

An Activist's Guide to Police Chemical Weapons



**Chemical weapons used by police, how they work,
how you can prepare, and what to do if exposed...**

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AN ACTIVIST'S GUIDE TO POLICE CHEMICAL WEAPONS

Most of us go to protests hoping that things will go peacefully, and indeed, many of us have gone to many protests and have had little exposure to police violence or chemical weapons. But just because you've had good experiences in the past doesn't mean you should naively assume all actions will go so well. Indeed, many people have stories to tell of perfectly peaceful actions that were met with police repression.

Modern police tactics emphasize the use of "less-lethal" weapons rather than the direct application of force through truncheons and bullets. Among the most popular tools in this class of weapons are chemical agents like pepper spray and teargas. While promoted as being virtually harmless, these chemicals can actually be quite dangerous, but with the proper knowledge and preparation, many of their effects can be avoided.

This guide will help provide you with basic knowledge on some of the chemical weapons used by police, how you can prepare for situations where these weapons may be used, and how to respond if exposed to chemical agents.

CHEMICAL AGENTS USED BY POLICE:

What are they, how do they work, and when are they used?

AN IMPORTANT NOTE ABOUT POLICE CHEMICAL WEAPONS:

Before police use chemical weapons, most police departments, as part of their "continuum of force" guidelines, require officers to issue a warning or order to disperse before using chemical weapons. Not only is this warning a useful sign that you should prepare yourself for a potential exposure, but also note the *lack of a warning*... this can be useful in any complaint against the police department.

OC ("Pepper Spray")

What is it? OC (oleoresin capsicum) is a concentrated extract from hot peppers, hence its common name of "Pepper Spray." Frequently OC is mixed with water and/or other solvents to allow it to be dispensed from aerosol sprayers.

What does it do? OC is an irritant. Much like spicy foods create a burning sensation on your tongue, OC will do the same—but to your eyes, throat, nose, and skin. OC is a super concentrated form of the same stuff that makes a pepper seem "spicy." While generally meant to subdue those who are exposed, the shock, pain, and disorientation resulting from OC can actually make people react violently.

Police and pepper spray manufacturers frequently tout OC as being "safe", but in reality, it is far from being safe. A US Army study noted "possible mutagenic effects, carcinogenic effects, sensitization, cardiovascular and pulmonary toxicity, neurotoxicity, as well as possible human fatalities." OC can trigger severe allergic reactions in some persons, and can also cause dangerous aggravations of respiratory problems such as

asthma. Notably, as pepper gas is a plant toxin, its use in warfare is prohibited by the 1972 Biological Weapons Convention—but international laws governing chemical and biological weapons do not apply to usage in domestic non-war conflicts, allowing police to freely use these weapons in law enforcement and crowd control situations.

When is it used? OC is the most commonly available and frequently used chemical weapon used by police and security personnel. It is intended for use in situations where the use of lethal force or more direct physical violence (such as striking with a baton) could be considered excessive or inappropriate, such as against unruly but unarmed suspects. In crowd control situations, OC is often used as an agent to encourage crowd dispersal. Police are often subjected to a controlled exposure to OC as part of their training, but even though they know some of its effects first-hand, there are countless stories of police misusing OC.

How is it used? In normal patrol duties, police officers generally carry small aerosol cans of OC Spray in their equipment belts, which can be used for self-defense situations. When used in crowd control, generally police use larger aerosol sprayers or foggers that resemble fire extinguishers. Some OC powders can be mixed into solutions that can be sprayed from much larger dispensers such as fire-truck nozzles.

OC less frequently can be seen used in canisters/grenades that explode and disperse a cloud of OC agent, or in “pepper powder” rounds fired from a paintball gun. The pepper powder is a paste designed to stick to the clothing and skin of those who are hit.

When should OC *not* be used? OC should only be used in the quantity necessary to achieve the desired result. Often that means one or two small squirts should be sufficient. Often though, particularly in crowd control situations, police use very large quantities of OC. OC also is not intended for use in confined areas, as the spray will disperse within the space but remain concentrated indoors, causing irritation to bystanders and prolonged excessive exposure. It can take as long as 10-12 hours for OC fumes to dissipate from an enclosed area.

OC is absolutely not meant to be used on immobile individuals unless absolutely necessary. This is because those exposed can not escape prolonged direct exposure, which has the potential to cause serious harm. Police have, nonetheless, frequently used OC against immobile persons, including a notorious incident in Humboldt County, CA, where sheriffs’ deputies used OC-dipped swabs to directly apply OC to the eyes of chained-down protestors. A report by the International Association of Chiefs of Police found that at least 113 deaths were linked to pepper spray use in the U.S., most of them from positional asphyxia, which suggests the spray was frequently used on restrained persons.

Generally most police departments require officers to issue a warning or order to disperse before using OC on crowds. If you are in a situation where it appears that officers are about to use OC (or any other chemical agent), take note of whether they issue a warning before use. If they fail to issue a warning, this can be useful in any complaint against the police department.

CN (Conventional Teargas)

What is it? CN (chloroacetophenone) is a chemical irritant that is usually dispersed as a mist/fog. CN comes as a liquid or powder that is often mixed with other solvents. CN used in the 1999 WTO protests in Seattle were 50/50 solutions with methylene chloride. Methylene chloride is recognized as a suspect carcinogen, teratogen (can cause birth defects), and mutagen (causes cell mutations). Methylene chloride can also cause central nervous system depression, temporary neurobehavioral effects, spontaneous abortions, upper respiratory tract irritation, liver and kidney damage, hallucinations, eye injury, and other problems.

What does it do? The chemicals in CN stick to bodily surfaces and mix with oils and other moisture sources on your skin to create an irritating acidic solution. CN has particularly strong effects in more moist regions of the body, namely the eyes, nose and mouth. The primary effect of CN is as a *lachrymator*, meaning it causes excessive secretion of tears. The key to minimizing the effects of CN is to limit your exposure and the ability of the chemicals to mix with moisture on your body (more on this later...). Just like OC, CN and other teargases are banned from use in warfare but are exempted for use in domestic police operations. CN has been specifically banned since the end of the First World War.

