



VISION CENTER OF EXCELLENCE (VCE)
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Podcast 1

APPLYING PROTECTIVE EYE SHIELDS IN THE FIELD

Introduction.

This series of podcasts is hosted by the Vision Center of Excellence, a joint program of the Department of Defense and Department of Veterans Affairs.

The podcast series provides concise summaries of issues and reports targeted to Department of Defense and Veterans Affairs vision providers overseeing care for our Service members and Veterans.

Body.

This podcast is intended to provide guidance to military medics, civilian EMTs, and other first and second responders, bystanders, and battle buddies on the appropriate application of protective eye shields in the field and other emergency situations.

The prevalence of blast-related injuries during the conflicts in Iraq and Afghanistan has resulted in an increase in eye trauma, making it one of the most common injuries among Service members in these conflicts. The outcome of an eye injury is often determined by the initial treatment received immediately following a traumatic event. In many cases, this may be provided by a bystander or battle buddy. While first and second responders, in addition to medical trauma providers, are well versed in the principles of “life, limb and sight”, an eye injury can easily be overlooked in the chaos of the moment. This is particularly true in combat, where an eye injury may be concealed by the blood, dirt and debris that accompany a traumatic event. In these instances, knowing what to do, and also what NOT to do, is vital to preserving vision. The best way to treat an eye injury is simply to apply a rigid shield over the eye, and seek or **refer** to immediate ocular care. The bottom line for eye injuries: shield it, and ship it.

In any instance where eye an injury is suspected, the most important course of action is to protect the eye using a protective eye shield. These rigid, protective coverings help safeguard the eye from pressure, environmental hazards or additional trauma by providing a safe enclosure until additional medical attention is available. The eye shields should be placed on the bony eye socket and vault over the eyeball. This dome-like shape helps distribute pressure away from the eye. Eye shields also help protect the wounded eye from the patients themselves. A common impulse when injured is to want to touch the source of pain to evaluate or try to *help* the problem. A proper eye shield will prevent the injured person from touching and putting pressure on the eye.

Before applying an eye shield, you may want to clean the dirt or blood from the area surrounding the eye—without touching the eye itself. Keep in mind that the eye is a very delicate organ, and barely touching a pierced eye or eyelid can actually cause the intra-ocular tissues to be ejected through the point of rupture. Here are a few things to avoid when it comes to an eye injury. Be sure not to apply force around the eye that may cause movement or pressure on the eye itself. **DO NOT** apply ointments or situate a patch or gauze over the eye. Never apply a wrap over an unshielded eye, even if the eye appears uninjured and do not place a “head wrap” over an unshielded eye to dress a head wound. All of these things can cause further

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Applying Protective Eye Shields

damage. The only case when it is acceptable to touch or irrigate the eye is if an eye injury is the result of chemical exposure. In this instance, the eye should be immediately irrigated.

When you move on to applying the eye shield, inexpensive metal shields will typically be the first choice for eye protection. If no commercially manufactured eye shield is readily available, there are many alternatives that can serve the same purpose. You may consider adapting equipment you already have that can vault over the eye. A great first choice is the patient's own anti-ballistic combat eye protection. These are bulletproof and already function as eyewear. Prescription glasses or sun glasses will also work, as long as they are large enough to span the entire bony eye socket and do not put pressure on the eye. Otherwise, an adequate shield can be fashioned using improvised materials, like a disposable cup, a small box, knee pads or even a molded SAM splint. The idea is to use something rigid that will vault over the eyeball without touching it. With these items, you may also have to improvise a way to secure the eye shield in place. Tape may not stick, so you may think of using something like gauze head wrap, fabric strips from clothing, or even shoelaces to secure the shield over the eye. Tie them loosely and never over an unshielded eye. Whatever form of eye shield you end up using, the important thing is that you protect your patient's wounded eyes.

Once the eye shield is in place, there's one final precaution to keep in mind when transporting the injured person to a treatment facility. Convulsive movements, such as sneezing, coughing, straining or vomiting, may put harmful pressure on the eye. Help the injured person limit any excessive movement that can cause further damage. Keep them calm and consider giving them medicine that can help with these symptoms. For combat trauma, administer the antibiotic in the combat pill pack, as long as doing so does not cause nausea or vomiting.

Eyes are extremely delicate organs, but they are also exceptionally resilient. Loss of sight is among the most devastating injuries, and proper management in the initial trauma and transport phase can make it possible for even severely injured eyes to be repaired at a medical facility. While medical priorities are "life, limb then sight", a patient's priorities are likely "life, sight then limb". The best way to treat an eye injury is simply to apply a rigid shield over it. Then seek or refer to immediate ocular care. Following these best practices can help protect your patient's eye and give them the best chance of retaining their vision. Remember for eye injuries: shield it, and ship it.

Conclusion.

This production was brought to you by the Vision Center of Excellence. Our mission is to lead and advocate for programs and initiatives to improve vision health, optimize readiness and enhance quality of life for Service members and Veterans. Working with TRICARE, the Military Health System, other Centers of Excellence and the Veterans Health Administration, the Vision Center of Excellence works to enhance collaboration between Department of Defense and Department of Veterans Affairs vision care providers, provide guidance for clinical practice and facilitate patient-centered support. For more information, visit us online at vce.health.mil or on Facebook.

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Education, Training, Simulation and Readiness & Clinical Care Integration Directorates

APPENDIX

A: Phonetic Guide.

Phonetic Guide		
1	SAM	s-Am (like the name)
2	Ocular	Aw-kew-lar