

Are crowd-control weapons dangerous? Very, says expert

8 June 2020, by Gretchen Kell



Tear gas, used here at a 2011 demonstration in Tunis, the capital of Tunisia, in Northern Africa, can cause serious injuries including chemical burns, severe breathing problems or damage to the eyes. "It's almost impossible to use tear gas in a safe way to ensure the orderly dispersal of crowds," said Dr. Rohini Haar, a research fellow at UC Berkeley's Human Rights Center and a School of Public Health epidemiology lecturer. Credit: Nassir Nouri via Flickr/Creative Commons

Protests and demonstrations, like those erupting after the death of George Floyd, a black man who was killed when a white police officer in Minneapolis pressed his knee into Floyd's neck for nearly nine minutes, are a daily occurrence in our world. But what happens when police use crowd-control weapons, or CCWs, against those exercising their democratic rights?

Dr. Rohini Haar, an emergency room physician in Oakland, a research fellow at Berkeley Law's Human Rights Center and a lecturer at the School of Public Health, has been exploring the health impacts of these weapons, including [tear gas](#) and rubber bullets, for many years and has treated people injured by them.

In 2016, Haar was the first author of a Physicians for Human Rights report analyzing deaths, injuries and permanent disability from crowd control weapons used in arrests and protests and in other contexts from January 1990 to June 2017. She also has authored research papers on topics including rubber bullets and chemical irritants, as well as a Human Rights Center report on tear gas exposure among Palestine refugees.

Berkeley News spoke with Haar about crowd-control weapons, why they're used, why they're unsafe and how exposing their health impacts can be a powerful motivator to better protect human rights.

Berkeley News: Many people perceive that rubber bullets, tear gas, pepper spray and other crowd-control weapons cause minimal, transient harm. What's the truth about these weapons?

Rohini Haar: Rubber bullets is a generic term for a variety of projectiles that are not considered live ammunition. These can include compounds of rubber, PVC (polyvinyl chloride), hard plastics, foam and even metal, as well as bean bag rounds and other rounds or shot. Tear gas is also a catch-all term for a variety of chemical irritants, including pepper spray (an extraction, from peppers, of oleoresin capsicum) and its synthetic, PAVA; and traditional tear gas, also called CS or CN gas, and its successors.

These are all weapons. They are as dangerous as the person who fires them wants them to be. They can injure, maim and kill. They are not as deadly as live ammunition, of course, but when you consider the number of people exposed to tear gas and rubber bullets in a crowd, in protests and demonstrations around the world every day, that denominator is huge. So, injuries and deaths are everywhere.

As an emergency room doctor in Oakland, can you provide a few examples of harm caused to people in a crowd by crowd-control weapons?

Let's start with rubber bullets and other rounds. Our research finds that these weapons have no role at all in crowd control. At close range, the bullet leaves the [weapon](#) at speeds comparable to live bullets and can break bones. If they hit the head or face, they can fracture the skull or destroy the eye or neck structures. At longer ranges, their irregular shapes cause them to tumble and ricochet. They have unpredictable trajectories and can hit a bystander in the eye or a small child in the head.



Tear gas is a bit more nuanced. The vast majority of people exposed to tear gas will have transient symptoms and be in pain, but it will resolve. However, the excessive use and misuse of tear gas that we are seeing all over the country and all over the world right now is ripe to cause more injuries.

When the tear gas canister is targeted, or hits someone's head, it can cause skull fractures and death. When tear gas is used excessively, or in enclosed spaces, or when people can't get away, they can suffer more serious injuries—chemical burns, severe breathing problems or damage to the eyes or other mucous membranes, and people can even be trampled in an ensuing stampede.

It's almost impossible to actually use tear gas in a safe way to ensure the orderly dispersal of crowds. But even if that was plausible, tear gas is a dispersal agent, and one has to ask, 'Why are the police ending the demonstration?' Even if an individual or a small group is violent, that is not a reason to stop the vast majority of folks from exercising their rights to speech and assembly. The threshold for firing any weapon onto unarmed civilians must be very high, much higher than we are seeing right now in the U.S.

I've treated pepper spray and tear gas victims in the U.S. and abroad over the years. Even in folks who appear to be fine, that pain is severe, and people are very agitated and often disoriented. I've also reviewed medical reports for injuries secondary to rubber bullets and tear gas canisters; these are horrifying and devastating injuries.

At close range, a rubber bullet is fired at speeds comparable to live bullets. It can break bones, fracture the skull and destroy the structures of the head and neck, said Dr. Rohini Haar, an expert on health and human rights. Credit: Lucas Delaqua via Flickr/Creative Commons

Should these weapons be banned, or is the problem that those who are using them aren't properly trained to deploy them?

From the research, we are convinced that rubber bullets and other projectiles should be banned in the policing of demonstrations. There is no point at which they are safe, or that they de-escalate tensions or make the community safer. Tear gas and other CCWs, such as sound cannons, need better regulations about when they should be used. There are almost no international or national laws about their safety, their content or their sale. When police do use them, there has to be reasonable justification for their use and accountability when they are misused.

Rubber bullets and tear gas have been used for nearly a century. It is time to learn our lessons and control their use.

What impact does the use of crowd-control weapons have on the freedom of assembly and expression, and on human rights?

This is a huge question. And so critically important.

When Physicians for Human Rights started researching CCWs, this question is actually where we started. The answer is: It has a large impact. In many parts of the world, tear gas and other weapons are used to simply control people, repress their basic rights and quiet the population. In the U.S., it is rare, in any large demonstration, that the majority of people are inciting violence.

But when tear gas or rubber bullets enter the picture, these weapons are indiscriminate. They target everyone—the peaceful ones, the kids, the elderly, bystanders and even law enforcement itself, along with those few who are being violent. When these weapons are used to disperse crowds, or even to intimidate people so they won't want to protest, basic human rights are frequently violated.

Do these weapons have a place when there is violence and looting?

In those settings, prevention—through communication, open dialogue and understanding—is the best medicine. Individual arrests are another option. Weapons like CCWs should be a choice of last resort.

With COVID-19 in our lives, what are the extra dangers of these weapons during protests, and how can protest participants protect themselves?

There is so little understood about COVID-19, but, certainly, it is a respiratory disease, and chemical irritants are a respiratory irritant. While no one can really say that one can potentiate the other, it would certainly be a good idea for law enforcement to limit its use of these gases in the middle of this pandemic.

During the era of COVID-19, I'd also suggest protesters wear masks, eye protection and use social distancing where possible. The active component in tear gas, for example, is 2-chlorobenzalmalononitrile, and it can last on surfaces and stick to clothing (it is more of a powder than a gas), so it's important to wash your clothes, wipe down eyeglasses and shoes and take a shower when you get home, just as ER doctors do when they get home from their shifts these days.

I also suggest that members of the public continue to demonstrate and exercise their human rights. As they say, use it or lose it!

Do you have any specific response to the killing of George Floyd and the experiences of demonstrators who continue to take to the streets?

Police brutality is a public health crisis, and I'm so happy that the protests are garnering a national level of recognition. I only hope it will lead to a reckoning around race, discrimination and disparities—not only in law enforcement, but also in health care and so many other fields.

Provided by University of California - Berkeley

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