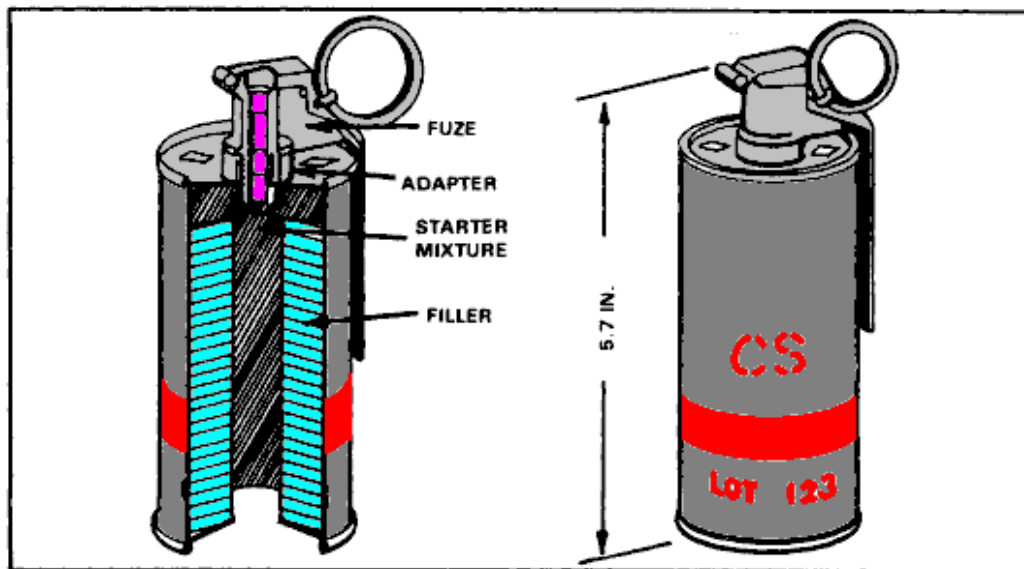
When is it used? Police generally use CN and other teargases to compel crowd dispersal. One problem with CN is that it can form dense clouds which hang in an area if the air is stagnant, or even worse for police and bystanders, it can blow long distances into areas away from its original target... sometimes right back at the police lines. Many Seattle residents were subjected to a “fog” of teargas due to excessive use in less-than-optimal weather conditions. Such a fog can easily creep into personal residences and businesses and cause undue harm to innocent bystanders.

How is it used? CN when used as what we usually call “tear gas” is generally dispersed from canisters and grenades that explode and release a fine gas-like mist. CN liquid can also be sprayed in much the same way OC is used (CN is the ingredient in “mace” sprays). Most police departments now favor using OC-based sprays instead of CN-based mace, as OC is a more reliable incapacitant when directly applied to an individual.

When should CN *not* be used? CN should only be used when absolutely required to control or disperse an unruly crowd, yet often police use it in excess and without much provocation at large protests. As it is a “fog,” if you use too much of it, you will quite literally create a fog of teargas which makes a situation go from bad to worse, as visibility will be reduced, bystanders exposed, and crowds will panic. CN should ideally be used on days with moderate wind so that it does not concentrate and hang in an area indefinitely, and the wind should not pose a risk of blowing it at innocent bystanders. CN generally should *never* be used indoors.

Much like OC, police generally have to issue a warning before the use of CN and other teargases. The use of CN should also be discouraged among crowds consisting of a large proportion of children or elderly as they are worst effected by the toxic components of CN.

CS (Pyrotechnic High-concentration Teargas)



ABC-M7A2 and ABC-M7A3 riot control grenades.

A "riot control grenade" containing CS. Note the red color code. Most chem weapons have a color-coded band and have a clear label referring to its active ingredient. CN grenades will look similar externally.

What is it? CS (o-chlorobenzalmalonitrile) is a highly concentrated teargas agent that is much more effective than CN. It was specifically developed for use in the Vietnam War and is now a staple of many police crowd response teams. The active ingredient in CS has been demonstrated to be a potential carcinogen and mutagen, and the process used to release the gas is accompanied by the release of a large amount of carbon monoxide, as well as smaller amounts of hydrogen cyanide, toluene, and xylene, all of which are highly toxic and carcinogenic.

What does it do? CS works in a similar manner to CN, in that it relies on mixing with moisture on body surfaces to create an irritating acid. The difference is that CS is far more concentrated and powerful compared to CN—it is considered to be 10 times as effective as CN and works in a greater range of climate conditions.

When is it used? CS is yet another agent generally used for crowd dispersal. Initially it was intended for use as a more effective backup when CN failed to be effective, but now many police departments use CN and CS interchangeably, or even have replaced CN entirely with CS. CS is, questionably, considered "safe" for limited indoor usage.

How is it used? CS differs from CN in that it is often used as a "pyrotechnic agent," meaning it is mixed with flammable carrier chemicals. CS comes as a solid that is projected as a pressurized aerosol from the burning/exploding device. When in use, CS canisters and grenades generally resemble flares or smoke bombs. Streams of CS can also be injected into water pulse cannons, but it is most frequently used in grenades or canisters.

When should CS *not* be used? CS is an extremely powerful irritant with known toxicity, therefore, its use should be relatively limited. It should also not be mixed with

other chemical agents because of the potential increases in toxicity and the resulting difficulties in treating injuries related to exposure. CS suffers from the same dispersion problems as CN, and therefore must only be used in the proper conditions.

One vitally important difference with CS is that it should absolutely not be used in areas where there is a high risk of fire, as the pyrotechnic dispensers will ignite any nearby flammable materials.

As with any chemical agent, police generally must issue a warning before using CS.

OTHER CHEMICAL AGENTS

These are other chemical agents sure to be of interest to protesters. Some are still in development stages, while others are in active use by police forces.

