Presbyopia

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THE COLLEGE OF OPTOMETRISTS

Overview

As you get older the lens inside your eye becomes less flexible, so you become less able to focus on things that are close to you. This change is normal and is known as presbyopia. Most people notice this when they start to find it difficult to read small print or change focus between things at different distances. This leaflet explains why this happens and what various options are available to help correct it.

Watch our video about presbyopia at **lookafteryoureyes.org/presbyopia**.

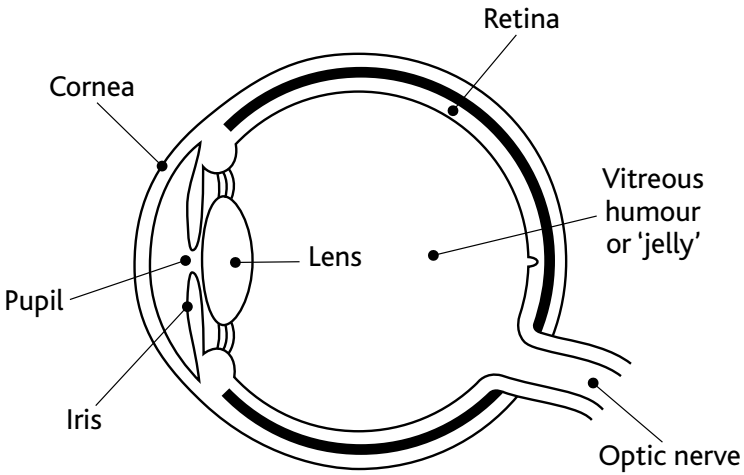
If you have any concerns about the health of your eyes, please visit your local optometrist. Optometrists are eye health specialists.

What is presbyopia?

There are two main parts of your eye that are responsible for focusing light on to your retina at the back of the eye so you can see clearly. These are your cornea (the transparent dome-shaped part at the front of your eye that covers the iris and pupil) and the lens inside your eye.

When you are looking at something far away, your eye is shaped so the object is focused on your retina (the back of your eye). Some people may need to wear glasses or contact lenses to help correct their vision, so that the image of the object is clear to see.

A change in focusing tends to become more noticeable when we reach our late thirties or forties.



When you look at something close up, for example to read a book, the muscles inside your eye that surround the lens (called the ciliary muscles) contract to make the lens change shape. This focuses the light from the book onto your retina. The lens inside the eye is normally flexible, so it can change shape easily and allows your eye to focus on things that are far away as well as things that are close up.

As we get older, the lens becomes less flexible, so it changes shape less easily. This reduced flexibility is called presbyopia. Presbyopia means we are less able to focus on things that are close to us, and may have to hold them further away to see them clearly. Everyone will experience some reduction in their natural ability to focus as they age, but some people will notice it more than others.

This is more noticeable when we want to look at something very close to us, such as when threading a needle. It may also mean that it may take longer for us to change focus from looking at something close up to looking at something far away (or vice versa).

The exact age at which you will notice presbyopia will vary depending on several things, including whether you are long- or short-sighted, but the change in focusing tends to become more noticeable when we reach our late thirties or forties. This is when we tend to find it difficult to focus on things that are at the normal reading distance. It is quite common to see people who have presbyopia holding things further away from them in an attempt to see them clearly.

Everyone will experience some reduction in their natural ability to focus as they age, but some people will notice it more than others.

As you get older, presbyopia continues to reduce the flexibility of the lens inside your eye. This is normal, and some people will notice it more than others. Presbyopia first affects how well you see up close, and your vision of things that are further away (such as a computer screen) will not be affected until later. This is when the lens is no longer flexible and so can't change shape.

When the lens has lost its elasticity and is no longer flexible, you will need glasses to focus on objects at the different distances you need to see. This may mean having separate pairs for distance and reading, and maybe another pair for middle distance, such as looking at the computer or reading sheet music.

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What is the treatment for presbyopia?

Presbyopia is a natural part of ageing. There is no cure, but there are many options to correct the effects on your vision. The solution is generally to wear glasses for reading. Because reading glasses focus light that comes from objects that are close to you, you will find that if you wear them and look at something far away, it will appear blurred. This is quite normal, and you will often notice people peering over their reading glasses to see something clearly in the distance. If you do not want to do this, or you would prefer not to have a separate pair of reading glasses, you can choose glasses with bifocal or varifocal lenses.

Bifocal lenses have two separate areas of the lens which are separated by a line. The top part of the lens helps you focus on things in the distance, and the bottom part of the lens helps you focus on objects close up. Varifocal lenses work in a similar way to bifocal lenses, but they have no line as the lens gradually changes its focus from top to bottom. These lenses allow you to see objects at any distance clearly, simply by looking at the object and moving your head up and down so that your eyes look through the correct part of the lens.

