



Your prescription explained

Most people will need their eyesight corrected at some point in their lives. The reason for this is a 'refractive error', where the eye does not bend (or refract) light as it should. This causes blurred vision. There are four common types of refractive error and they affect your sight in different ways. All of them can usually be corrected with glasses or contact lenses and do not necessarily mean your eyes are unhealthy.

Myopia

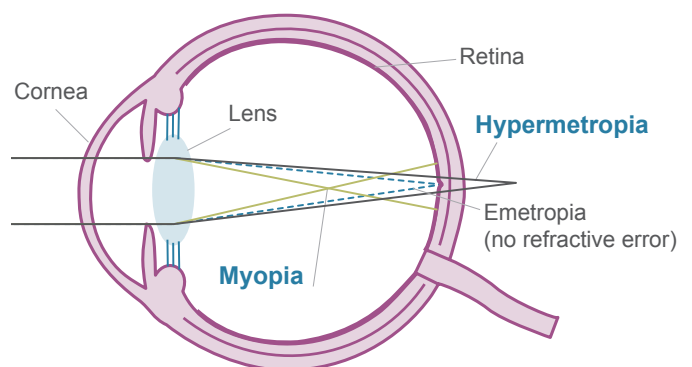
Myopia, or short-sightedness, happens when light is focused in front of, rather than on, the retina. This makes distant objects blurry, but objects that are close are clearer. The most common way to treat this is with glasses or contact lenses which refocus light onto the retina. If the amount of myopia is large enough and is left uncorrected, your distance vision will be poor.

Myopia can develop at any age and has been associated with both genetic and environmental factors. Your parents having myopia, ethnic background, environment (living indoors in cities) and carrying out prolonged tasks up close have all been linked to the onset and progression of myopia.

Hypermetropia

Hypermetropia, sometimes called hyperopia or long-sightedness, happens when light is brought to a focus behind the retina. This makes close objects blurry while objects in the distance appear clearer.

If the amount of hypermetropia is large enough and is left uncorrected, close vision may be poor and may lead to headaches and eye strain, particularly in adults. Hypermetropia usually becomes more noticeable as you get older.



Astigmatism

Astigmatism happens when light is not brought to a single focus on the retina. The light is focused unevenly, often due to the front of the eye being shaped 'like a rugby ball'. This causes blurring of both far and near vision. If uncorrected, it can also lead to headaches and eye strain.

Most people with hypermetropia or myopia will have some level of astigmatism.

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About the AOP

We are the leading representative membership organisation for optometrists in the UK. We support over 80% of practising optometrists to fulfil their professional roles to protect the nation's eye health. For more information, visit www.aop.org.uk

Presbyopia

The lens in your eye is flexible and able to adjust its focus when you look at objects at different distances. As you get older, the lens in your eye becomes stiffer and your ability to change focus reduces. This makes it harder to focus on close objects, such as when reading small print, particularly in poor light.

Presbyopia is a normal age-related change, which happens in your early forties and gets progressively worse as the lens in your eye loses more of its flexibility. It can be corrected with a pair of reading glasses which are designed to focus the light from close objects. Or you can have bifocal or varifocal lenses designed to focus light at both long and near distances at the same time.

Understanding your written prescription

Below is an example prescription. Prescriptions can vary, and yours may not look exactly like this.

R	SPH	CYL	Axis	Prism	Base		SPH	CYL	Axis	Prism	Base	L E F T
I	+5.00	-0.75	180	1.00	In	Distance	+5.25	-1.00	175	1.00	In	
G		Add +2.50		3.00	In	Near add		Add +1.75		3.00	In	
H						Intermediate add						
T												
BVD (if needed)		10mm										

Spherical error (SPH)

SPH stands for the spherical error and shows whether you have myopia (with a minus sign), or hypermetropia (with a plus sign). The number shows the strength of lens you need. A smaller number means the condition is milder. PL is short for plano and means there is no refractive error in that eye.

Cylinder (CYL) and axis

CYL stands for cylinder and shows the severity of any astigmatism. Axis shows the angle the cylindrical power your lenses must be to correct it. You may see DS written in the column which stands for diopter sphere and means you have no astigmatism.

Prismatic power (prism) and base

Prism is short for prismatic power and is used to correct problems with binocular vision, where both your eyes may have some difficulty working together. The number in the prism column shows the strength of the correction, and the base column shows which direction the prism is acting in.

Near add and intermediate add

This refers to the additional correction you may need to focus at short distances and is more common over the age of 40. The intermediate add refers to the additional strength of lenses you may need to bring a 'mid-range' distance in focus (usually the distance to a computer screen you are viewing) and the near add is usually for close tasks such as reading. This number is added to the spherical error part of the prescription to give the actual near or intermediate prescription. Not all prescriptions will have a section for the intermediate add, instead it may be written in by hand if needed.

Back vertex distance (BVD)

BVD stands for back vertex distance and is the distance in millimetres between the front of your eye and the lens of your glasses. This distance can influence the effective strength of a lens and is usually only given for higher-strength prescriptions.

Remember, if you are not sure about anything on your prescription, your optometrist or dispensing optician can help.

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