Paintballs and Marker Dyes

Police use paintball guns against protesters and crowds for a number of reasons... one obvious reason is that it hurts a lot to get hit by a paintball. Thus, many police departments have switched to paintballs as a less dangerous substitute for “rubber bullets” and other rifle-fired “less-lethal” ammunition. Paintballs still pose a risk for serious injury or even death, but are generally less harmful than “baton rounds” (and cheaper too). Not only do paintballs inflict pain, but they’re also annoying. Nobody appreciates being splattered with paint—hence they make good crowd dispersal weapons.

There are other less obvious uses for paintballs. As mentioned before, paintball-like rounds can be used to dispense chemical irritants like pepper powder. Paintballs are also used as “markers” to identify people. Police can label protesters targeted for arrest by marking them with paintballs. A more subtle use is through UV marker dyes, which are not visible unless seen under a UV lamp. Police used this type of paintball in Seattle as a discrete way of marking protesters for later arrest by “snatch and grab” squads.

Stink Bombs

Obviously, no one likes to stay around stuff that stinks, and companies have developed especially nasty compounds that take advantage of this tendency. Foul-smelling substances can therefore be used by police to encourage a crowd to disperse. These aren’t your usual sulfur-based stink bombs, but are rather specially designed compounds to create a range of particularly repulsive odors. One commonly used police stink bomb could be described as the combined smell of rotting flesh, feces, vomit, and just about every other vile thing you could think of, multiplied times ten. Newer stink bombs use generally non-toxic substances to achieve the desired effect, but some use potentially toxic substances like butyric acid.

Stink bombs can be delivered in several forms, such as paintballs, impact-shattering glass vials (some of which can be fired from special rifles), canisters, or grenades.

Sticky Foam

This is a new chemical agent under development. Essentially, sticky foam is just what its name implies: foam that’s sticky. It’s a powerful adhesive foam that can be sprayed on protesters to immobilize them. Sticky foam is meant to incapacitate protesters and facilitate easier arrests. Some sticky foams under development also combine foul-

smelling ingredients into the foam to turn those hit into walking stink bombs to encourage the dispersal of surrounding people. One has to wonder how practical sticky foam is, considering that it leaves police with quite a mess to clean up.

Flashbangs and Concussion Grenades

These are often mistaken for chemical weapons, as they can look similar to the canisters and grenades used to dispense agents such as CS, though flashbangs and concussion grenades can, in some instances, also release chemical agents.

Flashbangs are a type of pyrotechnic grenade that creates an immense blinding flash combined with a deafening bang to shock and disorient people in the vicinity. They can be used to both incapacitate people in an immediate area and encourage dispersal of those in the surrounding area.

Concussion grenades work similar to flashbangs but usually omit the “flash” and just use the “bang.” Some concussion grenades known as “stingers” fragment into smaller exploding balls or spray projectiles such as hard rubber or plastic spheres. Much like flashbangs, concussion grenades are meant to stun and scare. One particular model of concussion grenade disperses what are essentially rubber “superballs” which frantically bounce around an area—the resulting chaos and confusion allows police to sweep in and subdue individuals for arrest.

These weapons present an obvious set of hazards to protesters. The flash from a flashbang and the loud explosion of both weapons can cause potential damage to vision and hearing. They are both explosives and can cause injury if they make physical contact with someone. Flashbangs also have a significant pyrotechnic component to them and therefore present a fire hazard or can burn people nearby. Such a grenade fired into an apartment at 123 E. Johnson during a drug raid by the Dane County SWAT Team in January of 2001, put one sleeping suspect into the hospital with second degree burns after it set his bed afire! There is also the risk of injury from fragmentation or projectiles emitted from these devices. Often these devices are just as frequently used indoors, so don’t assume they won’t be used if you’re in an enclosed space. In fact, many of these weapons are more effective when used indoors.

Nerve Agents and “Calmatives”

Based on symptoms experienced by some protesters at the Seattle WTO protests in 1999, it appeared that police might have been using some previously unknown chemical agent related to nerve gases. Medical staff providing assistance to protesters noted symptoms such as heart palpitations, persistent nausea, vomiting and diarrhea, muscle twitches and dyscoordination, and uncontrolled spasmodic movements usually accompanied by a temporary loss of consciousness.

These symptoms did not correspond to the usual pattern of symptoms known to accompany the use of OC, CS, or CN, and appeared to be consistent with disruption of neurotransmitter activity. Medical team members came to the conclusion that a class of chemical agents known as *cholinesterase inhibitors* may have been used to incapacitate protesters. These chemicals prevent the normal communication of nerve impulses to muscles, and essentially work in the same manner as nerve gases like VX, albeit with somewhat reduced effects. The possibility of the mixing of CN, CS, and OC and their

respective “inert” components was not entirely ruled out as the culprit for these symptoms.

In recent years, there has been an increased interest among police in the use of “calmative” agents. These are akin to the “soma gas” used in the novel Brave New World, but unlike the stuff in the book, contemporary calmatives are far from harmless. Calmatives are tranquilizing chemicals, some of which are derived from narcotic opiates similar to morphine, dispensed in gaseous form in order to subdue or incapacitate. Calmatives are largely unproven, and one high profile use of calmative gases, in a Russian raid on Chechen hostage takers in a Moscow theater, the results proved to be completely disastrous, with many of the exposed persons (primarily the hostages) dying as a result.

Smoke

Pyrotechnic smoke is commonly used by police against crowds, as it has a number of practical applications. One use is to obscure movements by police and/or disorient protesters by limiting visibility. Smoke can also be used as a proxy for chemical agents, as a crowd might disperse upon seeing smoke dispensed, falsely assuming that it is teargas. Smoke can also enhance the effects of teargas by providing an additional carrier to the teargas particles. Compared to teargas or pepper spray, pyrotechnic smoke is relatively harmless, but it can still cause respiratory difficulties, irritation, and contains some toxic substances.

IDENTIFYING CHEMICAL AGENTS

This table will help you identify what kind of chemical agents might be in use, in order to facilitate proper first-aid response.

