

## Medicine by John Grauerholz, M.D.

### The perils of cocaine

*Present trends in cocaine use point to a marked increase in medical complications that threaten life and health.*

Cocaine is rapidly becoming the major addictive problem in the United States today in terms of loss of jobs and life. Unlike marijuana, with which functional impairment is more apparent in terms of being "stoned," and which appears to take longer to establish addiction, cocaine does not seem to visibly impair the functioning of an individual under its influence, and works faster than other drugs or alcohol to gain total control over its victim, according to Dr. Mark Gold, director of research at Fair Oaks Hospital in Summit, New Jersey, and head of the National Cocaine Help Line.

Besides its psychological effects, there is a growing body of evidence that cocaine use is a direct threat to life and physical health.

The danger of the cardiac effects of cocaine was underscored in a report by Dr. Warren Kossowsky and Dr. Alan Lyon, cardiologists at the Brookdale Hospital Medical Center in Brooklyn, on six patients who suffered heart attacks within an hour after they used cocaine. In some of these cases the attack occurred within minutes of snorting the drug, and one of the men died.

The six men ranged in age from 27 to the early 40, and four of them were long-term abusers who mixed drugs. But Kossowsky says that it is the cocaine which brings on the attacks, and even small amounts can cause a heart attack by causing the coronary arteries to go into spasm and shut off the blood flow to the heart muscle. This is compounded by a chemical reaction to cocaine which increases the heartbeat,

causing the heart to need more oxygen to sustain the higher pumping rate. When the heart cannot obtain the oxygen it requires, because of the spastic constriction of the coronary arteries, it incurs what is called an "oxygen debt." This results in the death of the heart muscle fibers involved, producing a myocardial infarct, or heart attack.

Another, increasingly popular, method of using cocaine is to smoke it, otherwise known as freebasing. One hazard of this was highlighted (so to speak) by comedian Richard Pryor, who partially incinerated himself when the ether he was using to prepare the cocaine for smoking caught fire.

Once again the magic of the marketplace has intervened to service the growing number of those who wish to smoke, but not to burn. The new product line is called "crack" or "rock" on the street, and consists of plastic capsules containing freebase cocaine. These are being sold for \$10-\$15 a shot, and are the most rapidly expanding portion of the cocaine market.

Crack markedly shortens the time frame for the development of compulsive cocaine use. Whereas it may take two to five years for cocaine snorters to become addicts, certain people appear to develop an "almost instantaneous" addiction to crack, according to Dr. Arnold Washton, a psychopharmacologist at Fair Oaks Hospital in Summit, New Jersey, and research director of 1-800-COCAINE, a national cocaine hotline.

The mechanism for this rapid addiction is related to the rapidity of

action of cocaine when it is smoked. Smoking produces an intense high, which comes on within five minutes, and is of relatively short duration. This leads to rapid development of cravings for more drug, and the resulting cycle of repeated, compulsive use characteristic of the cocaine addict. According to Dr. Washton, this can lead to a pattern of compulsive use within a few weeks of initial use of the drug.

Whereas snorted cocaine must be absorbed through the mucous membranes of the nose, and then into the venous system before reaching the nervous system, smoked cocaine is absorbed directly from the lungs, bypassing the venous system. This absorption of the irritating cocaine vapors across the membranes of the lung is responsible for the development of lung disease in cocaine smokers.

A study of 19 people who had smoked cocaine for periods from three months to five years showed that those who avoid incineration run into other problems. Researchers at Northwestern University School of Medicine reported that 12 such individuals had symptoms such as shortness of breath or coughing, and tests revealed that 10 of them had suffered lung damage, that reduced the ability of their lungs to absorb oxygen and give off carbon dioxide.

In an article in the *Journal of the American Medical Association*, the doctors wrote, "These abnormalities may persist after cessation of freebase cocaine use," and referred to freebasing of cocaine as "an important health hazard in this country."

It is in this context that one must evaluate the recent proposal by the Inter-American Dialogue to legalize the traffic in cocaine and other drugs, and the refusal of Paul Volcker to condemn that proposal.