



# THE TACTICAL EDGE

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# Medical Aspects of Clandestine Drug Labs

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## Introduction

Clandestine drug laboratories are becoming an area of great concern for tactical law enforcement officers due to the high risk of personal injury. They are highly dangerous criminal operations. Explosive and toxic chemicals, booby traps and heavily armed criminals can add up to serious trouble for a tactical team.

Knowledge of clandestine lab hazards and safety procedures means more than just being a good tactical operator. It could mean the difference between life and death for not only the officer, but team members as well.

## The Problem

Extremely large quantities of illegal drugs are manufactured in the United States each year. These kitchens of death produce narcotics, stimulants, hallucinogens and depressants. Clandestine drug laboratories are in violation of the Controlled Substances Act (PL 91-513).

Tactical law enforcement officers are at risk for personal injury during raids on labs due to the fact that the operators of these laboratories do not follow USEPA (United States Environmental Protection Agency) storage or



Decontamination Stages at a lab site after a raid. All photos courtesy of Mike Cashman, DEA, San Diego Division.

disposal procedures. In the absence of proper safety procedures and lab cleanup guidelines, law enforcement personnel and the general public may be exposed to hazardous materials and experience both acute and chronic

adverse health effects as a result of exposure to lab reagents, solvents, drug precursors and by-products improperly used or generated during the manufacture of illegal drugs.

Clandestine drug labs exist in a wide range of operations, from crude makeshift laboratories to sophisticated and technologically advanced facilities. These labs can be found almost anywhere, from private homes to apartments, motel rooms, houseboats, RV's, and commercial establishments. Often the laboratories are hidden in nondescript locations, such as old houses or barns in remote rural areas.

Keep in mind that isolation is the criminal chemist's best friend, and urban low-income homes and apartments are becoming favorite locations for clandestine labs due to the landlord usually residing elsewhere, often far away. Trailer-type campers, mobile homes, and RV's are sometimes converted into a clandestine laboratory because drugs can be cooked and sold for several days and the entire operation then driven or towed to a new

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A methamphetamine lab found in a trailer, utilizing the Ephedrine Method of manufacturing.



A methamphetamine lab site showing some of the equipment used.



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area. Self-storage units and community rental lockers are often used to store laboratory equipment, chemicals and firearms. Lack of proper temperature controls and ventilation at these off-site locations creates a potential for explosion, fire and area contamination.

Of particular concern is the fact that many clandestine drug labs contain sophisticated surveillance equipment. They may also be booby trapped to prevent outsiders and law enforcement personnel from entering the laboratory, and to destroy evidence in the facility if discovered.

### Clandestine Drug Lab Seizures

The easy availability of precursor chemicals, low production costs, ease of manufacture and the high profits from drug sales has led to more clandestine

drug labs operating in the United States than ever before. This has increased the availability of stimulants and hallucinogens for sale on the streets. According to sources in the DEA, these laboratories could easily satisfy the current domestic illegal drug demand, even if the source and entry of all foreign drugs were halted.

DEA statistics reveal that the number of clandestine laboratory seizures increased dramatically throughout the 1980's by 25%. Although the problem is national, four states account for 78% of all types of drug labs seized by the DEA in 1992. The states are California (44%), Texas (19%), and Washington and Oregon (15% combined).

### Clandestine Drug Lab Operators

Organized motorcycle and street gangs historically have manufactured and distributed PCP (phencyclidine) and amphetamines. However, since 1991, current trends show that manufacturing and distribution of methamphetamines by Mexican nationals is overtaking organized motorcycle gangs. The "cookers" (chemists) of these illegal laboratories come from a wide range of backgrounds. They can be an absolute novice with little or no background in chemistry, or trained chemists with Ph.D. degrees.

### Drugs, Hazards and Wastes

Current DEA statistics indicate that the majority of the drugs produced by clandestine labs are of three types: methamphetamine (82%), amphetamine (10%), and PCP (2.5%). Although the amount of hazardous materials found during a typical clandestine drug laboratory raid are relatively small when compared, for example, to

an industrial waste site or spill, the real concern is the exposure to toxic chemicals by law enforcement personnel unaware of their presence.

During a tactical operation where officers are engaged in potential drug seizures, a lab may be present. If so, law enforcement personnel present could be exposed to toxic chemicals. These include reagents, solvents, drug products, and by-products that may be toxic. In addition, many of the reagents and solvents present in clandestine drug laboratories are explosive or flammable. For this reason, any law enforcement personnel, including tactical officers, should have special training in clandestine drug laboratories, health and safety procedures, and the proper use of personal protective equipment.

### Methamphetamine ("Crank")

The illegal manufacture of methamphetamine is a relatively simple process that does not require a terrific amount of knowledge. The drug is produced in a multi-step process, in either what is called the P-2-P Amalgam Method or the Ephedrine Method. There are over 30 different chemicals that can be used in the manufacture of illicit methamphetamine. To further complicate matters, there are over 20 different chemical by-products and contaminants that can be produced during the manufacture of methamphetamine. Also, several chemicals used in methamphetamine production can result in a fire or explosion.

