

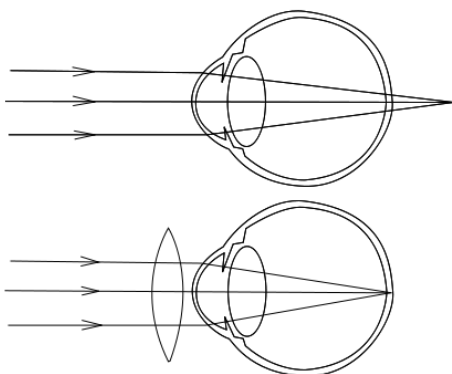
## INFORMATION FOR PATIENTS

# What is a refractive error?

This leaflet explains the three types of refractive error.

### 1. Hypermetropia (or long sight)

- This means the light focuses better on distant objects than near ones
- Hypermetropic eyes are usually smaller than average or the focusing powers of the eye are too weak, and causes blurred vision
- Normally infants are a little long-sighted
- By using a convex (magnifying) lens, objects are brought into focus on the retina at the back of the eye (see below)



Convex lens

- Some children are too long-sighted, in which case they need glasses for constant wear
- The first sign of hypermetropia is often a squint, one eye turning towards the nose
- Otherwise it may be picked up by a vision check of the child at three to four years of age.

**All children must have the vision of each eye tested separately at this age as part of a developmental check.**

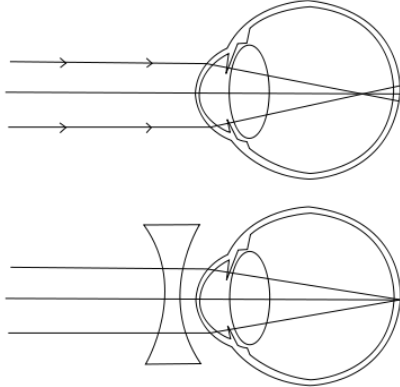
### 2. Astigmatism

- This can be present at the same time as short or long sight. It means that the shape of the cornea is not even (rather like a rugby ball), so light is bent more sharply by one direction of the cornea than another. Light cannot then be focused to a point.

### 3. Myopia (or short sight)

- This means the eye cannot focus on distant objects but can focus on near objects
- Myopic eyes are usually longer than average, so the light focuses in front of the retina and causes blurred vision

- By using a concave lens, objects in the distance are seen clearly as the light focuses on the retina at the back of the eye (see below):



Concave lens

- Short sight usually starts after the age of ten, but it can be present from birth.

Children with refractive error need yearly checks of their spectacle correction along with regular vision checks by the orthoptist until their vision is stable. They will then be discharged to a local optician.

### Contact details

If you have any problems or queries, please ring:

#### King's Mill Hospital

01623 622515, extension 3365 or 6655  
Monday to Friday, 9am-4pm.

#### Newark Hospital

01636 681681.

### Further sources of information

NHS Choices: [www.nhs.uk/conditions](http://www.nhs.uk/conditions)

Our website: [www.sfh-tr.nhs.uk](http://www.sfh-tr.nhs.uk)

### Patient Experience Team (PET)

PET is available to help with any of your compliments, concerns or complaints, and will ensure a prompt and efficient service.

**King's Mill Hospital:** 01623 672222

**Newark Hospital:** 01636 685692

**Email:** [sfh-tr.PET@nhs.net](mailto:sfh-tr.PET@nhs.net)

If you need this information in a different language or format, please contact the PET (as above).

This document is intended for information purposes only and should not replace advice that your relevant health professional would give you.

External websites may be referred to in specific cases. Any external websites are provided for your information and convenience. We cannot accept responsibility for the information found on them.

If you require a full list of references for this leaflet, please email [sfh-tr.patientinformation@nhs.net](mailto:sfh-tr.patientinformation@nhs.net) or telephone 01623 622515, extension 6927.

To be completed by the Communications office  
Leaflet code: PIL3254(2)  
Created: November 2015 / Revised: June 2017 /  
Review Date: June 2019