	Appearance	Dispensing Method	Odor/Taste	Telltale Symptoms, Duration of Effects
Smoke	Thick smoke cloud, usually white, gray, or yellow in color, but can come in range of other colors.	Pyrotechnic (burning) canister or grenade. Most canisters will have a yellow color code.	None, or a mild sweet odor.	Eye and respiratory irritation, possible dizziness and sensory deprivation. Side effects generally go away shortly after exposure.
OC (Pepper) Spray	Dense spray, mist or fog, or a granular paste if dispensed from a paintball.	Usually from a small aerosol can or a fire-extinguisher-like dispenser. Also comes in canisters and grenades, or in pepper powder paintballs. Many containers will have an orange color code.	No distinct odor. Spicy sensation if OC enters the mouth.	Temporary/ involuntary closure of eyes, burning sensation, shortness of breath. Can also cause skin rash. Severe effects last 1/2 to 1 hour.
CN Teargas	Generally a fast dispersing misty cloud. Can also be a fine spray similar to OC spray.	Generally from canisters or grenades. Containers usually color coded red . Can also be sprayed from an aerosol dispenser ("mace").	Smells like apple blossoms or cherries. Distinct, generally sweet odor and taste, but highly irritating.	Excessive secretion of tears, closure of the eyes, mild skin irritation. Severe effects last 1/2 to 1 hour.
CS Teargas	Dense, smoky cloud, usually accompanied by a bright flare at its source.	Generally from canisters or grenades. Usually color-coded blue . Can also be included in flashbangs and concussion grenades.	Peppery or spicy odor.	Excessive secretion of tears, closure of eyes, skin irritation particularly evidenced by a burning sensation concentrated in moist areas.
Potential Incapacitating Nerve Agent or Calmative	Might resemble teargas or smoke; others might be an invisible gas.	Presumably from canister or grenade.	Odor/tasteless; some might have a distinct sweet smell or taste.	Distinct impairment of muscle function, breathing difficulty, psychological effects (disorientation, hallucinations, etc.) and nausea, vomiting, and or diarrhea. Some might suffer convulsions and/or loss of consciousness.

PREVENTATIVE RESPONSES TO CHEMICAL WEAPONS AND FIRST AID

How to prepare yourself for an encounter with chemical weapons...

Before you go to any protest or direct action, ask yourself what risks you may encounter in terms of chemical weapons. Will you be participating in a well-controlled, officially permitted march? Then you might not have to worry much about teargas or pepper spray. But if you're participating in anything that isn't as carefully orchestrated, there is always the chance that something could happen which will result in a police reaction. This is especially true for particularly confrontational or obstructive actions such as blockades and lock-downs. Base your preparedness for chemical weapons based on the presumed risks, and always avoid being naïve--just because things seem like they'll probably occur peacefully, there is always the potential for the situation to change.

When you go to a protest, there are several ways to prepare for chemical weapons, first lets look at...

Clothing

Synthetics can be your friend in the event of a chemical weapons usage. Chem weapons will not stick as well to slippery synthetic surfaces, particularly those that are waterproofed. Therefore, it's a good idea to wear something like a synthetic-fabric windbreaker or jacket over the rest of your clothes, or in warmer weather, bring a plastic poncho along (it'll be handy if it rains and/or if chemical weapons are used, so its always a good thing to have). But remember these chemicals will also damage synthetics, so don't wear your best Gortex™ jacket!

What you definitely shouldn't wear are highly textured or absorbent fabrics. Items like wool sweaters or fleece jackets will trap chemical agents and cause prolonged exposure. These items can still be worn to a protest, but preferably underneath a layer that will better resist exposure to chemicals. Fabrics like cotton or linen are better natural fabrics to wear, as the fabric will be less prone to trap chemicals for a long time.

Try to minimize the amount of exposed skin. Wear long pants and long sleeve shirts, preferably something with cuffs that are tight enough to keep agents from seeping underneath your clothing. It might even help to tape sleeves and pant legs shut. A hat or a shirt with a hood is also a good thing to wear, as it will protect your head and help keep chemicals from sticking in your hair. Also, wearing a bandanna or scarf around your neck might be helpful in providing a first line of defense against teargas fumes, and gloves can provide protection to your hands.

Ideally, clothes you wear to an action should not be washed in detergents but rather with a non-detergent washing soap such as Dr. Bronner's or Kirk's-brand Castile soap. Detergents allow chemical agents to stick more easily to your clothing.

Hygiene

As teargas relies on the oils in your skin to activate many of its nasty effects, it's generally a good idea to thoroughly clean your skin to get rid of substances that may trap chemical agents. Castile soap (such as Dr. Bronners) works best, as you do not want to use soap with large amounts of moisturizers or other chemicals in it, as these might actually worsen exposure to chemicals. Also, when washing your hair before a protest,

avoid conditioners or shampoos that deposit residues on your hair (such as moisturizers), as these will make it easier for chemical agents to stick to your hair, and make sure to rinse thoroughly. Chemicals like teargas and OC stick well enough to your hair on their own, so don't make it easier for them!

If you haven't figured it out yet, applying any sort of oils to your skin is a big no-no. DO NOT use moisturizers, lotions, makeup or sunscreens. You want to *remove* oils from your skin surface, not add them. DO NOT use Vaseline, mineral oil, or any other substance in an attempt to create a barrier for chemical agents. These substances will only help trap chemical contaminants.

Masks and Goggles

It's always wise to bring some sort of mask along with you to an action. Regardless of whether you think there might be a threat of chemical weapons usage, a mask is easy enough to carry with you that you might as well bring one all the time.

A handkerchief or bandanna soaked in a solution of 50% vinegar, 50% water makes a great and easy-to-carry mask that provides effective emergency protection against chemical agents. Keep the cloth in a plastic bag somewhere where you will be able to quickly access it. It's a good idea to carry a few of these masks, as you can give them out to others who might need them or use the extras as cloths to wipe off chemical agents or apply to the eyes if you cannot flush them immediately after exposure.

