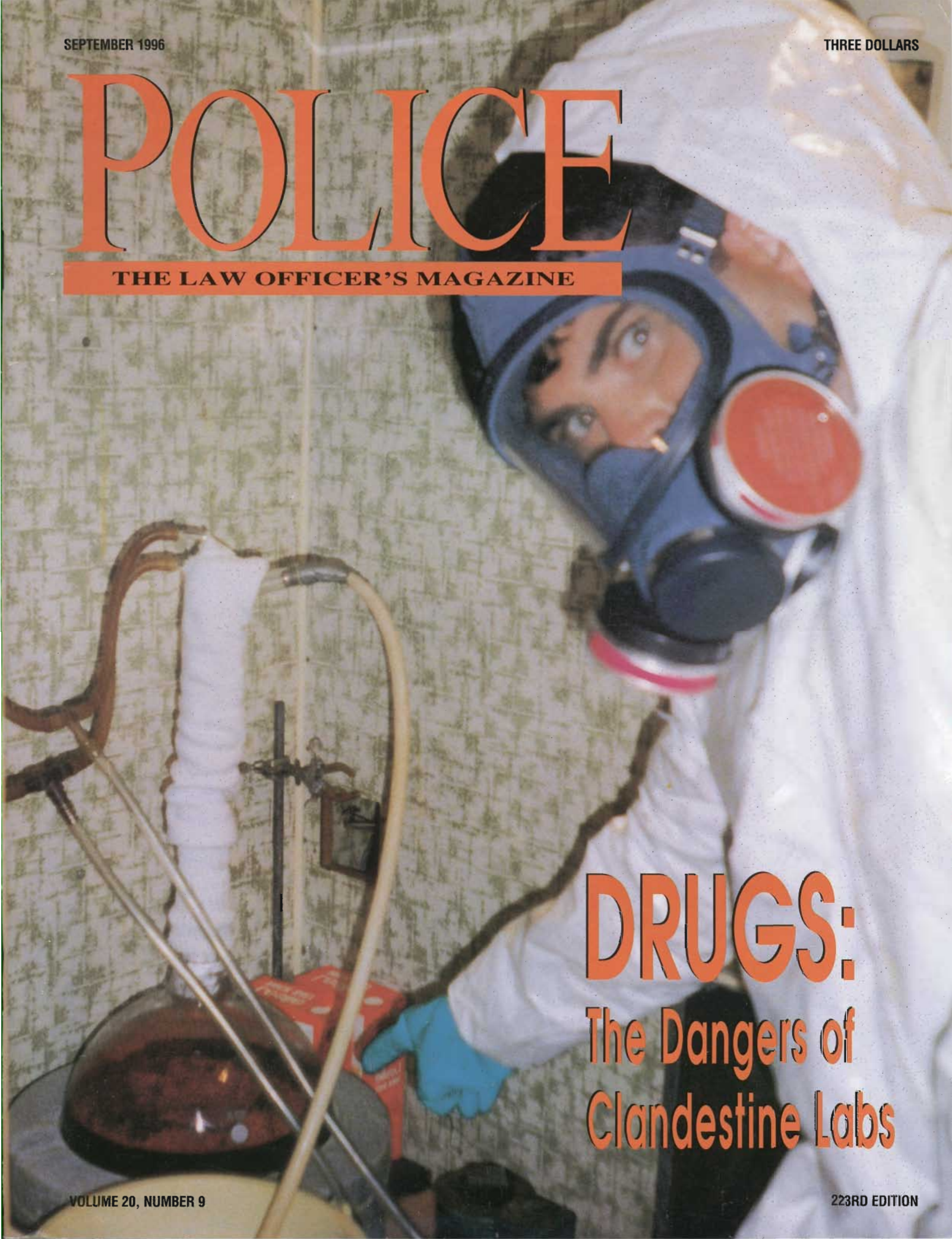


SEPTEMBER 1996

THREE DOLLARS

POLICE

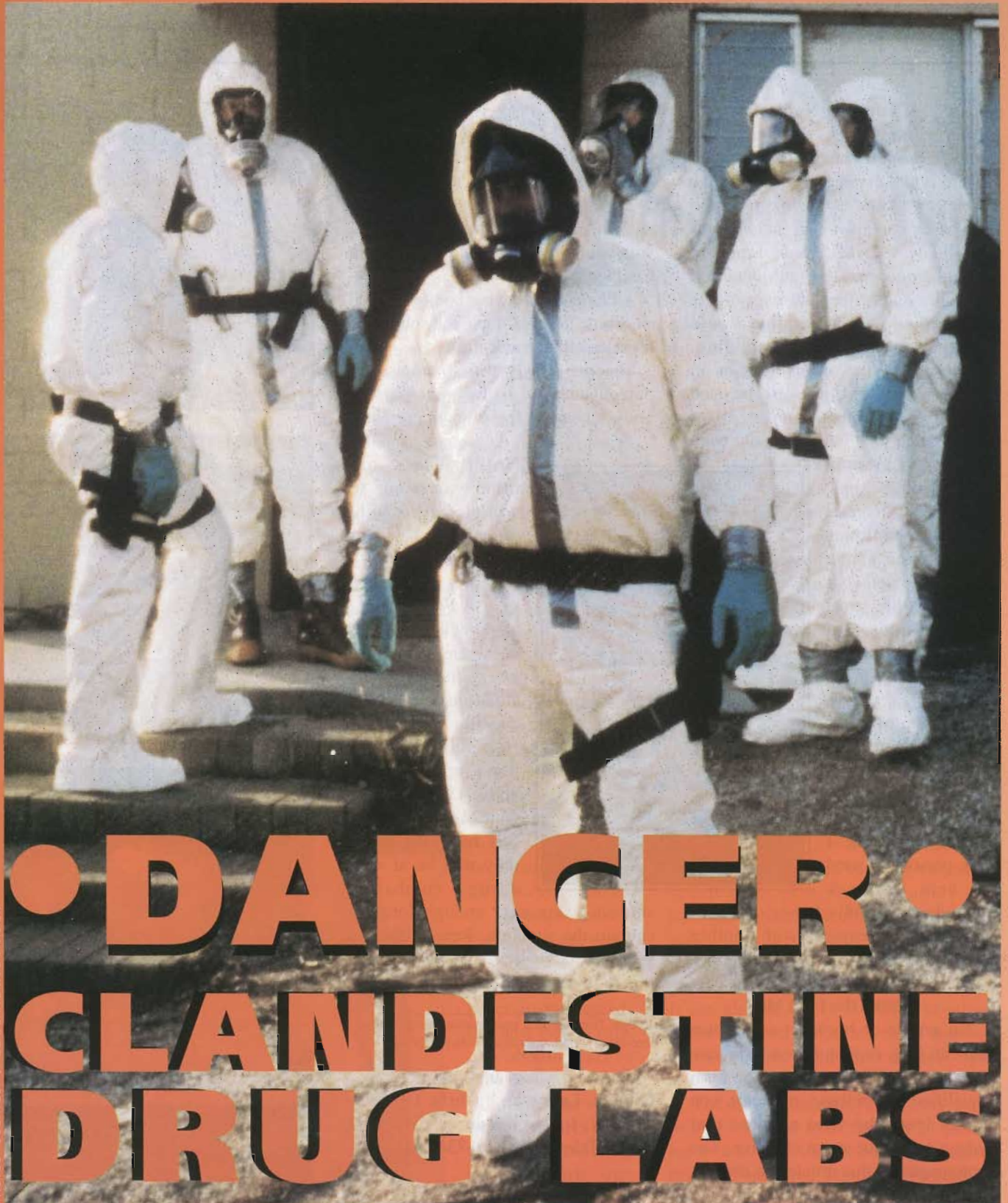
THE LAW OFFICER'S MAGAZINE

A person wearing a white protective hazmat suit and a blue respirator mask with two red circular filters is working in a laboratory. They are wearing blue gloves and are positioned next to a piece of laboratory equipment that includes a round-bottom flask containing a dark red liquid, connected to various tubes and a vertical glass column. The background is a wall with a light-colored, textured pattern.

