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Hand Armor Advancements

How to protect and repair your best combat and LE tools!

Hand injuries account for nearly 10 percent of all emergency department visits in the U.S. A 2008 study at the U.S. Army Institute of Surgical Research, Burn Center at Fort Sam Houston looked at the hand injuries sustained during Operations Enduring Freedom and Iraqi Freedom. They found in a retrospective review of the U.S. Army Institute of Surgical Research Burn Registry that 451 military personnel were admitted during a 34-month period and 239 had sustained hand burns. This clearly demonstrates that hand protection in a combat environment is paramount.

Hand injuries are also commonplace in the civilian tactical environment. Breaking and raking windows, breaching doors and clearing rooms all put our hands at risk for injury. Nothing can be more debilitating to an individual than the loss of function of all or part of a hand. Even the loss of a finger can be devastating. Although, with time most individuals can adapt to such a disability, the goal is to prevent such injuries by using appropriate gear.

Intricate in design and function, the hand is an incredible work of art and anatomy. Form follows function in the hand and any injury to the underlying structures of the hand carries the potential for a serious disability.

Rapid Evaluation

The primary goal with injuries to the hand is an accurate and rapid initial medical evaluation. Once an injury occurs, the tactical medic should begin medical treatment rapidly to prevent both short- and long-term effects.

The hand consists of 27 bones if you include the eight bones of the wrist. When the other associated structures such as nerves, arteries, veins, muscles, tendons, ligaments, are considered, the potential for a large variety of injuries becomes greater.

Hand injuries can be divided into four general categories: (1) lacerations (2) fractures and dislocations, (3) soft tissue injuries and amputations and (4) burns.

The potential for devastating injuries increases tremendously when medical



Whether you're involved with a dynamic breaching mission or an all-out gunfight, the right hand armor is a necessity.

attention is delayed. Even the smallest cut or seemingly innocent hand injury could require advanced treatment to prevent significant loss of function. Even the most

insignificant hand injury can have the potential for serious loss of function.

Any laceration that may require sutures warrants a complete medical evaluation. Internal damage to the hand can also occur, and is hidden out of plain view deep within the hand, such as lacerations of tendons. These can be treated at a later date by a hand surgeon with good results, but you do not want to miss them in your evaluation.

Hand Injury Treatment

Field care for hand injuries initially involves some smart first aid techniques. The following is a solid checklist of what's needed depending on the situation.

Lacerations:

- ➔ Apply pressure to the wound to stop bleeding
- ➔ Wash dirt or debris from the wound if at all possible
- ➔ Cover the wound to prevent further contamination or injury
- ➔ Do not remove large foreign bodies such as nails, hooks, or knives

Fractures and dislocations:

- ➔ Rapid field reduction if possible
- ➔ Immobilization by splinting or buddy taping
- ➔ If the bone is exposed, cover with gauze
- ➔ Ice may help decrease the pain, but never apply for more than 20 minutes and never directly to skin

Soft tissue injuries and amputations:

- ➔ Apply pressure to stop bleeding
- ➔ Cover with damp bandage, if possible
- ➔ Elevate the hand above the heart
- ➔ Retrieve amputated body part. If possible, cover, keep damp, and place near ice to cool
- ➔ Do not place body part in direct contact with ice in order to prevent freezing

Burns:

- ➔ Thermal (heat) burn: Cool with water
- ➔ Chemical burn: Irrigate with lots of water
- ➔ Frostbite: Re-warm with warm-water bath or soak, then cover.

Additional treatment:

- ➔ Pain medication
- ➔ Antibiotics if needed
- ➔ Tetanus shot if indicated

Infections

Human or animal bites require thorough cleansing and irrigation to reduce the risk of infection. Puncture wounds such as cat bites and wounds where tissue is crushed such as human and dog bites are particularly likely to become infected. The risk of infection increases when these wounds are sutured. Most bite wounds require antibiotics and close follow up to assure healing.

Preventing an injury is better than treating one. The hand is clearly one of the most critical parts of the body to protect from injury because even with the best treatment, just about any injury leads to some loss of function.

Tactical gloves can protect your hands, specifically the nerves, which can become injured if the palm suffers a direct blow. In addition to protecting your nerves, gloves can protect your skin from direct wounds and cuts. At the International School of Tactical Medicine, we are as concerned about preventive medicine as we are about educating and training good effective tactical medics. The next time you deploy make sure you and your team members have adequate hand armor. Remember you can't shoot back if your hands are injured. **TW**

WILEY-X TACTICAL GLOVES

Wiley-X of Livermore, CA is famous for producing the best ballistic eye armor on the market today. Now, no expense was spared to produce the best "Hand Armor" on the market today.

Wiley-X Combat Assault Gloves CAG-1 are designed specifically for military and LE tactical applications. The new, second-generation gloves provide superior hand protection without compromising control and finger dexterity. The Wiley-X Combat Assault Gloves feature a blend 100 percent Kevlar weave that offers excellent flame and cut resistance providing protection in hazardous situations without compromising flexibility and ensuring a highly tactile function.



These tactical gloves also feature leather-reinforced in high-wear areas, an adjustable cuff for custom fit and an injection-molded knuckle protector for impact and abrasion resistance. The Wiley-X Combat Assault Gloves have a clip-strap for easy storage and portability and a Kevlar expansion slot for easy accessibility. Wiley-X's injection-molded

knuckle protector and flame-resistant-treated goat leather combine to make Wiley X CAG 1 Gloves one of the most durable gloves ever produced. They are custom designed to match tactical uniforms and are available in three colors Black, Coyote Brown and Foliage Green.

To learn more about the company's "hand armor" visit www.wileyx.com.