Information from
The Macular Disease Society

Anti-glare Spectacles

Anti-glare Protection

It is important to protect your eyes from harmful elements in sunlight including Ultra Violet radiation and blue light. Controlling glare will improve your visual comfort. This information sheet details the effects of these forms of light and provides advice on methods of protecting your eyes and on reducing glare.

UV protection

We need light to see the world around us, but cumulative exposure to sunlight can also damage the structures of the eye. People with light coloured eyes may be more prone to damage from sunlight.

The sun gives off a range of energy types which travel at the same speed but have different wavelengths. This is known as the electromagnetic spectrum of which visible light is a very small part.

The electromagnetic spectrum also includes radiation, which is not visible to the human eye.

Even though infra-red and ultraviolet are not visible to the human eye, they are still absorbed by the eye and the eye-lid. Infra red is normally accompanied by the sensation of warmth. Apart from a few specialist occupations infra-red is not a big concern for us in the UK.

Ultraviolet radiation (UV) is however something we do need to consider and not just on sunny days. The damaging effects of UV are well documented, particularly in the case of sunburn and skin cancers, but UV radiation is also damaging to the eyes. UV can contribute to a number of eye conditions, including inflammation of the cornea and cataracts. There is also a potential of harm to the retina. The amount reaching the retina is increased if the crystalline lens has been removed (e.g. after the development of a cataract), but modern intra-ocular lenses incorporate similar UV protective characteristics as the natural lens.

We should protect the eyes from exposure to UV light by using filters to block it in order to minimise cumulative damage. Make sure your sun-glasses are marked with either the CE mark, which means they meet European standards regarding UV protection or the British Standard BSEN 1836:1997.

Not all sunglasses block UV. Dark tinted lenses which do not provide UV protection will actually

increase the amount of damage caused as the dark tint will make your pupil open wider letting more UV light into the eye.

Wearing a hat, cap or sports visor with a broad brim or peak can minimise the amount of UV actually reaching our face and eyes. People who are extremely sensitive to glare should remember to shield their eyes from the light coming in from the side as well as directly from the front.

Wrap-around sun-spectacle styles or those with built in side and brow shields (often known as overshields as they can be worn over the top of ordinary spectacles if wished), will stop the light sneaking in above or from the side.

Prescription spectacles or sun spectacles can be made incorporating a UV filter. The majority of the wrap-round styles can not be fitted with prescription lenses. Photochromatic lenses that change colour with changing light conditions to give more flexibility and visual comfort do block UV radiation.

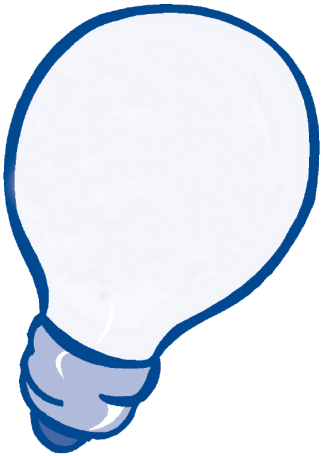
Glare

Glare is caused by a light source, direct or reflected being in or near our line of sight or by being comparatively bright compared to our surroundings. It is possible to increase lighting levels, whilst keeping glare to a minimum.

Keep general room lighting bright and even. Use multiple light sources spread around a room, to increase light levels evenly, avoiding sharply defined

dark and light areas. This will also mean that you will get less tired, as each time you look from a dark area to a light area and back, your eyes have to re-adjust.

Frosted light bulbs are better than clear as they diffuse the light and do not create harsh shadows.



The level of lighting in a room can be controlled with the use of blinds and dimmer switches to achieve maximum comfort.

Give your eyes sufficient time to adjust when moving from one level of lighting to another, this takes longer as we get older and conditions like macular disease slow the process even more.

Try to avoid placing a light source in direct line of sight, such as ensuring that light bulbs do not protrude beneath a lampshade or that a task lamp is positioned below eye level so that it does not shine directly into your eyes. If reflected light is a problem, try altering the angle of incidence by tilting the lamp head. For more advice on lighting ask for a copy of our leaflet 'Lighting Advice' (17) or telephone the helpline on 0845 241 2041.

Reflected glare from white paper may be reduced with the use of matt coloured transparent plastic sheets known as overlays or perhaps a typoscope. Typoscopes are simple,

but useful tools. They are often made of black card or plastic with slots cut in them to act as a guide. The surround serves to screen out excess information and glare, allowing somebody to concentrate on the area of particular interest.

Blue-blockers

Blue light is thought to be a major contributing factor in glare as it is more easily scattered then other forms of visible light. Blue blocking filters help to reduce glare and can possibly enhance contrast.

Blue-blocker lenses tend to be yellow or orange in appearance but an additional tint may be added to improve the cosmetic appearance of the lens. Different people with similar levels of vision will prefer different depths of colour for specific tasks. This is a personal choice, so try the level of tint before making a decision. The paler version may be preferable (and safer) for indoor use and darker shades may be beneficial outside in bright sunlight.

If you have macular degeneration, whilst wearing very dark sunglasses with side-shields may improve visual comfort by reducing glare, you may also find it harder to see things, including pavements and steps. Blue-blocking glasses with UV protection are often lighter than sunglasses (being yellow or orange) and this may reduce the risk of tripping over hazards.

Apart from possible contrast enhancement and glare reduction properties of blue-light blocking filters there is a growing body of

evidence to support the theory that blue light is actually damaging to the macula.

Good sunglasses with a CE marking will block around 98% percent of UV light but generally do not include blue-blocking properties. Filters which block blue and UV light will help protect the eye and can reduce glare.

