

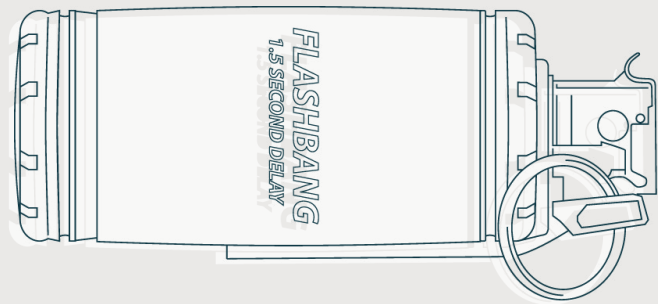
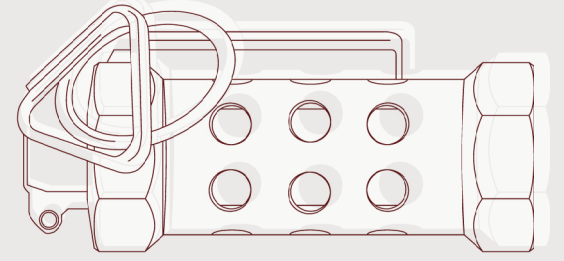
# DISORIENTATION DEVICES

FLASH-BANG/STUN GRENADES

Disorientation devices, also known as **concussion grenades**, **flash-bangs** or **stun grenades**, are weapons that create a loud explosion and/or a very bright flash of light. Originally developed as a **military weapon**, the use of disorientation devices in crowd-control settings has climbed significantly over the past several years. While their stated objective is to cause disorientation and a sense of **panic**, the potential for injuries caused by the pressure of the **blast or by shrapnel** from the fragmentation of the grenade is disproportionately high, and could even **lead to death**. Therefore, these weapons have no place in effective crowd management.

## HISTORY

These explosive devices were initially developed by the **British Special Air Service** in the **1960s** as training weapons, and they were later used for decades as **military weapons**. The transition from military operations to policing occurred over time. Their use in urban settings and on civilian populations is now more common.



## HOW THEY WORK

Disorientation devices are usually constructed like a **conventional grenade**, with **explosive powder** that ignites when struck by a fuse. The grenade is thrown and explodes after a roughly **1.5-second delay**. The explosion of magnesium-based pyrotechnic chemicals causes a very bright flash and a loud sound (**160–180 decibels**), which can cause temporary blindness, temporary loss of hearing and loss of balance, as well as a **sense of panic**. Parts of the device can burst and travel as shrapnel.

## HEALTH EFFECTS

DISORIENTATION DEVICES CAN CAUSE A RANGE OF BLAST INJURIES:

### PRIMARY BLAST INJURY:

This results from pressure shock waves from the blast. These can cause internal injuries, especially of delicate membranes like the eardrum.

### SECONDARY BLAST INJURY

The explosion and fragmentation of objects can cause blunt and penetrating trauma.

### TERTIARY BLAST INJURY

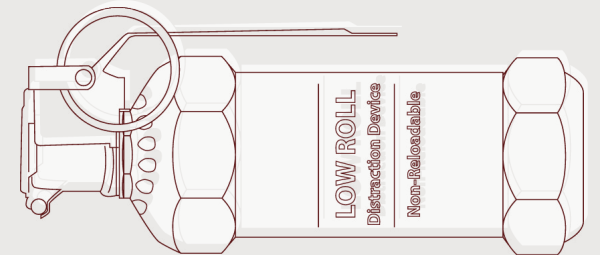
The displacement of air can push people into solid objects, causing blunt and penetrating trauma.

### QUATERNARY BLAST INJURY

Other parts of the explosion can cause miscellaneous injuries such as burns, respiratory injuries, crush injuries and psychiatric trauma. In addition, crush injuries may result from the panic and chaos caused by large moving crowds that have suddenly become disoriented.

## FINDINGS ON INJURIES FROM A LITERATURE REVIEW AND RESEARCH

A **Propublica report** from 2015 documented more than **50 cases** of severe injury and death from the use of disorientation devices in recent years. Many of the injuries involve **severe burns** resulting from the weapons being fired at **close range**, in enclosed spaces or in dense crowds.



## CONSIDERATIONS & POLICY RECOMMENDATIONS

**FIRING STUN GRENADES DIRECTLY INTO CROWDS OR TOWARDS INDIVIDUALS SHOULD BE PROHIBITED, AND VIOLATORS SHOULD BE HELD ACCOUNTABLE.**

✓ **Firing disorientation devices for dispersal of crowds is inappropriate** and often causes serious injury.

✓ **Quality control and regulation** of disorientation devices is poor and requires significant attention.

For more information, see Physicians for Human Rights and INCLO, "*Lethal in Disguise: The Health Consequences of Crowd-Control Weapons*." (March, 2016).