



Water Cannons

Crowd-Control Weapons Series

Overview

High- or low-velocity streams of water, commonly known as water cannons, are frequently used for dispersing crowds or limiting access to certain areas. Water cannons can cause hypothermia, direct trauma from the pressurized water, secondary injury from being knocked down or colliding with objects, or injuries from chemicals and dyes dissolved in the water. These medical problems – along with practical and human rights concerns about communication, intimidation, indiscriminate and disproportionate use, and collective punishment – highlight water cannons' potential for misuse.

History

Water cannons were first used for crowd control in the 1930s in Germany and, by the 1960s, were frequently used during the civil rights protests in the United States. Now most often employed as large truck-mounted hoses, water cannons are used worldwide, with little to no regulation.

How They Work

Water cannons are water hoses connected to either in-ground water supplies or mobile bladders (often on trucks). They propel streams of high-pressure water aimed at pushing back crowds or low-pressure streams intended to douse.

Device Types

Modern water cannons can propel water at rates of up to 20 liters per second, and can stream water 67 meters away. Different agents are sometimes mixed into water cannons to create secondary impacts: colored dyes, malodorous chemicals, and invisible UV markers are used as means of collective punishment or for the purpose of later identifying and arresting protesters.

Health Effects

Water cannons can affect the health of individuals in a number of ways:

- **Hypothermia and frostbite:** In colder climates, the use of water cannons can cause hypothermia and frostbite.
- **Internal injuries:** Direct injuries can include traumatic or internal injuries from the force of the water stream.
- **Falling and slipping:** Indirect injuries from the blunt force of water cannons include forced falls and slipping.
- **Exposure to added chemicals:** Added chemicals can also have negative effects.

In a systematic literature review conducted by Physicians for Human Rights, a number of serious injuries caused by water cannons were identified. Several individuals sustained facial fractures and eye injuries from direct trauma from water cannons.

Secondary injuries caused by water cannons include traumatic brain injuries and bone fractures.

Health Effects *continued*

Secondary injuries identified in the medical literature included traumatic brain injuries, bruises, rib fractures, and various musculoskeletal injuries, primarily from falls and trauma secondary to the force of the water. Malodorous chemical agents that are sometimes mixed into water cannons by law enforcement agents have been reported to cause prolonged nausea and labored breathing to those exposed to it.

Legality of Use

International human rights law protects the right to freedom of assembly, including the right to hold public or private meetings, marches, processions, demonstrations, and sit-ins.

The state has a duty to protect those exercising their right to peaceful assembly from any type of violence, including violence from law enforcement agents and counter-protesters. As long as the purpose of the assembly is peaceful, incidental violence does not discharge the state from this obligation to protect.

International legal principles require law enforcement agencies to adopt rules and regulations for the use of force within the following parameters:

- The use of force must be minimized, targeted, proportional, and directed at de-escalating violence.
- The use of less than lethal incapacitating weapons must be carefully controlled.
- The deployment of less than lethal incapacitating weapons must occur in a manner that minimizes the risk of endangering uninvolved persons.
- Restraint must be shown in all use of force by law enforcement agents, with a view to minimizing injury and loss of life.

In addition, the state has an obligation to ensure that assistance and medical aid are rendered to any injured or affected persons at the earliest possible moment.

International human rights principles have been violated if the use of less than lethal incapacitating weapons is not adequately regulated, or if the weapons are used in an indiscriminate manner.

Considerations and Policy Recommendations

- Contextual factors must always be considered before making a decision to deploy water cannons, and water cannons should never be used in cold weather or where dispersal safety cannot be guaranteed.
 - Dyes and other chemical agents are not appropriate for the purpose of safely managing crowds and should be prohibited. The primary outcome of these additives appears to be collective punishment and humiliation, which are not legitimate policing tactics.
 - Regulations on appropriate water pressure and temperature and limitations on distance should be defined both by manufacturers and law enforcement departments.
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