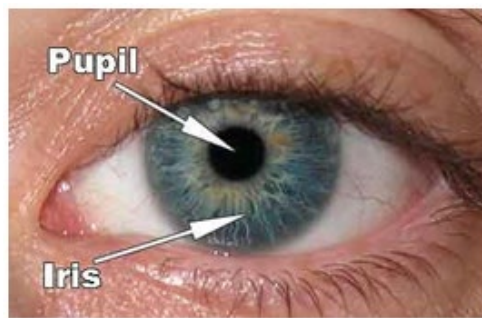


Pupil Dilation

Authored by Ieuan Rees

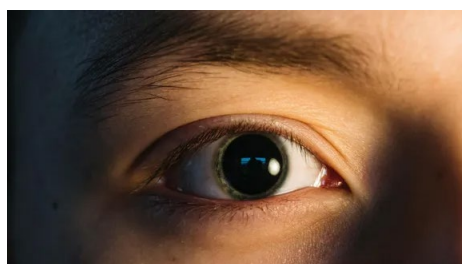
What do my pupils do?

The pupils of the eyes are simply holes in the centre of the iris (the coloured part of the eye) that allow light to reach the back of the eye and form an image. The pupil size changes in response to changes in light intensity – the brighter the light, the smaller your pupils become. When the light is dimmed, the pupils dilate again to allow more light to enter the eye. Muscles in the iris, which enlarge or constrict the pupil, control this function. The process adjusts the amount of light that enters the eye so that the optimum amount for clear vision focused onto the retina at the back of the eye. The pupils also get smaller when we look at something close and bigger when we are excited, in pain or frightened. Even though it is dark when we sleep, the pupils become small because the muscles that control pupil size are at rest. In most people the pupil size is equal in the two eyes at any given time and remains so even if one eye is kept in darkness and the other is exposed to light.



Why does my optometrist use drops that make my pupils larger?

As part of your eye examination your optometrist looks through your pupils to inspect the inside of the eye. In particular, the back of the eye is inspected because it contains the most sensitive part of the retina and the optic nerve that carries the visual picture to the brain. The instrument used for this examination is called an ophthalmoscope. There are several kinds of ophthalmoscopes but all utilize a bright light. This bright light would normally make the pupil very small and restrict the optometrist's view of the inside of the eye. To overcome this problem and allow a thorough assessment of the interior of the eye, your optometrist may need to make the pupils larger. Pupil dilation will allow an examination of the more peripheral parts of the eye or a particular feature under high magnification. This is achieved by placing drops in the eye, which will alter the muscle balance controlling the pupil size and allow the muscles that make the pupil larger.



What will I experience?

The drops act gradually to dilate the pupils over 20 minutes. You may notice difficulty in focusing on near objects such as books and some people notice that their distance vision is also blurred. You may also be more sensitive to bright lights and glare. These effects are harmless and largely wear off within about one hour. Many people, particularly the elderly, may experience no change at all in their vision. If you have an allergy to the active ingredient or to the preservatives used in the drops, your eyes may become itchy and red. This is rare and is easily treated. If you have had an allergic reaction to drops you have used in the past, tell your optometrist so precautions can be taken to minimize any side effects.

If you have any concerns about your eyes following an examination which dilation drops were used, please contact your optometrist for advice.