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Losing Teeth is Expensive – Losing an Eye is Priceless

Injury patterns, treatment and protection

Current discussion about face protection is running hot – to wear or not wear is the question.

The professional high goal players are perhaps not the ideal role models due to extraordinary riding skills, however a study from C.M. Inness and K.L. Morgan showed only 30% of the polo players think that a safety standard mark on the helmet is important.

It would seem the most precious part for a polo player, based upon the protection worn, is the eye. However in middle and low goal polo where the playing speed is lower and backward hits are not as common, this may be less of a problem.

The starting point for face protection has different levels due to multiple interests and necessities on the different playing skills.

I interviewed several different colleagues including dentists, ophthalmologist, oral and maxillofacial/plastic surgeons who are polo players and or riders themselves or treat the typical injuries.

Injury Pattern

Based on testimonials from FALCON Polo from more than 100 players in a period of two years, most players got a facial injury due a direct hit with the polo ball, and a smaller portion due a hit with a stick, hit with the horse head, and falls. There are exceptional cases of injuries due a kick of the horse.

Therefore three main patterns are responsible for facial injuries

- Hit with ball
- Hit with the stick
- Direct force to head when hit by a horse head or when falling off and hitting the ground

Facial Structures at Risk

- Superficial skin cuts and/or superficial injury to the eye
- Complicated injury to the eye and/or fracture of facial skull bone
- Dental injuries

Injury to the Eyes:

Sports-related eye injuries are blunt, penetrating, and radiation injuries. The extent of ocular damage depends on the size, hardness, and velocity of the blunt object, and the force imparted directly to the eye. A direct blow to the globe from a blunt object smaller than the eye's orbital opening, causes rapid anteroposterior compression and dilation of the middle of the globe, transmitting a great force to the internal ocular structures. A blunt object larger than the orbital opening exerts force on the floor of the orbit or the medial wall, resulting in fractures of the thin bones. This pressure-release valve may prevent rupture of the globe. However, there is a high incidence of internal ocular injuries

Injuries to the Skull Bones:

Skull fractures occur due to an impact to the head from either a blunt or sharp object. Common examples in sports include collisions between players in contact sports such as rugby, where fractures to the cheekbones and nose are common. In polo the risk of being hit by the ball or the stick is more common. Injuries by the horses can also occur but are quite rare.

Dental Injuries:

A cracked or fractured tooth, which has wildly varying levels of severity, happens most often during sports when the player sustains an abrupt blow to the face. The National Youth Sports Safety Foundation (NYSSF) estimates that players who don't wear mouthguards are 60 times more likely to damage their teeth this way during competition, and a tooth injury of this nature can cause various long-term problems.

Safety Material:

Applying maximum safety gear is recommended for all beginners and children.

Face Mask – Casablanca

Made from 3.2mm wire with a polyamide 11



Duncan Qui has produced the Warrior Mask for facial protection

coating (polyamide 11 is the only polyamide made from sustainable sources as it is produced from castor oil).

Easy to attach and detach, provided with stainless steel screws to fasten to a helmet. Built with just the right balance of strength to prevent serious damage from polo balls and swinging sticks, yet crushes on impact partially absorbing shock in case of a fall.

Glasses

Sports frames with a 3-mm polycarbonate lens (for athletes participating in high-risk sports). Eye protection should be used by athletes who wear contact lenses and by those who do not need corrective lenses. The athlete with refractive errors should wear prescription polycarbonate lenses. A sturdy sports frame meeting impact-resistance standards (i.e., ASTM F803-01) is required. Eyeguards without lenses do not pass ASTM racquet sports eye safety standards.



A facemask is one option to consider when protecting your face

something hits the mask as the mask simply shakes to divide the energy and pass through the openings.

Also those openings can help increase cold air into the face to reduce sweating. Also in the pipeline are goggles as part of a new range of protection equipment.

Blueye glasses provide a range of benefits

– Oakley is the most used brand with a wide range of models.

– Blueye Eyewear UK Super Light Ballistic Sunglasses is another model with high quality standards. They also exceed U.S. military ballistic impact requirements for spectacles (MIL-PRF-31013, clause 3.5.1.1) and feature: high impact grilamide frame material, interchangeable lens system, 2.1mm Carl Zeiss precision optics lenses 100% UVA & UVB.

When deciding which eye protection to purchase it is important to choose a model with a soft unbreakable frame and also unbreakable glasses, which allow free sight in all directions.

Mouthguards

Recent laboratory research showed that



The National Youth Sports Safety Foundation (NYSSF) estimates that players who don't wear mouthguards are 60 times more likely to damage their teeth

mouthguards can reduce distortion to the mandible (lower jaw) and the acceleration of the head from the same blow, and therefore may have the potential to prevent mandibular bone fractures and concussion. The proven benefit of a mouthguard is the dissipation of the forces delivered to the maxilla (upper jaw), skull and temporomandibular joint complex when the mandible receives a blow. There is also stabilisation of the skull through increased neck muscle activity by clenching on the mouthguard. Critical for injury prevention, the mouthguard should have an ideal thickness after fabrication of 3mm, and provide an occlusal surface balanced to the mandibular teeth. Only custom-made models are recommended.

“For adults/professional athletes. Three layers. For sports where extremely hard and pointed impacts may be received by the jaw. Independently tested and proven to be “The world's most protective mouthguard”. Particularly suited to extremely high impact sports such as senior rugby and hockey.” *Playsafe Heavy Pro mouthguard, Mighty mouthguards*

Future Trends – Warrior Mask for Polo by Duncan Qui

Duncan was inspired by an old Chinese warrior mask from the battlefield, which not just offered protection from arrows, but also intimidated the enemies in the night attack. In order to protect face injuries in polo, Duncan designed the warrior mask.

The mask is made from three liquids mixed together, also the interior silica gel not just creates the softness for the face, but also allows the face to cool down the heat. The whole mask has a lot of openings, on the side of nose and the side of the face, which were designed to release energy and impact when

WHEN TO SEE A SPECIALIST

Eyes:

- Sudden decrease in or loss of vision
- Pain on movement of the eye
- Photophobia (extreme sensitivity to light)
- Diplopia (double vision)
- Light flashes or floating shapes
- Irregularly shaped pupil
- Foreign-body sensation/embedded foreign body
- Red and inflamed eye
- Hyphema (blood in anterior chamber)
- Broken contact lens or shattered eyeglasses

General facial trauma:

- Any asymmetries in the face or crepitus should be checked in the emergency room
- Lacerations and concussion

Teeth:

- Dental avulsion (missing teeth) is a real dental emergency, if teeth have been knocked out bathe them in saliva and take it to an emergency room or a dentist
- Time is key, 20-40 minutes post-injury affects the prognosis of the tooth

For more information on Polodoc contact Andreas Krüger at drmedkrueger@gmail.com