DRUGS:
The Dangers of
Clandestine Labs

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PHOTOS • COURTESY OF DEA, SAN DIEGO DIVISION

• DANGER • CLANDESTINE DRUG LABS

**CLANDESTINE DRUG LABS CAN BE DEADLY
CHEMICAL TIME BOMBS IF YOU DO NOT TAKE
APPROPRIATE AND IMMEDIATE PRECAUTIONS.**

BY LAWRENCE E. HEISKELL, M.D., F.A.C.E.P., F.A.A.F.P.



Rural drug laboratory discovered in San Diego County.



Paraphernalia, like items uncovered here, are often found in drug labs.



The cooking of methamphetamine presents an extreme respiratory hazard.



Multiple-reaction setup for the manufacture of illicit drugs.

Knowledge of clandestine drug lab hazards and safety procedures could mean the difference between life and death. Explosive and toxic chemicals, booby traps and heavily armed criminals often associated with these dangerous criminal operations can add up to serious trouble for an officer. But appreciating their unique hazards and special circumstances will help you better understand the appropriate actions to take in the event of an accident, injury or chemical incident involving a clandestine lab. Your timely and appropriate reaction will invariably have far-reaching, long-term consequences on the community.

THE PROBLEM

Large quantities of illegal narcotics, stimulants, hallucinogens and depressants are manufactured in "stove-top" laboratories in the United States every year in violation of the Controlled Substances Act (PL 91513). Police officers who happen upon these labs are at risk for personal injury because few lab operators follow USEPA (United States Environmental Protection Agency) storage or disposal procedures. Clandestine laboratories are considered the largest single source of on-the-job injuries to narcotics officers. In fact, in the absence of proper safety procedures and lab cleanup guidelines, law enforcement personnel and the general public could be exposed to hazardous materials. Both acute and chronic health problems may result from exposure to lab reagents, solvents, drug precursors and byproducts improperly used or generated during the manufacture of illegal drugs.

Clandestine drug labs can be makeshift laboratories or sophisticated and technologically advanced facilities. They can be found almost anywhere, from private homes to apartments, old houses or barns in remote locations, motel rooms, houseboats, RVs or commercial establishments. 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 because landlords are usually far away.



Common solvents: naphtha, acetone, denatured alcohol, camp stove fuel.



Mexican Freon (marked with the Number 11) is used for meth production.



Drug cookers often bury red phosphorus sludge to hide their activities.



Methamphetamine solvent being recrystallized in a domestic freezer.

DO NOT ATTEMPT TO RESCUE SOMEONE UNLESS YOUR PERSONAL SAFETY CAN BE MAINTAINED; OTHERWISE YOU, TOO, COULD BECOME A VICTIM.

Trailer-type campers, mobile homes and RVs are sometimes converted into clandestine laboratories, since drugs can be cooked and sold for several days and the entire operation then driven or towed to a new 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 create a potential for explosion, fire and area contamination.

Of particular concern is that many clandestine drug labs contain sophisticated surveillance equipment and may be booby-trapped to prevent outsiders, including law enforcement personnel, from entering.

LAB SEIZURES

The easy availability of precursor chemicals, low production costs, ease of manufacture and high profits from drug sales have led to more clandestine drug lab operations in the United States than ever before. According to 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 also reveal that the number of clandestine laboratory seizures increased by 25 percent in the 1980s. Although the problem is a national one, four states account for 78 percent of all types of drug labs seized by the DEA in 1992. The states are California (44 percent), Texas (19 percent), Washington and Oregon (15 percent combined).

LAB OPERATORS

Organized motorcycle gangs have historically manufactured and distributed methamphetamines. However, trends indicate that since 1991, the manufacturing and distribution of methamphetamine by Mexican nationals is overtaking the organized motorcycle gangs. The "cookers" (chemists) at these illegal laboratories come from a variety of backgrounds. They can be absolute novices with little or no background in chemistry or trained chemists with Ph.D.s.

Suspects in 10 percent of clandestine labs investigated had fully automatic and silenced weapons. In addition, about 30 percent of clandestine laboratory operators were found to be using some form of electronic surveillance and countermeasures.