You can wear contact lenses for presbyopia if you do not want to wear glasses. Various surgical options are also available, such as laser eye surgery and lens exchange surgery, but these are not usually available on the NHS.

Contact lenses are available for presbyopia if you do not want to wear glasses.

Are there exercises I can do to stop me from needing reading glasses?

Presbyopia is not caused by muscle weakness but by the lens stiffening as we age. This means there are no exercises that can help.

Will presbyopia affect my distance vision?

If you are perfect-sighted, presbyopia will only affect your ability to see close up (for example, when reading) and your middle vision (for example, when using a computer). It does not affect your distance vision, so you will still be able to drive without glasses, and your optometrist will advise accordingly.

If you are long-sighted, as you get older and the lens stiffens, both your distance vision without glasses and your near vision will become worse. You will then need to wear separate glasses for both distance and near vision, or have bifocals or varifocals, to see clearly. Your optometrist will tell you which is best for you.

Will presbyopia affect my near vision?

If you are short-sighted, you will find that you can read more easily by taking your distance glasses off, although if you are very short-sighted you may have to hold things very close to your eyes to see them clearly without your glasses. This is because your natural focus is close up, so you can see things clearly at this distance without your glasses. You may prefer to have bifocals or varifocals to stop you having to take your glasses off when you want to read.

If you are hyperopic (long-sighted), as you get older and the lens stiffens, both your distance vision without glasses and your near vision will become worse.

I notice I mainly need my reading glasses at night – why is this?

If you need to wear glasses, it is very common to find that things are more blurry without them in dim light. This is because your pupils get bigger in poor light, so your ability to focus is reduced compared with when you are in daylight. This means that you notice the blurriness more. You may also find that you are more tired at night, so your muscles find it more difficult to contract to change the shape of your lens.

You will often see better in bright light, for example outdoors in the sunshine, when your pupils become smaller. This increases your depth of focus so that you don't notice the blurriness as much.

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Will wearing glasses make my eyes worse?

No. As presbyopia is caused by the lens stiffening, and not the muscles weakening, wearing glasses will not make your eyes worse. However, you may notice that when you take your glasses off, things appear to be worse without them than they were before you had them. This is simply because you are noticing how clear and comfortable your vision should be. Before you had the glasses, you were unaware how blurry your vision really was because it changed slowly over the years.

As we age, presbyopia continues to reduce the flexibility of the lens until we reach our late fifties, when the lens becomes so stiff that it is no longer able to change shape. This means you will no longer be able to focus naturally. While this change is normal, unfortunately it cannot be prevented.

As you age, presbyopia will continue to reduce the flexibility of the lens until you reach your late fifties, when you will no longer be able to focus naturally.

Can I use off-the-shelf reading glasses?

You can buy ready-made reading glasses to correct presbyopia from optometrists. They are also available from many shops. These glasses are designed for reading only, and are not suitable for driving. They are only right for you if both of your eyes have the same prescription and you have no astigmatism.

Research has shown that ready-made reading glasses are often not made to the same standards as prescription glasses, so we would recommend you have prescription glasses for your main pair of reading glasses, although it is OK to have ready-made glasses as spares. Even if you use ready-made reading glasses it is very important that you see your optometrist for regular eye examinations as people over the age of 40 are more at risk of eye conditions such as glaucoma and age-related macular degeneration. We produce leaflets on glaucoma and macular degeneration too.

I don’t want to wear glasses – can I have contact lenses instead?

Yes. Correcting presbyopia with contact lenses is possible, but it involves a more complicated fitting process than for glasses. This is because you can look through the different parts of a bifocal and varifocal lens simply by moving your head or eyes. As contact lenses move with your eye, it is more difficult to do this and correct the focus both for distance and near vision, although bifocal and varifocal contact lenses are available and often work well for some people. Another method is to correct the vision in one eye for distance and the other eye for reading. This is called monovision. We suggest you discuss the various options for contact lenses with your optometrist.

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This information should not replace advice that your optometrist or other relevant health professional gives you.

For more information, please talk to your local optometrist.

If you have any concerns about the health of your eyes, please visit your local optometrist. Optometrists are eye health specialists. An eye examination is a vital health check and should be part of everyone's regular health care.

Visit **lookafteryoureyes.org** for clear and helpful information on vision and eye health issues and keeping your eyes healthy.

The College of Optometrists

The College of Optometrists is the professional body for optometry. We provide qualifications, guidance and development opportunities for optometrists so that they can maintain and develop the knowledge and skills they need to deliver the highest standards of care. Membership of the College shows your optometrist's commitment to the very highest clinical, ethical and professional standards. Look for the letters MCOptom or FCOptom to see if your optometrist is a member or fellow of the College.

Other letters after your optometrist's name mean they have done further training and gained extra qualifications in diagnosing and managing specific eye conditions. The qualifications are available in different subject areas such as low vision, paediatric eye care, glaucoma and macular degeneration.

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