There are a few more advanced options for masks but they aren't necessarily superior to the classic vinegar-and-water bandanna. You can go to your local hardware store and buy a small dust-mask (look for one that offers protection against paint fumes). These masks are easy to carry and can be put on quickly but only offer limited short-term protection. Your local hardware store will probably also carry painters' masks or "respirators" which are essentially mini-gas masks. Make sure you are getting one rated for protection against *chemical fumes* NOT *particulate matter*. These masks will provide longer protection against chemical fumes, provide a better seal around the mouth and nose, and have filters that can be replaced for reuse. The downside is that these masks make breathing somewhat difficult and can make speech unintelligible. Nonetheless, if you suffer from particularly bad respiratory problems that could be affected by exposure to chemical agents, it might be a wise idea to purchase one of these masks.

You can go all out and buy a genuine military-style gas mask, but this isn't necessarily the best option. For one, they can be expensive! Two, it can be difficult to get the proper filter for some types of masks, and just buying a mask won't protect you much without an actual working filter in it. The biggest problem with these masks is that the police might specifically target you if they see you wearing such a mask--in Seattle, officers frequently confiscated, even forcibly removed, such masks or targeted their users for arrest.

Goggles are also a good thing to bring in order to protect yourself from pepper spray and teargas fumes. Conventional lab goggles like those you find in most chemistry classes are a good option, as they fit over eyeglasses and provide reasonable protection. Swim goggles also are good, but make sure to avoid goggles with a jelly-like seal around them. Acidic chemicals like CS and OC can cause the seal to break down and provide a place for the chemicals to collect--inconveniently next to your eyes. Make sure any goggles

you use are *shatter-proof*, so that your eyes will be protected from any blows to the face. This is an especially important consideration if you buy a gas mask with built in goggles, as some of the more widely-available models have glass lenses that are not shatter proof.

Also, this is very important: **DO NOT WEAR CONTACT LENSES!!** Chemical agents can wreak havoc with your eyes if you're wearing contacts. Absolutely do not wear contacts if you are going to be in a situation with a risk of exposure to chemical agents. Contacts will greatly increase the potential for permanent eye damage and complicate first aid.

Other Things to Bring in Order to Deal With Chemical Weapons...

- Water--lots of it! H₂O, its not just for drinking anymore... water can be useful for flushing chemical agents out of your eyes and off your skin. Carry as much water as you can.
- 4x4 gauze bandages. These make good absorbent pads with which to cleanse the skin after exposure to chemical agents.
- Mineral or vegetable oil can be applied to skin for removal of chemical agents.
- Antacids such as Maalox can also be useful in cleaning away and providing relief from chemical agents. A mixture of 50% water, 50% maalox/other liquid antacid is recommended for cleaning areas exposed to chemical agents.
- If preparing water bottles for eye flush usage, use a squirt bottle as this provides an easy way to apply water to the eyes. A homeopathic solution known as *Rescue Remedy* is known to apparently help with relieving the effects of chemical agents, though its not required for eye flushing. If you choose to mix Rescue Remedy with eye flush water, you should use 4 drops per quart of water.
- First aid supplies--It is generally a good idea to carry as many assorted first aid supplies as possible to deal with a range of injuries that can occur at a protest.
- Gloves-- If you're the type of person who likes to throw teargas "return to sender" back at police lines, remember to bring thick gloves, made out of heavy leather or of a heat and fire resistant material like asbestos fabric. (More on this in a moment...)

FIRST AID FOR EXPOSURE TO CHEMICAL AGENTS

It helps to know just what you or someone you're helping has been exposed to, as that allows more specific treatments to be applied, so always try to take note of what agents police appear to be using. While the basic treatments for OC and teargas are relatively similar, there are some distinct differences between the two classes of chemicals that can result in different first aid in situations requiring more advanced attention by medics.

Exposure to Chemical Agents--Essential First Steps

If you have been exposed to a chemical agent, remember this first step: **DON'T PANIC**. This step is kind of an absurd one, as you likely *will* freak out after getting hit by pepper spray or getting engulfed by a cloud of teargas. Fear, confusion, and apprehension are to be expected in such an event, but try to keep as clear of a head as possible. The more you panic the more dangerous the situation can become.

(Now is a good time to mention that you should **NEVER TOUCH A TEARGAS CANISTER**. Canisters remain extremely hot long after dispensing. They can also have a large amount of chemical residue on them. If for some reason you must handle a teargas canister, wear heavy, fireproof gloves.)

Use your chemical response supplies -- If you have a mask put it on as quickly as possible. If you haven't already gotten chemicals directly in or around your eyes, put on your goggles.

Calmly approach victims, offer help -- If you have not been hit by chemical weapons or your exposure was negligible, you may find yourself in a position to help other victims. Approach them cautiously and introduce yourself. Assume that they cannot see you. Obtain their consent before you begin helping them. Stay relaxed and try to keep the person as calm as possible.

Find assistance if possible -- Some actions might have special medic personnel available to help those affected by chemical agents or other injuries. Try to notify these people immediately of any situation where people need assistance. Street medics generally will wear some clear insignia marking them as medics, but also consider notifying any persons in your affinity group that you know may have detailed knowledge of first aid.

Get away from the chemicals -- If you can, try to move yourself or affected persons as far as possible away from where chemical agents are being used. This is sometimes impossible to do in certain situations, so try your best to find an area that provides shelter from exposure and fresh air. Keep in mind, if there is little wind, gas will collect in low-lying areas (children have asphyxiated trying to "hide" from teargas by crawling into holes), so seek well ventilated areas.

If you know of a friendly business or other place in an immediate area, try going there if there is no safe place outdoors--just remember, they might not appreciate you dragging in pepper spray or teargas fumes into their place.

If the person is blinded... hold on to them and slowly guide them to safety, continually giving verbal cues and descriptions of where you are going and what is happening. It might help to temporarily cover their eyes, with something such as a clean, water-soaked bandanna, until you can get them to a safe location for first aid. Try to keep their period of exposure to the chemicals as short as possible, as permanent eye damage can occur if chemicals are not flushed soon enough.

