## **The Partially Sighted Society**



# Living with single vision

Losing the sight or one eye either through illness or an accident, need not mean that productive life is over. When a person loses the sight in one eye several things have happened physiologically to the vision:

- The field of vision has become narrower
- The ability to see depth becomes difficult
- The visual system including the brain and motor functions becomes confused and requires a period of time to re-adjust in order to become integrated.

If you are learning to live with one eye, you will already be aware of this. You reach for a cup and miss, or try to shake someone's hand and it's not there. This is because in order to accurately judge how far away an object is involves three pyhsiological operations: retinal disparity; convergence and accommodation.

### **Retinal disparity**

Retinal disparity is the mechanism used when an object is viewed with two eyes separated by several inches. This means that each eye is looking at the same object at the same moment from a different location. That is, one eye views the object slightly to the right and the other slightly to the left, producing a slightly different image on each of the eye's retinas. The brain then examines the differences and computes the objects size and distance before merging each image into one clear picture.

### **Convergence**

The effort used by the eyes to bring the two images together is called convergence. The brain is able to compute how far away the object is by the different angles each eye uses to see an object.

#### **Accommodation**

Accommodation occurs when the curvature of the lens changes in order to bring the object into focus. The brain measures the distance of the object by the amount of muscular effort required to change the curvature of the lens.

### Day-to-day life with single vision

Listed below are some things that may help to make living with single vision easier.

- 1. Line yourself up with an object before reaching for it. E.g. a door knob.
- 2. When pouring liquids bring the lip of the container you are pouring from aginst the one you are pouring into.
- 3. If you are missing with the sugar, rest the neck of the spoon against the cup before tipping the sugar in.
- 4. In a social situation make sure people sit on the side of your good eye. In a restaurant be aware of waiters appearing from your 'non-seeing' side.
- 5. When outside in a busy area try not to make sudden turns. Take a good look around first.
- 6. On staircases look out for the last step. Especially if the staircase is the same colour as the surrounding floor. Use the handrail.
- 7. As you approach a kerb keep your eye on the edge of it. When crossing roads, keep looking. Turn your head both ways at the last moment before crossing.
- 8. Playing catch is a good way to improve your depth perception.
- 9. Use good lighting. Experiment with different types of light.

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