

## Comprehensive Eye Examinations

### **Policy Issue**

Comprehensive eye examinations conducted by optometrists are designed to assess the function of the visual system, the refractive or optical status of the eye, and the health of the eyes and visual neurological pathways. Many ocular disease conditions are not accompanied by obvious symptoms, especially in early stages when interventions are most successful. Comprehensive eye exams also review focusing and eye teaming ability, and recommend precise refractive corrections. In addition, systemic disease (such as diabetes and high blood pressure) may present with ocular signs that are detectable in a comprehensive eye exam, facilitating early diagnosis and better management of the condition.

### **Policy Position**

Optometrists play an essential and ongoing role in protecting the health and well-being of Canadians. Comprehensive eye examinations carried out by optometrists are an important part of Canadians' overall health and wellness maintenance.

### **Components of a Comprehensive Eye Exam**

What constitutes a comprehensive eye exam is determined by provincial optometric colleges and varies slightly from province to province. A comprehensive eye exam may include the following:

- **Patient History** – including past and present vision and medical issues, and a family history of eye and health conditions
- **Functional History** – including a review of visual needs and demands at home, at work, or at school, and a review of the visual demands of recreational activities and hobbies
- **Visual Acuity measurements** – measured both at the start of the examination and later during the exam, with the best refractive correction in place; as appropriate
- **A Color Vision Evaluation** – as clinically indicated
- **Binocular Vision Assessment** – to examine the binocular vision status and abilities of the visual system at both distance and near, using a variety of devices and techniques. This includes an assessment of how well the eyes work together and how well they can focus. This may include a stereo acuity measurement.
- **Eye Health Assessment** – including a review of the tissues and systems inside and outside the eye, as well as the periocular structures. When indicated, this may include dilating eye drops. A variety of imaging systems that may measure and record the integrity of structures such as retina, lens, and cornea may also be used. Instruments and techniques that measure or view specific characteristics of the eye may be used, e.g. eye pressure, corneal thickness, anterior chamber angle depth, tear film characteristics, and others.

- **Neurological Assessment** – including an assessment of pupillary reactions, ocular muscle reflexes and functions, and an assessment of peripheral vision. Additional systems such as visual field analyzers, nerve scanners, and others may be used.
- **Refractive Correction** - an accurate and precise measurement of the refractive powers of the eyes with the best-corrected visual acuity of each eye. The refractive correction is often measured with objective measurement systems which may include automated testing equipment, and further refined using subjective responses. In addition, systems that measure corneal surface curvature, higher order optical aberrations, and refractive changes with different lighting conditions may be used to determine the final refractive corrections.
- **Review, Diagnosis and Recommendations** – the final phase of the eye exam involves the optometrist’s professional knowledge, experience, and judgment to determine the best courses of action and recommended treatment plans, individualized for the patient and their specific needs. Recommendations for treatment options, when required, may include a precise and customized refractive correction, eye training exercises, ongoing monitoring, medical intervention, or surgical intervention.

### **Additional Testing and New Technology**

With the continued evolution of technology, there are a number of eye health, neurological, refractive, and binocular vision testing procedures that are not considered part of a comprehensive eye exam. These testing procedures may be used to confirm or exclude a diagnosis, provide more information, or generate a baseline on a suspected condition. Often these testing procedures have associated fees that are not included in the comprehensive eye exam.

### **Guidelines**

CAO endorses evidence-based [guidelines for the frequency of comprehensive eye exams](#), considering age-related risk. Optometrists may individualize frequency recommendations based on a patient’s risk or presence of eye disease.

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