Watch for respiratory problems -- If breathing difficulties don't start to go away after getting to fresh air, you or the person you are helping might be experiencing complications from inhaling chemical agents. Try to find trained medical help immediately--call for an ambulance if symptoms are extremely severe. Ask the person if

they have any allergies or asthma (or check to see if they are wearing a medic alert necklace or bracelet with relevant info). If they do suffer from such a condition, ask them if they have a rescue inhaler or other means of alleviating an attack of symptoms. If they do have an inhaler or similar item with them, help them find it and use it (DO NOT use someone else's rescue inhaler on a different person, unless you can be ABSOLUTELY SURE it is the same type and dosage of medicine). This will hopefully help stop any particularly severe reaction until trained assistance can arrive.

While waiting for help to arrive, have the person sit comfortably in an upright position. Encourage slow, calm breaths to avoid hyperventilation. Those who experience prolonged breathing difficulty from chemical inhalation should seek medical care as soon as possible, as it may be an indicator of other underlying illness.

Realize that you may suffer minor respiratory discomfort for hours or even days after a chemical exposure. Some coughing, congestion, and irritation can be expected. As long as these symptoms progressively disappear and do not worsen, there is little reason to worry.

Chemical Agents in the Eyes

If the victim is suffering from burning and or swelling of the eyes due to contamination, you must immediately determine if they are wearing contact lenses. If they are wearing contacts, instruct them to remove them immediately to avoid permanent eye damage. If they request help, assist them with removing lenses if necessary.

Next, you will need to flush the chemicals out of the eyes. For this you should use clean water (or the rescue remedy and water solution previously mentioned). Preferably, this should be done with something that allows you to apply a constant, directed but gentle stream of water, such as a squirt bottle. The ideal thing would be to use an emergency eye wash station, but obviously, unless you stumble into a business equipped with one, you probably won't find these readily available. Use a sweeping motion, starting at the inside corner of the eye and moving towards the outside, orienting the stream at a slight outward angle. You want to use a constant, solid stream of water, as you want to flush the contaminants out of the eye, but at the same time, don't use too strong of a stream as that could cause added discomfort or even injury.

If you cannot find something to easily flush the eyes with, using a sink or water fountain to continually splash water into the eyes will suffice. You could also resort to pouring a steady stream of water from a bottle or glass.

Have the victim try to keep their eyes open as much as possible, but encourage blinking as this helps the eyes' own natural defenses work to neutralize and remove the chemicals.

After the eyes have been flushed, you might want to apply a soothing agent such as the antacid-and-water mixture to the eyes. Drip two to four drops of the solution into each eye. Don't rinse the solution away--let the person's natural tear ducts do that. You might also want to use a clean rag or gauze pad to wipe the skin around the eye to neutralize and remove chemical contaminants around it.

If irritation, pain, swelling, tearing, or sensitivity to light persist, you should seek medical attention from a health care facility.

Skin Exposure

Wash exposed areas extremely thoroughly with soap and water, or just water if that's all that's available. Try to use a relatively pure soap such as castile soap or Ivory to minimize any bad reactions with chemicals. In this step, knowledge of what you've been exposed to makes a difference: OC is more soluble in warm water, and thus, you want to use warm water if possible so that you can break up the OC and wash it away easily. By contrast, CS, as it relies on moisture to cause its effects, will cause more irritation if warm water is used, so try to use cold water after CS exposure. Small amounts of rubbing alcohol can also help remove OC, but is not recommended for CS.

After washing an exposed area, irritation is likely to persist. Cold water can help temporarily provide relief, but the burning will return quickly. Irrigating the exposed area with a vinegar-water solution can provide relief, and vegetable oil can help provide long term relief as well. The aforementioned antacid-water mix also provides cooling relief and can help neutralize remaining chemical agents on the skin. Make sure when applying anything other than water that it is *NOT* applied on *broken skin*.

If irritation or pain persists, it might be wise to see a physician. If an exposed person breaks out into a large rash or experiences blistering or obvious severe chemical burns, rinse the exposed skin and get emergency medical attention immediately.

Abnormal Symptoms

If you encounter someone who is experiencing symptoms that don't seem to match those of pepper spray or teargas exposure, get that person to safety and call for emergency medical aid immediately. Abnormal reactions to chemical weapons, severe aggravations of pre-existing symptoms, or the results of the related panic and shock from chemical weapons usage can lead to a range of severe medical consequences including allergic reactions, heart attacks or strokes, and injuries from collisions, weapon impacts or trampling.

If you notice any particularly strange symptoms in presumably healthy people, such as sudden loss of consciousness, excessive and persistent nausea and vomiting, difficulty in coordination and/or slurred speech (akin to drunkenness), lethargy, and muscle dyscoordination and loss of strength, this is a sign of potential exposure to a chemical agent that interferes with nervous system functions. People exposed to such chemicals should see trained medical personnel immediately, and appropriate first aid should be provided until medics can provide assistance.

Women should also be aware that chemical agent exposure may disrupt menstrual cycles, trigger miscarriage, and many chemical agents have been linked to possible birth defects. Women who are pregnant (or planning to be) should avoid chemicals if at all possible. If you are pregnant, seek medical attention immediately after a chemical exposure.

This is not meant to be a comprehensive guide for protest first aid, therefore we recommend you familiarize yourself with a range of common first aid procedures so that

you can handle a diversity of situations beyond just chemical weapon exposures. A thorough knowledge of first aid will help you be ready for many dangerous situations you may encounter.

After The Protest...

The immediate first aid steps you take don't fully eliminate the effects of chemical agents. You may still have substantial amounts of chemicals in your clothing, on your hair, or residues on your body.

Clothes should be washed in cold water, and again, do not use a detergent soap. There are special "laundry soaps" that come in brick or powder form that do not contain detergent, and are widely available from most natural foods stores and co-ops. If an item of clothing is thoroughly soaked with a chemical agent, consider throwing it out or if you have to keep it, air it out for several days. Textured synthetic fabrics like "polar fleece" wick up chemical agents and will release them for days after exposure.