DRUGS, HAZARDS AND WASTES

Current DEA statistics indicate that the majority of the drugs produced by clandestine labs are of three types: methamphetamine (82 percent), amphetamine (10 percent) and PCP (2.5 percent). Although the amount of hazardous materials found during a typical clandestine drug laboratory raid is relatively small when compared to an industrial waste site or spill, for example, the real concern is the exposure to toxic chemicals by law enforcement personnel who are unaware of their presence.

On routine patrol or while responding to an alarm, an officer may unknowingly stumble upon a clandestine lab. Containers of chemicals or reaction vessels may be accidentally overturned or broken, dispersing chemical dust, liquids, gases and fumes into the air or onto clothing and skin. These conditions can expose the officer and others to toxic materials that can be absorbed into the body through the lungs, skin, eyes, mouth and small cuts.

Up to 20 percent of all clandestine laboratories are discovered through fires and/or explosions—a prime time for officers to be exposed to highly toxic chemicals. These include poisonous and explosive reagents, solvents, drug products and byproducts. Because of the many dangers associated with these labs, all law enforcement personnel should have training in health and safety procedures when coming in contact with clandestine labs.

METHAMPHETAMINE "CRANK"

The illegal manufacture of methamphetamine is a relatively simple process that does not require a lot of knowledge. The drug is produced in a multistep process, and more than 30 different chemicals can be used for its manufacture. However, more than 20 different chemical byproducts and contaminants can be produced during the manufacture of methamphetamine. Also, several chemicals used in methamphetamine production can result in a fire or explosion.

An officer's risk of exposure varies depending on the lab process and whether the lab is fully functional and actively producing drugs. This lab presents the greatest risk for both the chemist and occupants, as well as the officer. Not only can fires and explosions occur, but large concentrations of corrosives, cyanide and solvents

that may be present during the lab cooking process can result in inhalation injuries.

Even after a clandestine lab is closed down, residual amounts of toxic substances may be present on walls, floors and surfaces of furniture. The skin may also absorb some of the chemicals on direct contact. Inhalation or skin exposure may result in local injury from corrosive substances, including burns, coughing, shortness of breath and chest pain.

DESIGNER DRUGS

The designer drug phenomenon represents one of the most serious challenges to law enforcement officers. This aspect of the clandestine drug lab problem is pioneered by sophisticated chemists who manipulate the molecular structure of powerful controlled drugs to make new substances that are not yet under federal and state statutes. The term "designer drug" refers to a clandestinely produced substance that is chemically and pharmacologically similar to substances listed in the Controlled Substances Act, but which are not themselves controlled.

Alphaprodine, for example, is a synthetic drug similar to meperidine, an injectable pain medication commonly found in hospitals. The drug offers clandestine drug manufacturers the opportunity to accumulate immediate wealth. Since the drug is somewhat stronger than heroin, it can be cut more times to increase its dollar value.

In the illegal attempt to manufacture alphaprodine, a toxic byproduct called MPTP is sometimes formed. This drug has severe, irreversible neurotoxic side effects that mimic Parkinson's Disease. Based on autopsy findings, the drug destroys nerve cells in a portion of the brain that plays a major role in controlling movement. Although police officers are not at risk unless they use the drug, alphaprodine illustrates the inherent dangers associated with the byproducts of manufacturing designer drugs.

FENTANYL LABORATORY HAZARDS

Clandestine fentanyl laboratories are one of the greatest hazards to law enforcement officers. Fentanyls are a class of highly potent, synthetically made, narcotic analgesics. Exceedingly huge profits can be earned by dealing in fentanyl analogs. Just 1 pound of the potent analog methylfentanyl can earn a street dealer \$28 million or 1,000 times the profit on a similar amount of heroin. One pound of methylfentanyl is equivalent to 62 pounds of pure heroin.

Respiratory depression is the most significant acute toxic effect of the fentanyl compounds. Inhalation of a minute amount of loose powder floating around a clandestine laboratory has the potential to cause arrest of the central nervous system and death. For example, it has been estimated that an effective dose of methylfentanyl powder is equivalent to one-quarter grain of salt. Because of the extreme potency of small amounts of powder, law enforcement officers should not smell or sniff suspected samples of fentanyl compounds, or any drug for that matter, even while making a street arrest.

