POSITION PAPER ON ORTHO-KERATOLOGY (ORTHO-K)

Introduction:

The College of Opticians of Ontario firmly supports the NACOR position paper on the performance of Orthokeratology by Opticians in Canada. The following position paper is an amended version of that paper, modified to apply to Ontario Opticians.

Position:

> ***All Registered Opticians in Ontario are permitted to provide fit Ortho-K fittings provided they do so within published standards of practice of the College of Opticians of Ontario.***

Rationale:

Ortho-K is a specialty contact lens fit that is based on all the principles of a normal contact lens fitting. Accordingly it is within the scope of practice of all Ontario Registered Opticians.

Overview of Ortho-K:

The top layers of the cornea are very malleable, and very fluid. When you have an injury to the eye, cells surrounding the injury move around and change shape to cover the injured area and protect it. Ortho-K takes advantage of this characteristic of the top layers of the cornea. The lenses guide or move the tissue around on the surface to achieve the desired refractive change. Unlike surgery, no tissue is removed and no optical structures are permanently altered. The technique is non invasive and totally reversible. If clients stop wearing the retainer lenses, the cornea will return to its original shape.

Ortho-K uses retainer lenses worn to shift tissue on the cornea to give a result just like laser surgery. A corneal topography of an eye that has had Ortho-K compared to a corneal topography of a post surgery eye look the same. Since there is no removal of tissue and no surgery involved, the procedure is completely reversible and without the complications such as poor healing that can occur in laser surgery. Clients simply stop wearing the retainer lens and the corneas will revert back to their original shape. This procedure is safe and effective.

A very crude predecessor of this procedure was used but was not very effective back in the 1950's and 1960's and has for the most part been abandoned. About 10-15 years ago

with the advent of several technological advances modern orthokeratology was perfected, to make it the effective, quick, and safe procedure that it is today. First, corneal topography was needed so that fitters could really see what was happening on the cornea. Before corneal topography fitters had much more limited measuring techniques that gave only a fraction of the information that fitters now get from topographers. Second, fitters needed the computer-controlled lathes used in lens manufacture, to provide micron accuracy in the manufacture of lenses. The lenses used today in Ortho-K are much more sophisticated designs of the "reverse curve" lens that was used to fit post-laser surgery corneas (where there were complications). Ortho-K lenses are designed to actually change the shape of the eye to a post laser surgery corneal shape. Third, extremely permeable lens materials that are available today were needed to make overnight wear safe and effective.

Initially an Optician will perform a consultation to determine if the prescription, size and shape of the eyes and the pupil size indicate that a client is a good candidate for Ortho-K. Ortho-K has an optimal prescription range for which it works well. At the edges of that range, the size and shape of the eyes and the pupil size will have more bearing on whether or not an individual would be a good candidate. The consultation involves taking several measurements, evaluating the health of the eye, and performing corneal topographies. Once an Optician determines the information from the topographies (shape factor, diameter of the cornea, pupil size) a fitter will then plug in their calculations into a computer predictive program and it will assist the Optician to determine if a client is an appropriate candidate.

Once the custom retainer lens is fitted and ready to wear, it takes 7-10 days for the prescription to decrease from its original level to the target level (in most cases that target requires that no correction is worn during the day). As the prescription is dropping clients are fitted with progressively weaker contacts to wear during the day. Once the target is achieved, the client has clear vision during the day. Clients continue to wear the retainer lens for 1-2 months to stabilize the effect. Once stabilized, the fitter then performs follow-up evaluations to determine how often clients need to wear the retainer lens to maintain the effect. This does vary from client to client and is affected by various factors including the original prescription requirements.

Requirements:

Competence:

The Optician must possess the necessary competence and training in Ortho-K to perform Ortho-K independently. The Optician shall not engage in tasks that are beyond their capacity to perform until such time as sufficient education and experience have been obtained.

Screening:

The Optician will ensure they have screening processes in place. The Optician will turn clients away if they are inappropriate candidates for Ortho-K. The Optician will refer or assist clients to find the necessary professional help where appropriate and shall only provide treatment they know is appropriate to the needs of the client. The Optician shall only continue treatment where such need is indicated and where the treatment continues to be effective.

Education:

The College of Opticians of Ontario recognizes that current Opticianry programs teach Orthokeratology to the entry level competencies outlined in the National Entry to Practice Competencies document. This entry level of skill may not be sufficient to provide an Optician with the skill required to perform Ortho-K fittings competently. Each Optician is responsible for evaluating his or her own educational needs and meeting those through programs of continuing education. Such education may include, post graduate education offered by existing Opticianry educational institutions, being mentored by more experienced Ortho-K fitters, training provided by Ortho-K technology suppliers or various continuing education programs offered.

Equipment:

Opticians that offer Orthokeratology must have the appropriate equipment and instruments available to them.