Hair can be washed with a standard shampoo, just remember to avoid those with conditioners, moisturizers, detanglers, or other additives. Rinse thoroughly and repeatedly, and try to keep the rinse water away from your eyes and skin. Repeat shampooing and rinsing several times. Cold water is generally best for this, as warm water may reactivate tear gas chemicals.

Shower in cold water to flush away remaining residues from chemical agents. Soap is not necessary, but if you do use soap, use a non-detergent soap with minimal ingredients (i.e. no moisturizers or fragrances.) Liquid castile soap or plain old Ivory will generally work okay.

Chances are that whatever space you've retreated to after a hard day of being repressed by police now reeks of pepper spray, teargas, and whatever other agents you were exposed to. To minimize this, try to keep contaminated items outside of enclosed spaces. If fumes build up indoors, open up windows and use a fan to get fresh air circulating to dilute and blow out the contaminants. In stagnant air, OC fumes can linger as long as 10 to 12 hours, so its definitely a good idea to take proactive measures to drive out chemical agent fumes.

CONCLUSION

Hopefully this guide has provided you with some useful background knowledge on police chemical weapons. Now you can go to actions prepared for whatever nasty chemicals they want to spray at you. But don't consider this to be the end of your preparations... this knowledge should be combined with other resources on protest tactics, police responses and weaponry, and a wide range of other issues... and you should share your knowledge with fellow protesters, so that others know what to do.

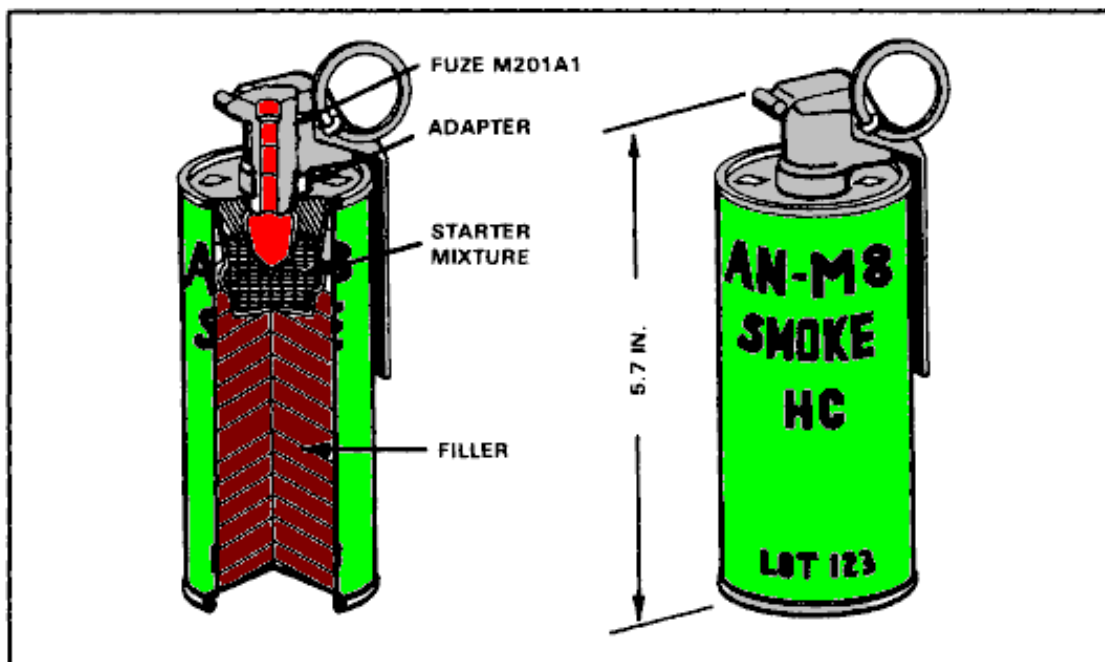
This guide has been compiled from a hodge-podge of factsheets, websites, periodical articles, and "field reports" from actions where chemical weapons have been encountered. If you encounter any errors or omissions, let us know, or feel free to make corrections and revisions on copies you make to distribute. This guide is "copyleft"--feel free to copy and republish what you want however you want (we certainly did!).

APPENDIX

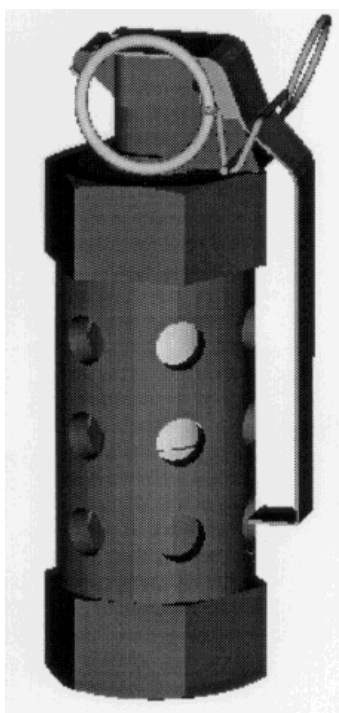
Diagrams and illustrations of common chemical weapons

There are many different models of chemical weapons devices, but most of them work in a relatively similar manner. The following are illustrations and cutaway diagrams of military-grade chemical weapons, taken from the Federation of American Scientists (<http://www.fas.org/>) "DOD 101" guide.

