**WHAT IS AN EDW?**

An EDW is a weapon that delivers a series of electrical pulses intended to temporarily incapacitate subjects through pain compliance (the use of painful stimulus to control or direct a person) and involuntary muscle contractions. An EDW can be used directly on the subject (stun gun, stun belt, stun vest, stun sleeve) or by two probes shot from up to a 10-meter distance (TASER).

The UN Committee against Torture concluded that the TASER X26 constitutes a form of torture as it causes severe pain and may even cause death (1). The European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT) has issued general principles for the use of EDWs stating that it should be “limited to situations where there is a real and immediate threat to life or risk of serious injury” and that use towards vulnerable persons should be avoided (2).

**IN PRACTICE**

While the TASER X26 was discontinued in 2014, it remains in use having been purchased by over 15,000 law enforcement and military agencies around the world, including the US, UK, France, and Australia (3). A variety of TASER models are still available on the market both to law enforcement and private individuals. Other devices relying on pain compliance through electric shock are also available on the market. These include electric shock batons, stun cuffs, riot shields and so-called capture shields that emit electric shock upon touch. Electric stun vests, electric riot shield and stun sleeves have been banned in the EU since 2006 (4).

EDWs are promoted as less-lethal weapons in comparison to deadly force. The UK police force for example, places the TASER M26 directly before firearms in the hierarchy of use-of-force (5). Use is therefore intended only in situations where it is absolutely necessary to protect life.

Electro-shock stun belts are reportedly used in 30 state prisons and all federal trial courts in the U.S. Stun belts are also used by prison staff and police in South Africa (6). Stun belts are strapped onto prisoners during transport and during judicial hearings. Similar devices include stun vests and sleeves worn on a prisoner’s leg or arm (6).

The CPT has investigated and documented allegations of ill-treatment or torture regarding the use of EDWs by law enforcement in Poland, Bulgaria, the Slovak Republic, and Russia (7–10).

**HEALTH CONSEQUENCES**

Studies report that injuries occur in 20% - 41.2% of cases involving a range of EDW use (11,12). While some studies show no increased risk of death due to the use of EDWs (13), a study of police departments on moderate to large cities in California using Tasers, shows a 6.4-fold increase in the rate of in-custody deaths (not involving firearms force) in the early deployment period of Tasers compared to the average mortality rate in the five years before the deployment. This rate decreased to pre-deployment levels in years 2–5 after deployment (14).

EDWs have been found to cause the following injuries:

**Electrically induced injuries:** Eye trauma caused by an EDW dart has been reported in several studies (15,16). Research has shown that EDW shocks can affect the heart and that people with pre-existing heart conditions can be vulnerable to the electric shocks from EDWs (17).

**Fall-related trauma due to EDW application:** Falls can induce serious trauma since the person subjected to the EDW will often be paralyzed and therefore not capable of reducing the fall and its consequences (18). Hence, falls are a common factor when EDWs induce severe injuries to the brain, which in some cases can be fatal (19).

**Mechanical trauma from probes:** EDW darts cause injuries, including burns, lacerations and punctures to the area hit by the darts. Studies have documented injuries to the skull, face, eyes, nose, pharynx and fingers (16,20–22). Injuries to the skull have also been documented involving the dart penetrating through the skull (23). Single cases of serious injury from the darts have been documented including for example a case of severe neurologic injury and stroke (24) and a case of pneumothorax (collapsed lung) (25).

**CONCLUSION**

EDWs encompass a broad range of weapons designed to temporarily incapacitate a person, however injuries and even death have been documented in cases where EDWs were deployed. The risk of injury or death from EDWs is amplified in the absence of international and sometimes national standards or laws regulating their use.
REFERENCES