If you don't wear spectacles normally then blue-blocker lenses are available without a prescription in a range of styles. You can get over-shields which block both blue and UV light, which fit over the top of ordinary spectacles or can be worn on their own. Overshields have inbuilt side shields and brow bar. It may also be possible to get clip-ons to fit a limited range of ordinary spectacles styles.

Prescription lens options:

If you decide that you prefer a suitable filter to be incorporated into your normal spectacles, rather than use an overshield, then your optician can order prescription blue blocking lenses from three companies that we know of (below). These companies are usually happy to loan sample lenses to your optician so that you can choose exactly which depth of colour would best suit your needs and provides the most comfort.

Ask your optician to fit your spectacle frame to minimise the amount of UV and blue light reaching the eye around your spectacles. You may even wish to add a side shield to your

spectacles to help block the light getting in from the side. Please note that prescription lenses with a blue blocking and UV filter take longer to prepare than standard lenses as they are a specialist order.

You should enquire at your local Optician or Low Vision Clinic. They will advise on and/or prescribe the most suitable product for your needs. Please tell your Optician exactly what eye condition you have, as the characteristics of sun/anti-glare spectacles suitable for those having Macular Degeneration may differ from those with other eye disorders, such as Diabetic Retinopathy.

Specialist Suppliers

Norville Optical can only supply via an opticians, not direct to the general public, your optician should have the contact details but the details are listed below. They supply fixed colour, blue-blocking tints. Your optician will need to ask Norville for samples of the PLS 500, PLS540 and PLS600 specialist tints.

Medi-view can provide both prescription and non-prescription options in a choice of two colour depths. The lighter version is recommended for indoor use and on overcast days and the darker option is recommended for bright sunny days or for people with high levels of light sensitivity.

Low Vision Supplies are the only UK supplier of the Corning range of CPF glare control lenses which are photochromatic and have inbuilt blue-blocker protection. Photochromatic

lenses get lighter and darker according to changing light conditions to give more flexibility and visual comfort. These particular lenses are glass so you may need to give some thought to the extra weight of these lenses and consider the safety implications.

Caution from The Macular Disease Society

Please exercise your own judgment as to whether items are likely to help you, as the Society is not equipped to test and approve such products and provides information rather than advice.

Points to remember:

- Wear good quality sun/anti-glare glasses with lenses that block out UV and blue light. These should be marked with the CE mark, or the British Standard BSEN 1836:1997. There are currently no recognised markings or standards to indicate blue-blocking properties.

- UV light is strongest between 10am and 3pm. Avoid being in the sun during these hours.

- Wear a hat with a brim or peak. This can reduce the UV radiation reaching your face by up to 50%.

- Some studies suggest that antioxidants may

also provide some protection against blue-light damage. Eat a healthy amount of leafy green vegetables which contain antioxidants or consider taking a balanced antioxidant supplement. For advice, see our leaflet: Nutrition and the Eye (20) or telephone the helpline on 0845 241 2041.

Suppliers:

The following are suppliers of anti-glare spectacles and over-shields. It is possible to have prescription lenses incorporated with anti-glare filters. The first two companies can provide these. A third company Norville Optical, who provide prescription blue-blocking lenses can only supply to an optician.

Low Vision Supplies

(Also providers of prescription lenses)
The Old Bank
176 Belasis Avenue
Billingham
TS23 1EY
Tel 01642 530801
Email: lowvisionsupplies@ntlworld.com
www.lowvisionsupplies.co.uk

Medi View Ltd

(Also providers of prescription lenses)
(Blue Bloc Filters)
20 Longcrofte Road,
Edgware
Middlesex,
HA8 6PR
Tel: 0208 933 7914
Email:
info@medi-view.co.uk
www.mediviewspecs.co.uk

Norville

(Providers of prescription lenses but only through Opticians)
Service House
Magdala Road
Gloucester
GL1 4DG
Tel 01452 528686
info@norville.co.uk
www.norville.co.uk

Cobolt Systems Ltd

The Old Mill House,
Mill Road
Reedham
Norwich,
Norfolk NR13 3TL
Tel: 01493 700172
Email:
cobolt@compuserve.com
www.cobolt.co.uk

IC at SW Retail Ltd

Unit 3 Marrtree Business Park
Kirkwood Close
Oxspring
Sheffield
S36 8ZP
Tel: 01226 762513 or
01226 762528
Email:
sales@swretail.fsnet.co.uk
www.swretail.co.uk

Optima Low Vision Services

Dartside, Ford Road
Totnes
Devon
TQ9 5LQ
Tel: 01803 864218
Email:
sales@optimalowvision.co.uk
www.optimalowvision.co.uk

NB. The Society does not test products from the above suppliers.

Notes:

Other titles in this series:

- Alternative & Complementary Therapies
- Cataracts & Macular Oedema
- Computers & Software
- Daily Living Skills
- Dry Eyes
- Eccentric Viewing Techniques
- Emotional Support
- Epiretinal Membranes
- Gardening
- Getting a diagnosis
- Hallucinations
- Juvenile Macular Dystrophies
- Large Print & Audio Publications
- Large Print Music
- Lighting Advice
- Living with MD - preparing for the future
- Low Vision Aids
- Macular Disease & Genetics
- Macular Hole
- Macular Translocation
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- Retinal Vein Occlusion
- Sports, Hobbies & Pastimes
- Stargardt
- Travel, Holidays & Courses
- Treatments for Early Stage Wet AMD
- Vitrectomy

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