

## Maximising your visual potential

### Preeti Singla

#### **Optical Magnifiers**

##### **High Add Readers**

These are simply higher-powered reading glasses. The highest powers you can get from non-optical suppliers like supermarkets and chemists are +3.50D however stronger powers up to +10D power (approx. 2.5x magnification) are available from optical suppliers. The advantages are that they are very portable, look just like normal glasses and keep your hands free. The main disadvantage is trying to get the eyes to work together and in order to do this the glasses contain special prisms. They also require a very close working distance which means you have to hold the object you are looking at very close to your eyes.

##### **Hand Magnifiers**

These are a variation of our traditional 'spy glass' magnifiers but can come in high magnifications – anything from 1.5x to 14x- and often have an in-built light. They are great for short 'spotting tasks' like reading price tags and are very portable and cost effective. The main disadvantage is holding it steady and they can cause tiredness after a long period of time. The best way to use these is to hold the magnifier as close to your better seeing eye or reading glasses as possible, and bring the print up until it is in best focus. This way you can get the maximum potential field of view (see more words at a time).

##### **Stand Magnifiers**

These are similar to hand magnifiers in that they come in similar powers and often have an in-built light. The biggest improvement is the fact the lens is mounted into a stand so it can sit on the page and maintain the optimum distance, allowing the best magnification and preventing your hand shaking or getting tired. Unfortunately, the mount means it's bulkier and less portable. Like hand magnifiers they can be held close to the eye to get the benefit of maximum field of view. They can also be made with a space to write underneath for things like crosswords and some can even be hung around your

neck (chest magnifiers) so you can have your hands free. Although these chest magnifiers have limited magnifying power.

### **Flat field magnifiers**

These are distortion-free dome shaped magnifiers that look like paper weights. They have limited magnifying power – only up to approximately 3x – but they are great for people that just need that extra boost at work or to read a book and can often be invaluable to people in the early stages of visual loss. The dome shape gathers the surrounding light and projects it on the page meaning they don't necessarily need an in-built light source. They are relatively lightweight, portable, easy to use and very socially acceptable.

### **Electronic Aids**

Electronic Visual Enhancement Systems (EVES) were originally CCTVs. They had a video camera, display screen and a power supply. They have moved on a lot since then and are now available in desktop style, portable mobile phone versions or as a Monomouse that can be plugged into a standard TV and used to scan over print. The biggest advantage of an EVES over an optical device is the image manipulation (changing the text and background colour e.g. black on white, white on black, black on yellow etc) as well as the huge range of magnifications meaning it is great for people with variable or progressive vision loss. Other big advantages are no distortions and being able to view it with both eyes open. The biggest disadvantage is cost however now they are more widely available prices are more competitive.

The hardest thing about EVES is getting hold of them. Unlike optical aids they are not normally available on the NHS. Funding may be possible through the Access to Work Scheme or through some charities or social service departments. EVES can of course be purchased privately and if registered as SI or SSI you can get a VAT exemption. They can also be purchased second hand. There are also some cost-effective schemes available for example through Bierely.com where you pay a fixed fee per month and borrow a product for as long as you want. It comes with the advantage of a warranty and insurance and means you can try things out to see if you like them.

### **Smart Phones and Apps**

Are without a doubt the way forward. If you have a smart phone you may not need anything else. The world of electronic visual enhancement systems has now become available to almost everyone, without the need to purchase any separate equipment and often at very little extra cost. Even without downloading additional apps the smart phone itself has a lot of accessibility features including voiceover, zoom, magnifier, larger text and the torch function.

There are so many apps available on the market it's hard to know where to start. Many of them are not much better than the existing zoom or magnifying function on a phone. A useful resource may be ViA (Visually Impaired Apps) which is an app designed by the Braille Institute. It sorts through the 500,000+ apps in the iTunes App store to find the ones that are specifically built for visually impaired users. The RNIB also has a tried and tested app of the month. Unfortunately, these have not been updated since 2016 but there are still quite a few published on there. Here are a few other popular Apps:

**Big Keyboards (free)** – download a keyboard that is 40% larger with 100% more contrast and still fits every key onto a single screen

**Blind Square (£38.99)** – provide accessible navigation both indoors and outdoors, telling you where you are and guiding you to where you need to go. It is controlled through voice commands and supports a range of languages.

**Awareness! The Headphone App (£6.99)** – let's you listen to your headphones without blocking out what is going on around you

**Be specular / Be My Eyes (free)** – sighted volunteers register with the app and describe images sent by visually impaired users

**Evernote (Free)** – this popular note taking app has the facility to store voice notes, photographs and texts and enables sharing between multiple devices. It also supports VoiceOver. Another useful note taker app is **Access Note** developed by the American Foundation for the Blind

**Aipoly Vision (basic version free, upgrade available)** – object and colour recognition using artificial intelligence. Point your phone at an object of interest and press the recognise button. Other similar apps are **Cam Find** and **Seeing AI**.

**KNFB Reader (£100)** – takes a phot of text and reads it aloud using clear synthetic speech

**Audible (£7.99 per months with free 30 day trial)** – audio book service from Amazon

### **Daily Living Aids for the Kitchen**

(majority available from the RNIB or Amazon)

- Spotlights under the cupboards
- Contrasting plates and chopping boards for food
- Read out loud labels using a PenFriend – lets you record your own audio labels and stick them on items around the home and at work. When you need to know what something is you place the PenFriend on the label and it reads it back to you
- Cut resistant gloves – keeps your hands safe when cutting and grating
- Child-safe nylon knives – cuts the food but not you! Slightly harder to use than normal knives as needs more pressure
- Long sleeve oven gloves
- Talking thermometer – announces the temperature of food in Celsius or Fahrenheit
- Talking microwave – microwave provides verbal confirmation of functions selected and cooking times allowing for easier setting and usage
- Liquid level indicators – can tell you when a cup or bowl is nearly full
- Pre-chopped onions, garlic, ginger and herbs – cook fresh food without all the fine chopping
- Bump-ons – self-adhesive coloured tactile markers which can be applied to a range of surfaces