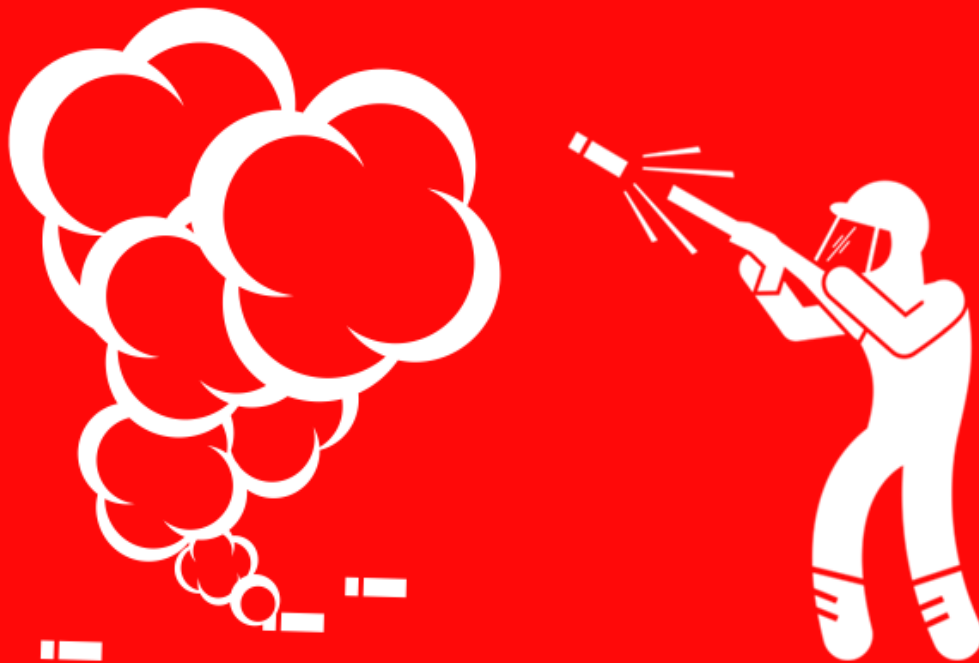




INTRODUCTION TO CHEMICALS EXPOSURE





Disclaimer

This guide is meant as an informal exploration of exposure to chemical munitions common in America. The author is not a certified medical authority and does not claim to be one. The purpose of this guide is as a stepping stone to deciding proper preparedness for day-to-day situations or for when participating in peaceful protests that may see these ordinances used against non-riotous individuals. The author does not advocate or condone using this to participate in unlawful activities, such as riot. Instead this is intended for use either to assist in protecting oneself against unscrupulous individuals using it against others unlawfully or to protect oneself when participating in peaceful mass demonstrations such as the demonstrations by Native American individuals and allies at Standing Rock.

Always be aware of the laws and regulations of a jurisdiction, including what equipment you can possess during a protest. Masks, as a rule of thumb, are not allowed or otherwise restricted during protests or mass gatherings. If law enforcement declares an assembly unlawful, it is better to leave and fight the battle in the courts than it is to stay and risk detention, arrest, and criminal trial.

Chemicals

Since the dawn of human conflict, chemicals have been an important weapon in mankind's arsenal. When one human found something that could harm them in nature, they realized it could harm another. The use of stinging peppers, for instance, in Asia and the Americas date back thousands of years. Noxious odors were one part of the strategy of swinging dead bodies over city walls in medieval Europe. Chemical warfare reached a zenith in World War I, where mustard and chlorine gas were used to horrific effect. Since then, various treaties limit or outright ban the use of chemical weapons in warfare, but less-than-lethal chemicals have been developed and used for civilian conflict. The two chemicals that will be primarily discussed are capsicum spray (OC spray) and chlorobenzalmalo-nitrile (CS gas). There are other chemical agents that can be employed in the US, but they are rarer and so will not receive as much attention.



Both OC and CS operate on the same principle: to cause severe and immediate irritation to the subject in order to gain compliance. These two chemicals are used by both law enforcement in the US as well as by private citizens: 34 states provide little to no restriction on the purchase and use of these chemicals in self defense. Exceptions apply to chemicals that are not designed for human use or are created specifically to cause lasting harm: for instance, the use of dog mace against a human is often illegal due to the higher potency of the chemicals being applied. In the event that a lawful citizen finds themselves in a situation where they are being exposed to these chemicals unlawfully or without good reason, it is useful to know how to counteract them.