The tactical officer's risk for exposure can vary, depending on the lab process, and whether or not the lab is actively producing drugs. An active



*Chemicals at a lab site.*



*Ephedrine at a lab site.*



*Pressure cooker lab in the bathroom of a hotel room in Escondido, CA. The "Cooker" threw a hand grenade in the lab in an attempt to blow it up and destroy evidence.*



*Methamphetamine in a freon solution found in a household freezer.*

laboratory is one that is fully functional. This lab presents the greatest risk for both the chemist and occupants, as well as law enforcement personnel involved in the raid. The danger of fire and explosion constitute the greatest risk from chemicals, due to solvents that may be present when the lab is entered. In addition, large concentrations of corrosives, cyanide, and solvents may be present during the lab cooking process, resulting in inhalation injuries to team members.

Even after the closing down and removal of a clandestine lab, residual amounts of toxic substances may persist on walls, floors and surfaces of furniture unknown to team members serving a warrant. The skin may also absorb some of the chemicals on direct contact. Inhalation or skin exposure may result in local injury from corrosive substances, with presenting symptoms such as burns to the skin, cough, shortness of breath and chest pain.

#### **Personal Protective Equipment**

Team members entering an active drug lab must utilize air flow respirators that will provide adequate protection against life-threatening ambient concentrations of toxic vapors. In addition, the skin, face, and eyes must be protected against splashes and chemical spills by using goggles and/or face shields. To protect the hands and exposed areas of the skin, impervious gloves and chemical-resistant suits and rubber boots should be worn.

#### **Signs and Symptoms of Chemical Exposure**

Due to the extensive list of reagents, solvents, precursors, by-products and contaminants found in the manufacture of methamphetamine, the discussion of health effects of each one is far beyond the scope of this article. However, it is worth mentioning a few so that tactical operators will be able to recognize the signs and symptoms from each group of chemicals. Keep in mind that a sign is what you can observe in another person, and a symptom is what is experienced by the victim but not observable by others. Some signs and symptoms may not be recognized by the victim and, therefore, the victim becomes dependent on his or her buddy for help.

#### **Solvents**

Examples of solvents include acetone, chloroform, and ethyl ether. The breathing of vapors at even low concentrations may result in irritation to the nose, eyes, and throat. Incoordination and drowsiness, or even loss of



*Entry personnel at the site of a synthetic heroin lab. Note masks. All clothing seams are taped up and ballistic vests are worn under the Saronex Suits.*



*Suspect "cooker" cuffed outside a lab site. Note decontamination cones indicating a hot zone, agents covering suspect, and raid team in Saronex Suits.*

consciousness, can occur at high concentrations.

#### **Irritants and Corrosives**

Examples of irritants and corrosives include acetic acid, hydroiodic acid and sodium hydroxide. The health effects from vapors may cause eye irritation, tearing, a burning sensation in the eyes and the mucous membranes of the throat and nose. The breathing of vapors can cause irritation of the lungs, resulting in cough, shortness of breath, and chest pain. In severe cases, the victim's lungs can fill with fluid

(pulmonary edema), and he or she may even cough up blood.

#### **Metals and Salts**

Examples of metals and salts include mercury, lead, and red phosphorous. Most of the metals and salts are stable in the solid form, and present minimal potential for exposure unless ingested, or if the metal is present in the air as fumes or dust. If inhaled, the symptoms may include irritation to the skin and eyes, dizziness, nausea, vomiting, abdominal

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pain, and loss of consciousness. Chronic exposure to the metals may result in poisoning, affecting the central nervous system.

### Emergency Medical Care

#### On-Scene Medical Management

Whenever possible, emergency medical support should be identified and established as per department protocols prior to conducting the raid. The on-scene medical officer should obtain the name, address, route and direct telephone number for the closest medical facility that is capable of handling a hazardous material contamination or accident.

On-scene management should include the following procedures:

- Initiate first aid, basic or advanced life support, if indicated.
- Victims exposed to toxic vapors should be removed to fresh air.
- Direct contamination to the skin with powders or granules should be brushed off and clothing removed.
- Direct contamination to the skin or eyes by way of a spill or splash should be irrigated with clean running water for at least 15 minutes.

#### Team Physician Referral

Any team members, lab occupants, and on-scene prehospital care providers that develop symptoms, or suspect they have been exposed to chemicals, should be seen by the team physician and transported to an adequate medical facility for evaluation. Also, any children or infants removed from a clan-lab during a raid should be seen by the on-scene team physician. In addition, any team members that sustain puncture wounds from needles or other drug paraphernalia should be seen promptly by their team physician for a medical evaluation.

#### Conclusion

The likelihood of a chemical or medical emergency occurring during a clandestine drug lab operation is directly related to the knowledge, training, and organization of the tactical team involved. Unfortunately, not a great deal is known about the potential long-term health hazards or reproductive risks as a result of exposure to illicit street drugs and the chemical precursors found in clandestine drug labs. Therefore, it is of the utmost importance that all efforts be taken to protect officers and others involved in clandestine drug lab interdictions.



*Cleaning up methamphetamine oil after entry. The suspect tried to pour the chemicals under a garage door in an attempt to destroy evidence.*



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