THE HISTORY OF CONTACT LENSES

Leonardo Da Vinci is credited with introducing the idea of contact lenses in his 1508 “Codex of the Eye Manual”, where he described a method of directly altering the power of the eye.

But it wasn’t until 1949 that the first corneal contact lenses were developed.

To this day there are essentially two types.

The original contact lenses were rigid in nature and non-permeable. As our understanding of corneal physiology improved, contact lens materials developed to incorporate a level of permeability, and became known as gas permeable contact lenses, or RGPs (rigid gas permeable).

RGP lenses are customised to fit an individual eye. They can provide extremely good visual correction for a wide variety of refractive prescriptions. They tend to be durable and relatively easy to look after. They require chemical treatment to both clean and disinfect after each occasion they are worn. Because of the rigid nature of RGP materials, these lenses may feel a little uncomfortable initially, due to interaction between the lens edge and the eyelids. The initial discomfort usually subsides after a few days of wear, but can persist in patients with “sensitive” eyes.

Soft contact lenses are made from pliable, flexible plastics which mould around the surface of the wearer’s eye, resulting in significantly less interaction between the lens change and the eyelids.
Consequently, wearers reported improved comfort when wearing soft lenses compared to the initial response to the wearing of RGPs.

As a result of the comfort issues for some potential wearers, contact lens manufacturers began to experiment with soft lens materials. The development of soft contact lens materials led to a rapid expansion in the number of contact lens wearers, as new wearers were attracted by the idea of more comfortable lenses. However, it soon became apparent that these new contact lenses had two significant disadvantages compared to traditional RGP lenses.

Firstly, the softer lens materials were much more difficult to clean and disinfect. Deposits from the tears, especially proteins, quickly accumulated on the new soft lenses. These deposits were very difficult to remove, and they began to develop bacterial cultivation on the surface of the contact lens.

Secondly, the soft lens materials were significantly less oxygen permeable compared to RGPs. Prolonged use of soft lenses produced dangerous hypoxic responses in the cornea, which weakened the immune response and caused structural changes, resulting in decreased corneal clarity.

As a consequence of these two issues, it was soon discovered that soft lens wearers were approximately sixteen times more likely to develop significant ocular complications compared to RGP wearers!

The medical profession therefore discouraged soft lens wear.

In response to this, manufacturers began to look at ways of improving the safety of soft contact lens wear. The thinking soon developed that if a contact lens cannot provide safe wear over a prolonged period of time, why not replace the lenses at regular intervals. Additionally, more advanced materials evolved that were more deposit resistant and more oxygen permeable. These developments led to the advent of disposable soft contact lenses.
Disposable lenses have revolutionised the wearing of soft contact lenses, and they now account for almost 90% of all new contact lens fittings.

The two main categories of disposable soft lenses are:

- Monthly disposables
- Daily disposables.

Monthly Disposable soft lenses can be worn for up to fourteen hours per day for one month before being replaced. This type of lens wear is ideal for those wishing to wear contact lenses every day.

The lenses need to be both cleaned and disinfected each evening. Nowadays, a new type of lens which is worn day and night for 30 days is also becoming more popular, though these lenses are not suited to everyone.

Daily Disposable lenses dominate the “occasional wear” market. Typically, daily disposable wearers use their lenses less than four times per week. These lenses are very safe and hygienic, and require no additional care products. They are ideal for social and sports wearers.

There are an ever increasing range of sub-classifications of disposable lenses including toric, progressive and coloured options.
At Stephen McKay Opticians, we fit a wide variety of contact lens types.

Unfortunately contact lens consultations are not covered by the NHS and we charge a typical fee of £25 for the time involved. Where possible, we try to provide a contact lens trial wearing period, to ensure new wearers are happy with their new contact lenses.

The contact lens consultation appointment provides new wearers with the opportunity to discuss the different types of lenses available.

All of our disposable lenses are available on a home delivery scheme. Payment for the schemes is by Direct Debit, though we do not insist on a fixed contract period. We aim to offer our patients up-to-date, professional advice on the most appropriate contact lens products from a wide variety of suppliers.

Please do not hesitate to contact us with any queries – or why not “GO FOR IT” and arrange your contact lens consultation.