Psychology

Modern chemicals work on two levels, psychological and physiological. It may seem strange, but the biggest part of handling chemical deployment is not necessarily bringing the current equipment but bringing the current mental state. All equipment can and will fail. Respirators can seal poorly in the heat of the moment. Protective glasses can come loose or simply just not work. Furthermore, all metropolitan law enforcement and military personnel experience chemical exposure as a condition of their training and employment. This isn't for the humor of those watching: it's to show that, while these chemical are effective, they can and are overcome. Advanced occupations within law enforcement and military roles often require even further chemicals training and exposure, to the point where special forces are expected to be able to operate at regular capacity while being exposed to these munitions.

Unfortunately, there is no substitute for exposure. It is impossible to accurately convey the experience to prepare one completely for the first time, but it is possible to act appropriately the first time. Regardless of what has been applied, a few cardinal rules apply: don't panic, continue to breath, and seek shelter. These are in order of importance, with panic being the very worst enemy against you. These chemicals are designed to cause panic and this results in all the years of biological and societal forces that made you into a sapient thinking entity going away and turning you into a simplistic input in, output out machine. Panic makes the pain worse and makes the adrenaline work against you rather than for you. Having a partner is useful during this: two is one and one is none, you need someone with you to be able to snap your brain out of that fight or flight decision.



Breathing can help with the panic, just as panic can make breathing harder. Both CS and OC will interfere with your ability to breathe, with CS being primarily employed to disrupt breathing. Neither CS or OC actively stop your ability to breathe, with the exception of individuals with asthma, which will be discussed later. Instead they cause pain to be associated with the act of breathing, and pain is the best motivator for your brain to stop doing something. This does require simple mental fortitude, as there is no way to negate the effects in the moment outside of limiting exposure. Multiple individual's experiences say that yelling after being exposed to CS gas helps overcome the feeling that you can't breathe, as it forces an involuntary gasp of air. Cursing has also been scientifically shown to reduce felt pain and can act as a pace-setter. It isn't very dignified, but dignity is irrelevant in these situations.

Seeking shelter is the last on the list because it isn't always possible, but should be sought out if at all possible. Exposure to chemicals requires decontamination as soon as possible and will vary depending on what you've been exposed to, discussed further below. Getting out of the conflict also helps mentally, as it is always more difficult to deal with a poor situation while still inside of it. When you're trying to focus during exposure, focusing on getting out is a very simple task that your brain can follow. The main thing is to try to avoid becoming a herd of frightened cattle: too many comrades have been injured by their own as panic sets into a crowd and everyone runs over everyone else to flee. It's the difference between a tactical retreat and a rout.

As a final note on psychology, which is likely a broad enough topic for a whole other essay, is organization vs disarray. This is not anything specific to chemicals, but is part of the purpose of chemicals. During protests, law enforcement and/or military presence relies on the fact that they are not seen as individuals but as a collective. Uniformed services are uniform not because of bulk discounts but because it is both a morale booster for those in uniform and devastating against those not. Fifty riot officers marching in unison, looking identical, has a far greater effect than fifty individuals marching as a clump. There is not only a sense of unity but also a leadership, with officers providing orders and instructions for other officers. These two things, uniformity and leadership, are often areas leftist groups struggle in due to the fundamentals of socialistic philosophy. It is necessary, however, to adapt to the circumstances: history shows that the most successful protests have a shared sense of unity and have workers who, while perhaps are not leaders in the traditional sense, do act as first amongst equals to coordinate and lead their comrades.



Physiological

The actual physical effects of chemicals are, ironically, a shorter topic than their psychological effects. CS gas is a light-weight, almost fiberglass like particle that finds its way to your mucus membranes and irritates the exposed glands to great effect. When you breathe it in, it interacts with the mucus that lines your lungs and causes those glands to seize, making it feel as though your lungs have collapsed and you can't bring any air in. This is a purely psychological effect (asthma disclaimer, discussed further down), as it is not actually interfering with your ability to draw air in and extract oxygen from it. The only deaths reported from CS gas are when it was in a confined space and asphyxiated the individuals due to a lack of oxygen in the air. Because CS gas is a light particle, however, it does float, and drift easily, and so generally will escape an area so long as you aren't locked in a room. Exposure also causes a sharp stinging in the eyes, which makes it very difficult to see or to keep your eyes open at all. This ends basically immediately after removing yourself from the gas cloud or even just moving into a thinner part of it. It is also possible to force your eyes open to get a bearing of location and see where you need to go.