CHEMICAL EXPOSURE

Due to the extensive reagents, solvents, precursors, byproducts and contaminants of manufacturing methamphetamines, the health effects of each one is considerable. As a patrol officer, you should be able to recognize the signs and symptoms of 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 he or she will require assistance.

SOLVENTS

Solvents include acetone, chloroform and ethyl ether. Inhaling vapors at even low concentrations may result in irritation to the nose, eyes and throat. Loss of coordination and drowsiness, or even loss of consciousness can occur at high concentrations.

IRRITANTS AND CORROSIVES

Examples of irritants and corrosives include acetic acid, hydriodic acid and sodium hydroxide. Exposure to the vapors may cause eye irritation, tearing and a burning sensation in the eyes and mucous membranes of the throat and nose. It may also irritate the lungs, causing coughing, shortness of breath and chest pain. In severe cases, the victim's lungs can fill with fluid, (a complication called pulmonary edema) and he or she may even cough up blood.

METALS AND SALTS

Examples of metals and salts include lead and red phosphorous. Most metals and salts are stable in the solid form and present minimal potential for damage unless they are ingested. If the metal is present in the air as fumes or dust and is inhaled, irritation to the skin and eyes, dizziness, nausea, vomiting, abdominal pain or loss of consciousness may result. Chronic exposure to metals may cause damage to the central nervous system.

FIRST ON-SCENE ACTIONS

A clandestine laboratory becomes an emergency at the time it is discovered. The person who discovers such a lab, therefore, is considered the first on scene. If you are the first to uncover a clandestine laboratory, there are several critical safety actions that must be accomplished, such as calling for help, warning others, isolating the area and providing important response information.

These safety actions, however, are separate from the steps taken to apprehend suspects, secure the scene and preserve evidence. First and foremost, you should be concerned for your own personal safety. Do not unnecessarily expose yourself to liquids, gases and vapors. Avoid areas with strong odors and stay up-wind and at a safe distance from the laboratory. Do not attempt to rescue someone unless your personal safety can be maintained; otherwise you, too, could become a victim.

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CLANDESTINE LABS

(Continued from page 35)



Your next concern should be that of public safety. Warn others nearby to stay away. Call for help and report the exact location, and evacuate and isolate the surrounding area.

Report your immediate actions at the scene and what response action is needed. Activate fire EMS for injuries and HAZMAT control. Secondary actions would include the elimination of any obvious sources of ignition, shutting off utilities to the equipment or building, if appropriate, and clearing away any debris that might impede fire containment and EMS response.

FINAL WORDS

The likelihood of a chemical or medical emergency occurring during an accidental discovery of a clandestine drug lab is directly related to the knowledge, training and organization of the police officers involved. Unfortunately, not much is known about the potential long-term health hazards or reproductive risks of exposure to illicit street drugs and the chemical precursors found in clandestine drug labs. Therefore, it is of utmost importance that all efforts are made to educate police officers through state and local clandestine drug lab safety schools. ■

Lawrence E. Heiskell is a former reserve police officer and SWAT team physician for the Palm Springs (Calif.) Police Department.

EMERGENCY MEDICAL CARE

The on-scene police officer should learn these tips and be prepared to administer first aid to victims while appropriate medical aid is summoned and en route:

- Initiate first aid.
- Victims exposed to toxic vapors should be moved to fresh air.
- Direct contaminants to the skin, like powders or granules, should be brushed off and clothing removed.
- Skin and eyes directly contaminated by way of a spill or splash should be irrigated with clean running water for at least 15 minutes.

Any officer, lab occupant or suspect who develops symptoms or suspects they have been exposed to chemicals should be transported to an adequate medical facility for evaluation. Also, any children or infants removed from a clandestine lab during a raid should be seen by a physician in a hospital emergency room. In addition, anyone who sustained puncture wounds from needles or other drug paraphernalia should be seen promptly by a physician for a medical evaluation.