

# CAO Position Paper – Tinted Helmet Visors

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The Canadian  
Association of  
Optometrists



L'Association  
canadienne des  
optométristes

## Introduction

The Canadian Association of Optometrists (CAO) represents 4,500 doctors of optometry in Canada. Optometrists are primary eye care providers and represent the front line of vision health. Accordingly, the CAO regularly presents optometry's perspectives on matters relating to eye care, vision health, and other vision related matters. The purpose of CAO position statements shall be to provide guidance to optometrists and members of the public in achieving optimal primary eye care as well as to promote vision health to Canadians.

This statement reflects the CAO's position on the use of tinted helmet visors and presents the case from the perspective of the on-field assessment of players at the time of injury. While football references are used to frame the issue, this position applies equally to all sports where a tinted helmet visor may be used.

## Framing the Issue

***'According to the U.S. Consumer Product Safety Commission, during 2007 an accurate estimation of the number of football related head injuries seen in hospital emergency rooms was 36,412. This is the 2<sup>nd</sup> highest (cycling was first) of the 20 sports and activities listed. For children 14 and under, football ranks 2<sup>nd</sup> in head injury categories.'* (Brain and Spinal Cord.org, 2011)**

***'The American Association of Neurological Surgeons (AANS), estimates the annual incidence of football-related concussions in the United States at 300,000. At the high school level, studies show that while 10 to 15 percent of athletes playing contact sports sustain concussions each year, only a fraction receive proper treatment.'* (American Association of Neurological Surgeons, 2009).**

***'In excess of 1.5 million people participate in football (i.e. recreational, high school, collegiate, and professional) annually. The estimated annual incidence of mild traumatic brain injury (MTBI) in football is 4–20%.'* (Mendez, Hurley, Lassonde, Zhang, & and Taber, 2005)**

The references above point to the fact that head injuries in football, and all contact sports, occur at an alarming rate. Even more alarming is the frequency with which they go undiagnosed. CAO’s concern regarding head trauma in sports relates to the on-field assessment process when injury occurs.

The following table provides a listing of signs and symptoms therapists, trainers and physicians use to assess an on-field injury for head trauma.

<b>Signs and Symptoms of Head Injury</b>	
<p><b>Neurological/Physical</b></p> <ul style="list-style-type: none"> <li>- Headache</li> <li>- <b>Vision problems</b></li> <li>- <b>Unequal pupil size</b></li> <li>- <b>Pupillary response to light</b></li> <li>- <b>Nystagmus (dancing eyes)</b></li> <li>- <b>Poor visual tracking</b></li> <li>- <b>Decreased peripheral vision</b></li> <li>- Tinnitus</li> <li>- Dizziness</li> <li>- <b>Dazed Appearance</b></li> <li>- Retrograde Amnesia</li> <li>- Post-traumatic amnesia</li> <li>- Nausea/vomiting</li> <li>- Otorrhea (skull fx)</li> <li>- Rhinorrhea (skull fx)</li> <li>- Battles sign (skull fx)</li> <li>- <b>Raccoon eyes (skull fx)</b></li> <li>- Slurred speech</li> </ul>	<p><b>Balance/Coordination Disturbance</b></p> <ul style="list-style-type: none"> <li>- Romberg test</li> <li>- Finger to nose (eyes open/closed)</li> <li>- Finger-nose-finger</li> <li>- Walk heel to toe</li> <li>- Walk straight line</li> <li>- Balance on one foot</li> </ul> <p><b>Cognitive</b></p> <p><u>Orientation</u>: deficits to person, place, time/date</p> <p><u>Short term memory</u>: deficits in immediate or delayed recall</p> <p><u>Concentration/Confusion</u>: inability to process instructions, perform mental tasks</p>

(Heck & Rosa)

The neurological/physical testing would be the first step in assessment as to whether head injury has occurred or not. Of the 18 tests listed 10 are visual/auditory signs that the assessor can assess by observation/listening. Of those 10 tests, 8 pertain to the eyes. The initial on-field assessment is important in determining many subsequent steps including the participant getting back into the game and the requirement for future assessments. It is

critical that the assessor be able to see the player's eyes, without removing the helmet, to provide the best opportunity for an appropriate assessment.

***'Although the helmet is designed for a stable fit for protection during play, removal of the helmet by others is relatively difficult. In the case of a head or neck injury, jostling and pulling during removal presents high potential for further trauma. Unless there are special circumstances such as respiratory distress coupled with an inability to access the airway, the helmet should never be removed during the pre-hospital care of the student-athlete with a potential head/neck injury.'* (National Collegiate Athletic Association, 2010)**

The use of tinted visors impairs the assessor's ability to properly assess whether head trauma has taken place or not, by not allowing the assessor to clearly view the eyes and eye movements. With a tinted visor the assessor will have to remove a player's helmet to visually inspect the eyes. If a head, neck and/or back injury have occurred to the player, movement of the player to remove the helmet can exacerbate the injury.