OC spray is more difficult to deal with. You can't decon from OC by standing in the wind and it burns like nothing else. To reiterate, OC spray's active ingredient is capsicum, what makes peppers peppery. As anyone who has been in the kitchen and gotten some pepper juice in the eyes knows, it isn't very fun, so a weaponized form of that is especially un-fun. OC spray is an oily substance in an aerosol spray, so it is heavy and sticky. This limits the range, as in order to get it to go significant distances it has to be pressurized, which increases the chances of grievous bodily harm. Most handheld canisters have a minimum deployment range of three feet: any closer and the particles may actually embed themselves in soft tissue such as your eyes and cause all manner of problems. Some law enforcement departments enforce this strictly, some don't, don't risk it. Safety glasses, or even standard prescription glasses, are good bets. If you wear contacts, DO NOT get sprayed. If this means sitting out a protest, then that's what it means. Contacts can and will trap the OC underneath the lenses. If you are detained, the police are most likely not going to oblige taking your contacts out for you, and good luck getting a judge to hold them accountable for that.

OC works pretty much entirely based on pain and inflammation. Anywhere it touches, it'll feel like a terrifying sunburn. This works for and against you: it hurts like nothing else, but it also gets your adrenaline pumping. This can, in the moment, help stop you from feeling it as much and keep you smart enough to get out. You will, however, be blinded pretty good. If you get hit in both eyes you need to hope that you're following the rule of two, and that



your partner still has at least one working eye. Attempting to retreat from the scene and get to a street medic is preferable.

As far as decontamination, creams are not recommended. Most ointments will only act to trap the OC against the skin and cause further irritation and chemical burns. Non-sterile products such as milk, while they do work to neutralize the acidic compounds in OC, are not recommended to flush the eyes out with due to risk of infection. Water is the best street answer, preferably a sterile solution like saline, but from previous experience, hoses work as well. After an extensive flushing, a change of clothes and preferably a shower is in order. As the OC is an oily substance, water will provide relief and remove particulate but will not totally cleanse the area. Baby shampoo is recommended as it is soft on the eyes and as a soap will help remove the oil. Be prepared for hot flashes on the exposed area for some time afterwards, and shower as appropriate.

Now, the asthma disclaimer: asthma is not an automatic disqualification from participating in protests with the risk of chemical munitions. Asthma comes in many varieties and severities, from hay allergies to proper respiratory shock. I am not your doctor, so consult with medical professionals if possible about just how severe your condition is and how to deal with irritants. The question doesn't have to be phrased in the context of chemical exposure, if that question would make you uncomfortable with your medical professional. I've seen comrades with asthma take chemical exposure like anyone else, but everyone is different. Keep an inhaler handy, know the signs of your body having a severe reaction, and if you do have a bad experience, consider whether or not it's wise to have the possibility of it again.

Preparation

So you've researched your local laws, you've gotten your protest permits, and you're getting ready to head out. What should you bring? This will depend on jurisdiction: while masks are generally banned during protests, some states do allow them on first amendment grounds. This is with the caveat that if you continue protesting after an assembly is declared unlawful, usually the fact that you're wearing a mask can add on to your charges. If masks are allowed and you're aware of the legal particulars, getting an OSHA-rated respirator to carry along can be a big help. These don't have to break the bank, running around \$40 online, and the key thing to look for is if they're rated for organic



vapors. It isn't recommended to be walking around in a respirator, but to put it on as you're retreating to avoid a lung full of CS.

Eye protection can be as simple as some sunglasses, but can be upgraded to goggles if you need to get an air-seal around your eyes. Usually you don't actually need to stop projectiles, but finding safety-rated sunglasses or goggles isn't difficult and they generally aren't expensive. It may help save an eye if you get hit with a gas canister, as was seen during the NoDAPL protests. Clothing should be adjusted to the elements, but some kind of water and oil resistant jacket will help keep chemicals off of your clothes and more importantly, your skin.

This section is short because preparation is simple. Protect your eyes, protect your lungs, use the fact that OSHA and NIOSH run very tight ships on workplace safety to your advantage. It's also short because the best preparation is not in how much gear you tote along but in your own personal behavior and the behavior of your comrades. As the trope goes, discretion is the better part of valor, and so knowing when it's time to call something a wrap is the best preparation you can have. No one can draw that line for you, though, besides yourself and your comrades. Staying within the law and making sure everyone is informed of their roles prior to the protest is probably the best thing that can be done for preparation.

Conclusions

The best strategy to dealing with chemicals is to avoid them, but unfortunately leftists can't always do this. As with all things, be smart, be conscious of your own strengths and weaknesses, and be ready to help out a comrade who might not deal with chemicals as well as you can.