



The Science Behind your Glasses



OPTOMETRISTS

PRACTICE LOCATIONS

47 Sheaf Street, DAVENTRY

(01327) 702289

dav@wpsoptometrists.co.uk

27 Abington Square, NORTHAMPTON

(01604) 637694

nor@wpsoptometrists.co.uk

or visit us online at

www.wpsoptometrists.co.uk



You may have been wearing spectacles for years, or have only recently discovered them. But have you ever wondered how they are made and what goes into the process?

The humble pair of spectacles has been around for many years now but very few of us know what goes into the production process. For example, a metal frame normally goes through around 20 different processes from start to finish. Each part, the bridge, side and rim are all made separately and often in different countries before being joined together. Once assembled the frame is then given its finished colour. In some cases this will involve hand painting, for others a more uniform finish is applied. Frames all use different sizes of screws, nose pads and end tips which all have to be sourced and held in stock ready to use. Any one manufacturer probably has a range of a hundred frames in several different sizes and colours. This could lead to over 1,000 options just from one supplier.

Spectacle lenses are a more complex issue as each lens needs to be made to your exact prescription. For optimum results this means that many lenses are not made into their final form until your order is received by our laboratories. Each lens goes through three separate polishing steps and if



an anti-reflection coating is required it passes through a seven stage cleaning process before the coating is applied. The coating of a lens alone can take up to 5 days. Each lens is then inspected before it is shaped to fit your frame and again afterwards.

So, bearing all this in mind, just how unique do you think your glasses are? Well, if we take a prescription range of +/-10 dioptres with cyls up to -4 dioptres at 5 degree steps around the clock. Then take into account a reading prescription of up to +2.50 dioptres and of course the fact that we have two eyes. Then given a conservative choice of 100 lenses and 1000 frames that means the chance of two pairs of glasses being exactly the same is around 50 billion to 1. Considering that the world's population is less than 10 billion your spectacles truly are unique - starts to make you wonder how we manage to supply them so quickly!!

In This Issue

SCIENCE OF SPECTACLES

- are spectacles the only truly unique products we buy today?

CONTACT LENSES

- announcing the world premier of a new daily disposable lens.

WHAT'S NEW

- new products and advances in spectacle lenses.

DRY EYES

- information about dry eyes and how they affect you.



Latest Eye Wear

Focus On ...

Within our practices we stock a wide range of different frames including designer names.

Calvin Klein
Police Eyewear
Nautica
SEIKO
Flexon & Nike
ELLE & Laura Ashley
Oliver by Valentino
Jai Kudo
Francois Pinton
Beano, Barbie & Action Man
Jean-Paul Gaultier & JPG
Gucci
DKNY

CAMERAS AND FILMS

Planning a holiday or do you have a keen interest in photography? In either case, you will need a plentiful supply of films to capture those precious moments. We now stock both 35mm and Advantix films in several sizes and speeds. Or for a stylish, compact and robust alternative, try Kodak Ultra disposable cameras. Whether you are a party animal or prefer a walk in the country, they can be taken anywhere, are easy to use and ready for action.



VITAMINS AND THE EYE

Research shows that nutrition plays an important role in the prevention of certain eye conditions. This is why many leading eye care professionals, including ophthalmologists, are now recommending that people who are at high risk of developing certain eye conditions, like macula degeneration, should consider taking one of these formulations. While they are not guaranteed to either prevent or cure eye disease, the earlier they are taken the better the chances of delaying the potentially debilitating visual effects.



With 53% of adults needing to wear spectacles, unsurprisingly glasses and wearers are seeing the benefits. We believe that our best customers choose the range of frames we stock. They can instantly change their look, a totally new image, be it business like, fun or even sexy. This fact has ceased to be considered as a medical device (this is how they are now) to bring out one's features and to express individual personality. Police has always been a synonym of style and innovation in the industry, not going to change this. Technical and avant-garde materials and materials combinations. Police interprets this trend and offers a wide range of options. Therefore, you could consider Police eyewear as an excellent material.

Seiko manufacture some of the world's finest frames and believe that this should be matched with the lightest lenses available. Using the highest index and most advanced materials, Seiko produces lenses that are thinner and lighter than they have ever been before. This year sees the launch of another revolutionary new lens, the Seiko 1.74 bi-axpheric. High prescriptions no longer mean thick, chunky lenses that can only be glazed into heavy frames. Seiko stands above ordinary glass and plastic lenses. Thanks to the anti-reflection lens enhancements that are a standard feature of Seiko lenses, a more natural vision that is clearer, sharper and easier on the eye can be enjoyed. Night-time drivers see reduced dazzle from approaching headlights and daytime wear cuts tiring reflections from sunlit surfaces.



Focus DAILIES
ONE-DAY CONTACT LENSES

Comfort is everything

ASK INSIDE FOR DETAILS

There are around 3 million contact lens wearers in the UK and it is one of the fastest growing areas. People are up or slip down your nose and often give their wearers greater freedom and confidence. This year even novelty disposable lenses. In particular, there has been a large demand for revolutionary new products are being released all the time. In the 1990s contact lenses. In 2002 Ciba Vision launched the world's first disposable toric lens. This year sees them launching another world first in the shape of Focus Dailies Toric, the world's first daily disposable toric lens to correct astigmatism.

People have really embraced daily disposable contact lenses and with good reason. Since their arrival contact lenses have never been more comfortable and convenient. They are also a much healthier option, as they are designed to be replaced every day - so there is no need to worry about lens care solutions. Best of all, daily disposables give you flexibility in what you do and how you want to look. Instead of having to choose between spectacles and contact lenses, you can wear either - whatever suits you at the time. People just love having the choice.

