The red reflex

The red reflex is light which is reflected by the inside of the eye, which can sometimes be seen through the pupil. We normally don't see this reflected light as it scatters in many directions but, when a beam of light goes into the eye and the light coming out of the eye are in line, the red reflex can be seen, especially in a dark room. Normally the reflected light is red because of the blood supply under the retina (the seeing layer of the eye). The most common time you see the red reflex is on flash photographs: the flash and the camera lens are so close together that the photo picks up the reflected light causing 'red eye' or 'red pupil'.

Doctors, nurses, health visitors and optometrists can use the red reflex to check the health of the eye. All newborn babies have a 'red reflex check' twice within the first few weeks after birth. A health professional has a special torch (ophthalmoscope) which shines light into the eye and looks into the eye at the same time.

What can cause an 'abnormal' red reflex?

Anything in the eye blocking the light from travelling inside the eye or which causes the back of the eye to be more

pale can cause an abnormal red reflex. Examples are a clouding of the lens of the eye (cataract), or a physical abnormality of the retina at the back of the eye. Very high glasses prescriptions can also make the red reflex look different.

Why has my child been referred to the eye clinic about their red reflex?

You may have been worried that the red reflex does not look right on your child's photos or a healthcare professional may have found a white reflex or a missing red reflex during the newborn checks. 'White eye' or 'white pupil' can be a sign of serious problems in the eye, the most serious of which is cancer in the eye. However, most babies referred with possible white pupils turn out to have nothing wrong with them. The best way to find out whether there is a problem with the eye, or whether the abnormal red reflex is harmless is to do an examination of the inside of the eyes by doctors or other members of the specialist children's eye team.

How do you examine the inside of the eyes?

After drops to make the pupils bigger, the eye examination is completed by a

specialist using a special head-mounted torch and magnifying glass to check the inside layers of the eye. Sometimes a hand-held microscope is also used to check the front parts of the eye and the lens. This allows the specialist to see any abnormality in the eye causing an abnormal red reflex. In many children, this examination can be completed quite quickly when there is nothing wrong.

We have been told that there is nothing wrong with my child's eyes. Why was the red reflex abnormal on my photos or when my GP/other clinicians checked it?

The most common reason for an abnormal red reflex on photos is that one or both eyes were not looking straight at the camera. The most common situation where healthcare professionals are not sure about the red reflex is in babies with dark brown eyes. In these babies, the back of the eyes is usually darker, so less light is reflected and the red reflex is not as bright.

What do I need to look out for now that my child has been discharged from the clinic?

Your child's eyes are healthy, so you do not need to worry about the red reflex any more. There are other eye conditions that any child can develop later, such as a squint (strabismus) or short-sightedness (myopia). If in the future you feel that your child cannot see well, or that their eyes are not straight, please speak to your GP. If your child is five or older, you can take

them to see a local optometrist (optician).

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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.

