

## LESSON 4 – NON LETHAL SELF DEFENSE WEAPONS

*Some people, especially if you have been the victim of violence, may find some of the subject matter contained in this article disturbing or traumatizing. If you are still in the process of recovering from violence and abuse, you may want to consult with a mental health professional before reading this content. The subject matter is also intended for an adult audience, and so if you are under 18, you should have an adult read the material first (parental guidance is advised for people under 18). This article addresses the subject matter head-on, so reader discretion is advised.*

### DEFENSIVE SPRAYS

Carrying a defense spray, either CS or OC (Pepper) can be a good defensive tactic, and a very effective way to deal with an assailant. However, like any weapon, if you don't have the time and space to draw it, it will be of little use. Too many people become so reliant and dependent on the spray itself, they feel that they don't need to be as aware of their environment as they would be if they weren't carrying it. An attitude of "I don't need to worry too much about my personal safety, as I have my OC Spray" can definitely develop. Whilst OC or CS Spray can be effective as a self-defense tool, it becomes less so in situations where multiple attackers and/or firearms are involved; and if you are unaware of a threat or danger, you may not have the chance to even get to it.

There are three different types of spray: CS, OC (or Pepper) and CN spray. CS is a synthetic, manmade agent that sometimes gets referred to as "tear gas". It causes watering of the eyes and in some cases, vomiting. Not everyone is effected by CS Spray and it has largely been replaced by OC Spray. CN is an extreme form of tear gas, which can cause dizziness and loss of balance and is used by the military and various law enforcement agencies. OC Sprays are preferable over CS & CN, because it's an inflammatory, rather than an irritant.

OC (standing for Oleoresin Capsicum) is, certainly within the US, the most commonly available and used spray around. It is called "pepper spray" because the active ingredient, Capsaicin, is derived from Chili peppers. The effect of this "ingredient" when sprayed into the eyes, is to cause the capillaries in them to dilate, resulting in temporary blindness - if you have ever rubbed your eyes after cutting up chilies, you will know how much it hurts and how difficult it is to see; imagine this magnified by 2 million. When inhaled through the nose and mouth, it will cause the membranes of the nose, throat and lungs to swell up, making it painful and difficult for a person to breathe.

These effects are immediate, and will last anywhere from 15 to 45 minutes. Rarely are these effects deadly and the only known cases of people dying after being sprayed were due to a prior respiratory condition, such as asthma. The police consider OC spray as a less than lethal solution to violence.

People often get caught up with looking at the percentage figures on cans of pepper spray. A canister of pepper spray contains the active ingredient, along with a carrier, such as water or alcohol, which produces the stream or fog to deliver the "pepper" over distance, into an attacker's face. The percentage noted on the canister is the amount of pepper to carrier e.g. if a canister of spray says 15%, then 15% of the contents of the can is made up of the active ingredient. This may seem an important piece of information to know, however the most important number on the can is the SHU value. The SHU (Scoville Heat Units), measures how "hot" the pepper spray is. If one can has a SHU of 3 million, then it is much hotter, and will have a greater effect than a spray that has a value of 2 million SHU, even if the percentage of pepper to carrier is less. To get an idea of what 3 million SHU's actually means, think back to the time you accidentally rubbed your eyes after chopping/cutting Chilies - if you had taken the rest of the chili and rubbed it in your eye it would be roughly the equivalent of 1 SHU.

Although the percentage figure isn't that important, the type of carrier that is used, is. Capsaicin is not soluble in water, and so if water is used as a carrier and a spray is continually released into an assailant's face, the spray itself may effectively "wash" some of the active ingredient away. Having a spray in which the carrier is alcohol-based will deal with this problem. It will also cause a cloud of spray to remain in place longer e.g. if you spray a "fogger" into the space between you and an assailant, a cloud of pepper spray will hang there that your aggressor will have to pass through if they want to get to you.

There are three basic types of sprays: streams, foggers (sometimes referred to as cones), and gels/foams. Streams have to be accurately directed into a person's face to be effective, which can be difficult if an assailant is moving quickly, with their head down, and you are under pressure to spray them. Gels and foams suffer from similar problems, and sometimes don't have the range that a stream has. Foggers spray a cone of mist, and cover a greater area, but can be susceptible to being blown in the wind and getting dispersed (this happens a lot less than people think or worry about). The main advantage of the cone or fogger is that it puts a lot of spray between you and your attacker and doesn't need to be fired accurately. People often over-estimate their ability to use weapons such as sprays effectively - in real-life situations, people are slow to react and often find their motor skills impaired, which means they are denied the time and space to respond effectively; accurately spraying somebody in these conditions is difficult, if not impossible.

Your strategy for using your spray should be to keep distance between you and an assailant, rather than to engage them with it (this is normally the time that people report inhaling some of their own spray). The fact that a good spray with a non-water carrier can cause the spray to hang in the air means you can create a temporary tunnel of spray that an attacker will have to chase you through if you disengage, spraying as you go.

The best use of your spray is to use it to confirm to yourself that you are in potential danger, and move from a state of denial to one of action e.g. if you find yourself reaching for your spray, you know you are potentially in danger and should exit your environment.

**Our Women's Self Defense Program is a framework, for understanding how violent situations occur and evolve, along with the motivations behind them, so that it is possible to predict, identify and avoid them.**

**Our Women's Self Defense Free Online Course is an 11-course topic program taught by Mr. Maurice Gomez. The course has also been reviewed & validated by FBI Criminal Psychologist, Dr. Natasha Bullock with contribution from Ben Keren who is a security analyst & subject matter self-defense expert in Women's Self-Defense.**

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**626-831-6953**

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**[www.mgempowerment.com](http://www.mgempowerment.com)**

**1740 E. Huntington Dr.**

**Duarte, CA 91010**