### Visor Practicality

There are practical, beneficial and recommended uses for helmet visors in sports. Visors can be prescription products to provide vision correction to an athlete to avoid the need for other optical appliances such as glasses or contact lenses. Visors can provide protection, beyond what a cage facemask can provide, from projectile objects, potential instruments that can damage the eye through contact and protection from incidental face-masking. (Ferguson)

Visors may also be used to reduce the amount of light that the eyes are exposed to through the use of tinted visors. These tinted versions provide the same benefits outlined above with the added feature of acting like sunglasses in filtering bright light. The problem is that the visors are attached to the helmets, and unlike sunglasses cannot be easily removed for assessment purposes.

The CAO agrees with the advantages that **clear** visors can provide in terms of prescription, safety, and protection benefits. However, the problems addressed by the tinted version of visors are not justifiable in relation to the potential complications that may arise from their use.

There are medically necessary reasons for filtering bright light (i.e. photophobia). However, there are better options beyond tinted visors that can address this or like conditions. If light filtering is required the use of appropriate tinted eye glasses (i.e industrial, shatterproof) or

tinted contact lenses can be utilized to provide the light filtering necessary and should not interfere with on-field assessments.

***The sports medicine experts addressed this issue with the rules committee / subcommittee of a player who has a medical condition in which a tinted or colored visor is recommended to help prevent and/or aid in his care. The sports medicine community opined that the visors posed a greater risk to a player with a head or neck injury than players who wore contact lens or eye glasses that were tinted or shaded. It was believed that the players who needed a tinted lens for whatever reason would get the same and safer result by wearing a tinted contact lens or tinted glasses. (Winnek, 2008)***

### Current Status of Visor Rules

Some leagues have taken the stance that tinted visors are illegal and are banned from the approved equipment list such as the NCAA which lists as illegal equipment, 'Eye shields that are not clear or made from molded or rigid material.' (National Collegiate Athletic Association, 2007). The National Federation of State High School Football Associations has also made tinted visors illegal:

***'Tinted eyeshields are illegal by NFHS Football Rules. If an eyeshield is attached to a football helmet, it must be constructed of a molded rigid material and must be clear without the presence of any tint.'*** (Colgate, 2011)

However, no other rules can be found in other North American football leagues (NFL, CFL, CIS, Football Canada, etc.) that deal with tinted helmet visors.

### CAO Recommendations

It is the position of the CAO that tinted visors should not be worn for participation in any contact sport where head injuries can occur. The CAO's position is that tinted helmet visors present considerable difficulties for on-field medical assessment and should not be used. The infrequent medical need for filtering bright light can be addressed through appropriate (industrial, shatterproof) tinted contact lenses or sunglasses.

The use of clear visors is supported and recommended for the protection of the eyes and to facilitate on-field medical assessments when necessary. While the protection of the eyes is vitally important in all recreational pursuits, the purpose of the policy is to address the use of tinted helmet visors in relation to on-field medical assessments.

**Qualifications of Optometry**

An optometrist is a primary health care provider who specializes in the examination, diagnosis, treatment, management, and prevention of diseases and disorders of the visual system, the eye and associated structures. Optometrists are educated and trained in the normal and abnormal physiology of the eyes, the psychophysics of vision, and the perceptual processes and their relationships to the functional activities of learning, employment and recreation.

As primary eye care providers, an optometrist's main responsibilities are:

- The examination of the human eye by any method (other than surgery), to diagnose, treat, and/or refer for treatment any abnormal condition of the eye, in cooperation with physicians and other health professionals.
- The employment of instruments, procedures or agents to measure, examine or diagnose visual defects or abnormal conditions of the eye.
- The prescribing, fitting and application of glasses, contact lenses or other devices to correct, relieve or treat the eye.
- The prescription, supervision and management of therapy for the improvement/ monitoring of visual health.
- The referral of patients to other health practitioners as required.

The optometrist has responsibilities in the following areas of primary care:

<ul style="list-style-type: none"> <li>• prevention;</li> </ul>	<ul style="list-style-type: none"> <li>• health education;</li> </ul>
<ul style="list-style-type: none"> <li>• health promotion;</li> </ul>	<ul style="list-style-type: none"> <li>• health maintenance;</li> </ul>
<ul style="list-style-type: none"> <li>• diagnosis;</li> </ul>	<ul style="list-style-type: none"> <li>• treatment and rehabilitation;</li> </ul>
<ul style="list-style-type: none"> <li>• counselling;</li> </ul>	<ul style="list-style-type: none"> <li>• consultation.</li> </ul>

**Conclusion**

While clear visors have a practical application and are recommended for prescription, safety and protection purposes in contact sports, the need for tinted visors cannot be justified in relation to the complications they can introduce to the on-field injury assessment process. The CAO recommends against the use of tinted helmet visors for all contact sports.

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