Contact details
If you have any concerns please contact your orthoptist.

Orthoptic department
01823 344679
8.30am-5pm

Diplopia
(double vision)
and Fresnel Prisms

Orthoptics
**What is diplopia?**
Diplopia is the medical term for double vision (seeing two of something).

**Why do I have diplopia (double vision)?**
Each eye is controlled by six muscles that work in pairs to move your eyes together. If a muscle is unable to work properly, your eyes may no longer be aligned and will not be able to work together. This results in diplopia (double vision).

**Why is my diplopia variable?**
The type of diplopia varies depending on the muscles involved. Diplopia can be horizontal (two images side by side), vertical (one image above the other) or tilted (on a slant). It may be a combination of more than one kind. It can occur close up (for activities such as reading) or when viewing distant objects.

**How can diplopia be eliminated?**
An orthoptist can join the two images to make one image by using a prism. A prism can be attached temporarily to your own glasses or some plain glasses to correct the diplopia. These are called Fresnel prisms (pronounced frennel). Sometimes it may not be possible to correct the diplopia and it may be necessary to cover one eye to remove the second image. This will not damage your eye sight in any way but may make it harder to judge depth and distance.

**What is a Fresnel prism?**
This is a thin sheet of flexible plastic available in different powers that can be cut to fit onto your glasses. The prism attaches to the inside of the lens of your glasses with water and does not damage it in any way. Once the water has dried they rarely fall off. The prism can easily be changed if your diplopia changes to maintain single vision. Some users of Fresnel prisms do find that they can blur vision slightly or can split light into a rainbow effect.

**Cleaning my Fresnel prism**
Your prism has a smooth side that attaches to the inside of the lens of your glasses and a rough side that faces towards the eye. This rough side can collect dust and grease but can be cleaned by running the prism under a gentle stream of water and brushing along the lines of the prism with a soft brush. Smoking will permanently discolour the prism.

**Removing and replacing a prism**
If your prism falls off, or needs to be removed for cleaning, it can be replaced. It is essential that the prism is replaced on the same lens and facing the same way as fitted by the Orthoptist. Hold your glasses in shallow water or under a gently running tap. Press the smooth side onto the lens. Remove from the water and check that the prism is correctly positioned. Any air bubbles underneath the prism can be squeezed outwards.

**Permanent prisms**
If your diplopia persists and your prism power remains stable over a period of time, it may be possible to ask an optician to incorporate the power of the Fresnel prism into the lens of your glasses. This eliminates the lines and distortion caused by the Fresnel prism. Please do not have prisms incorporated until you have discussed this with the orthoptist.