The wide variety of lenses available has contributed to the growth in contact lens use and now there are very few prescriptions that cannot be corrected. So even if you have astigmatism, need bifocals or have previously been unable to wear them - now may be the time to rethink. Remember that usually, the only barrier to being a successful contact lens wearer is the fear of trying them in the first place.

Contact Lenses

Focus On ...

IF YOU MUST WEAR
SOMETHING THIS SUMMER...

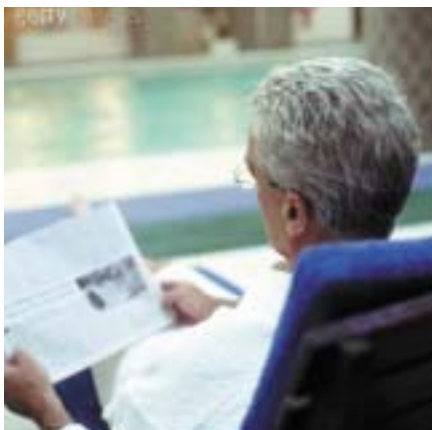


The overriding criteria for most buyers of sunglasses is fashion. The first question is "How do I look?" Your sunglasses become a part of your face, your look, your presence. Current fashion trends dictate eyewear to have small lenses in small wire frames or the cat-eyed look. Choose carefully when selecting a small lens that it isn't causing strain and affecting your vision by providing high contrast between your central and peripheral vision. Not only does this make it harder to see, you will be flooding your eyes with unfiltered light from around the edges of the frame. As well as making a fashion statement, the lenses you choose are also important. The best way to cut through the sun's glare is with NuPolar lenses - even on the brightest days and when the sun is low in the sky. NuPolar lenses bring superb visual comfort as the polarising filters tame harsh rays far more than ordinary sunglasses, while still offering full UV protection. Available in most lens forms including varifocals, they provide enhanced comfort and clarity, making them ideal for skiing, driving, fishing as well as general sunglasses.

...WEAR SUNGLASSES



Multifocal contact lenses are designed to let you see clearly and comfortably from up-close to far away. Previously this was only possible with reading glasses over contact lenses or mono-vision (one eye for distance, one for reading). Although often difficult to predict exactly how well you will see, most people find they can perform their daily tasks comfortably - however the convenience and freedom will be much greater. The SofLens Multi-Focal has unique optics enabling easy transitions across near, far and all points in between and a patented edge design provides all day comfort.



in the world of optics. They offer you an unrestricted field of vision, they don't steam
s now possible to get daily, monthly, toric, multifocal, continuous wear, coloured and
aily disposable contact lenses like Focus Dailies and this is why
O's we saw the release of the first daily disposable
aily disposable multifocal lens.



ent.
s

Eye Care

Focus On ...



A REVOLUTION IN EYE CARE

We all want to protect our eyesight and that is why it is important to have regular eye examinations. In addition to fine tuning your spectacle or contact lens prescription, we also look at the back of the eye, the retina, to check it is healthy and not damaged or showing signs of disease.

Many eye diseases, such as glaucoma, diabetic retinopathy or retinal tears and detachments, if detected at an early stage, can be treated successfully without total loss of vision. Now with the Optomap retinal examination this vital screening has been dramatically improved because it gives us access to areas of the retina which, due to the limits of earlier technology, were previously difficult to see.

Obtaining Optomap retinal images is comfortable, quick and very simple. By looking into an eyepiece, the digital image of the retina is captured in less than a second, with a small flash indicating the image has been taken. Nothing touches your eye during the process, no eye drops need to be used and it is completely painless. Your Optomap image is then immediately displayed for us to review with you.

Your digital Optomap image will be stored electronically giving us a permanent record of the condition of your retina. This is very important in assisting us to detect and measure changes in your eyes next time you attend for a routine eye examination. The images can be e-mailed to a doctor or ophthalmologist for a second opinion.



Dry Eyes

When we blink, tears form a film which spreads over the eye making the surface smooth, optically clear and enabling good vision. There are three layers in the thin film of tears: an oily layer, a watery layer and a layer of mucus, each with a specific function and a weakness in any layer can cause problems. Tears serve to lubricate the eye and they are produced around the clock, but when insufficient moisture is produced stinging, burning, scratchiness and other symptoms are experienced and may be referred to as dry eyes.

What causes it? Dry eye is caused when the tear glands produce insufficient tears. This can happen as part of the normal ageing process and is more common among women. Therefore, the condition tends to occur with increasing age and is not always noticed because the effects of dry eyes can balance other age-related changes like poor tear drainage. The main causes of an insufficient tear film are deterioration of lacrimal tissue, blockage of the excretory ducts or dysfunction of the Meibomian glands.

How is it diagnosed? There are a series of tests designed to identify the cause and type of dry eye. These include Rose Bengal staining where a dye is used to identify problems and the Schirmer test which involves measuring the amount of wetting of a special filter paper. Either of these can be done very simply by your optometrist.

What treatment is available? The aim of treatment will be to relieve discomfort and prevent corneal damage. In some situations relief may be found by blinking consciously when doing close or continuous work. It is also helpful to close the eyes for a spell from time to time. Eye drops may be prescribed or purchased over the counter and since there is a variety, it may be helpful to try others if your present product does not suit you. Some women benefit from hormone replacement therapy (HRT), especially those whose dry eye problems begin around or after the menopause.

What is the longer term picture? This varies considerably and may depend in part upon individual lifestyle choices and overall health as well as the severity and cause of the condition. There is no definite cure, but people can usually be made more comfortable. Without treatment the discomfort continues indefinitely and the eye may be more likely to get infected as well.