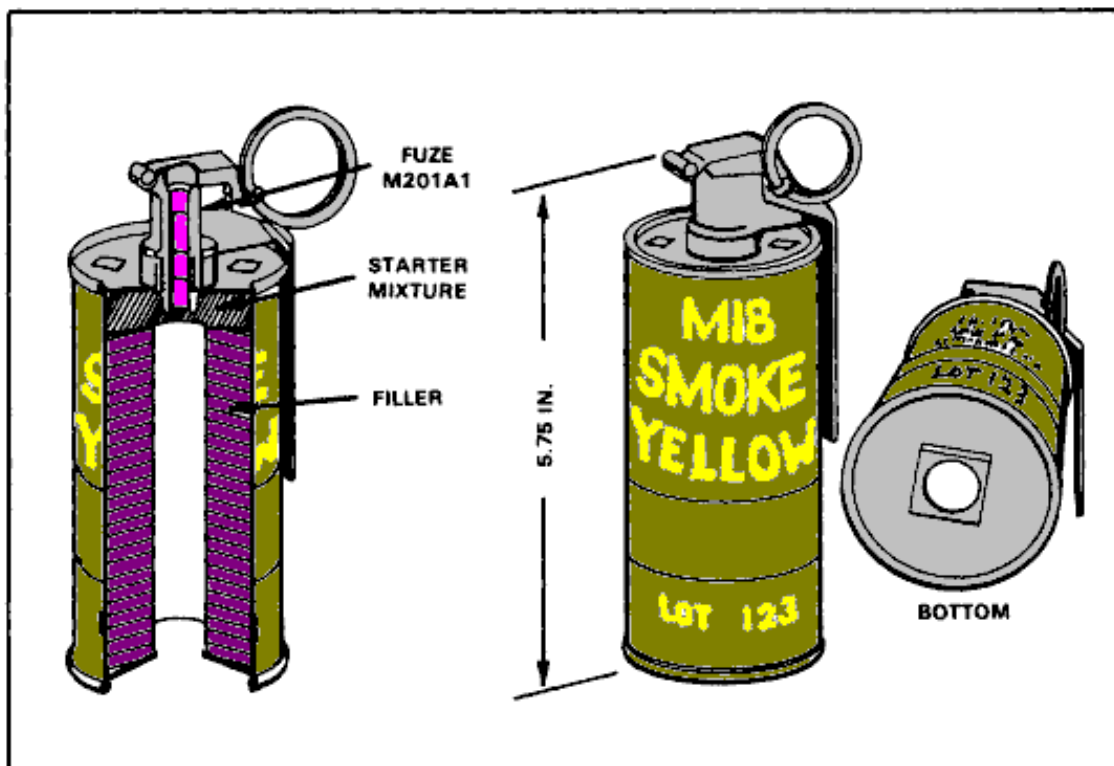
Smoke Grenades and Flashbangs:



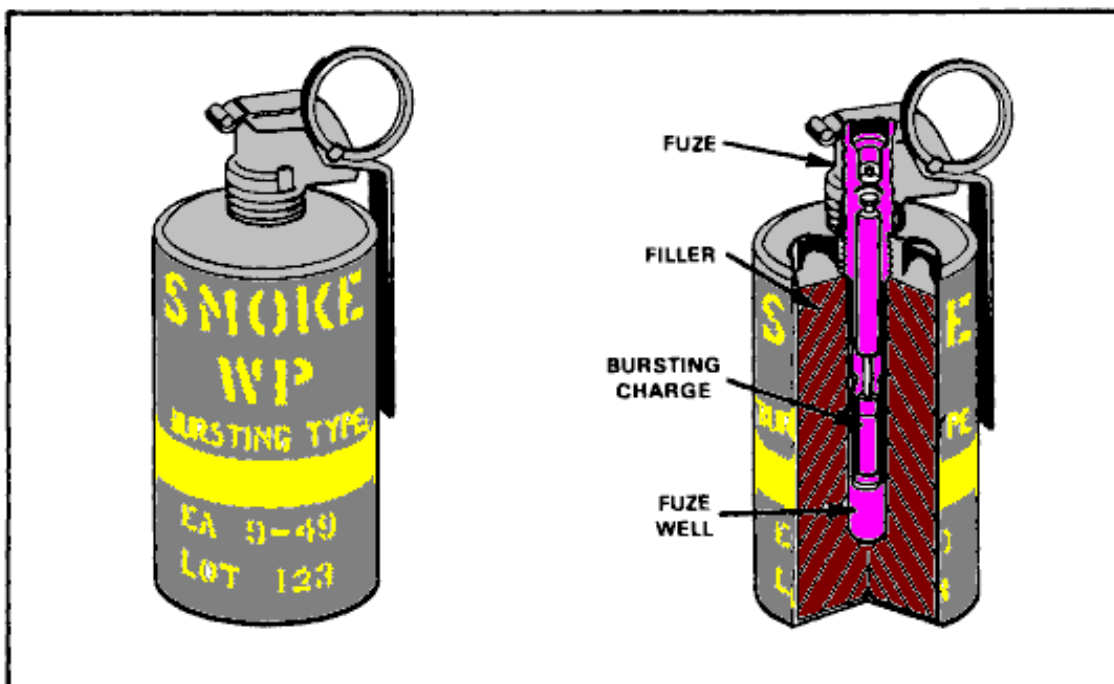
AN-M8 HC white smoke grenade.



One type of Flashbang grenade.



M18 colored smoke grenade.



M15 WP smoke hand grenade.

White Phosphorus Smoke Grenades are essentially a combination of a flashbang and a smoke bomb.

The following pictures are of Seattle Police at the 1999 WTO protests-- accompanying the photos are labels detailing the type of chemical weapon in use. (Photos: Seattle Independent Media Center-- seattle.indymedia.org)



This fire-extinguisher like object is actually an aerosol dispenser for chemical agents. Based on the red/orange color of the label, it either contains OC, CS or a combination of the two. Canisters like this can produce either a targeted stream or a more widely dispersed mist of chemical agent.



The wafting clouds in this photo suggest the use of a teargas such as CN or CS. Though it is possible that it is just pyrotechnic smoke. The obvious irritation of some crowd members and the use of heavy protective equipment by police suggests though that it is genuinely teargas.



In this picture, it appears that a CS or CN canister/grenade was used shortly before police advanced on this position. Note the officer in the center wielding an OC dispenser. The officer also has large bags carried near the hip which likely contain other chemical weapons.



This photo demonstrates the problem of police using too much of chemical agents in a small area--due to excessive use in poor weather conditions, much of Seattle was covered with a "fog" of teargas fumes during the duration of the WTO protests.