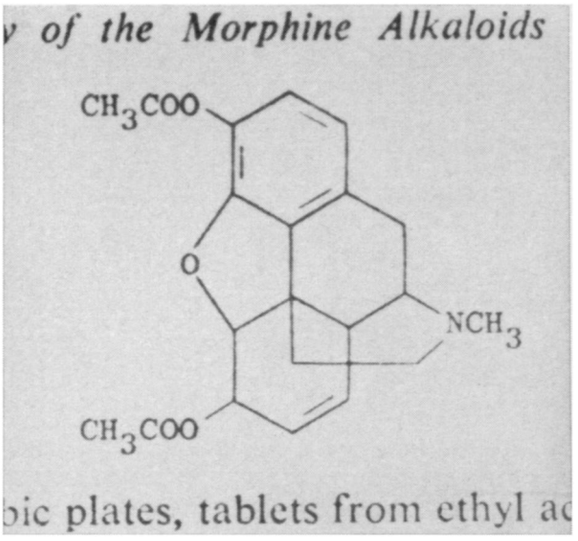
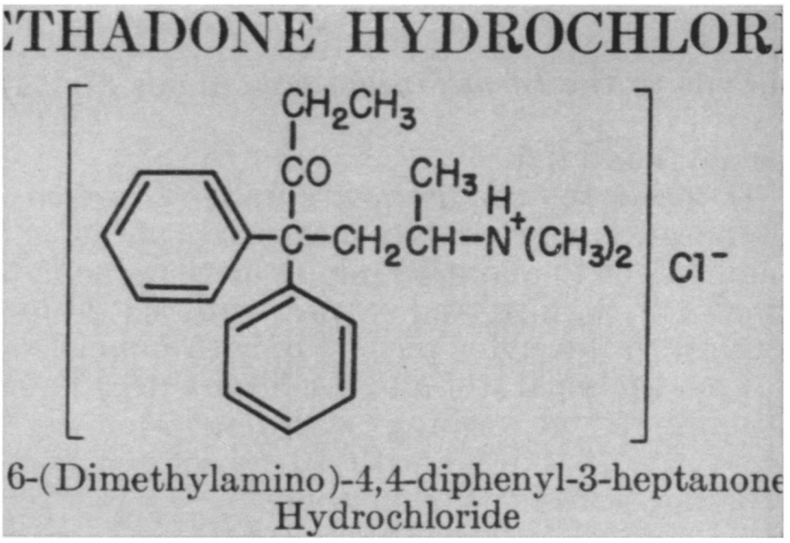


A molecule of heroin as a chemist sees it.



The intricate chemical structure of a methadone molecule.

METHADONE THERAPY

Key decisions coming

Despite some scientific and ethical objections, methadone may be the answer to heroin addiction

The addictive drug, methadone, came to the United States from Germany after World War II. The I. G. Farben chemical cartel developed it there as a synthetic pain killer when the Germans ran short of opium derivatives. It has been used as an analgesic in Europe since the war. It is also used in the United States as an experimental weapon against heroin addiction. In this use it has at least one profound side effect: It keeps the user out of jail. It also keeps him off heroin, the grim and expensive narcotic which has trapped an estimated 100,000 Americans in their own private hells.

Not only does methadone, in supervised dosages costing about a dime a day, neutralize heroin, but it also frees the addict's mind to concentrate on becoming a productive member of society. A heroin addict, on the other hand, must nearly always fracture legal and moral codes in order to scrape up the $40 or more a day that it takes to keep him in drugs. Methadone does not produce heroin's highs, and prevents the body from reacting characteristically to the deadlier drug.

With urban crime rates soaring, and with much of the cause being traced to heroin addicts, officials at the Federal Bureau of Narcotics and Dangerous Drugs in Washington, D.C., are busy appraising a number of programs which substitute methadone for heroin.

They have not yet taken a definite position on methadone therapy, though it is occupying a considerable part of their time and attention.

"We have a team of experts studying these programs," says Dr. Edward Lewis, chief medical officer of the bureau, "and they will probably report by the end of this month." A decision by the bureau would set the tone for a pending program in Washington, D.C., singled out by President Nixon as a pilot city in a national campaign against drug addiction. It will also affect profoundly the course of heroin therapy in other United States cities.

In the Nation's Capital, where there may be as many as 5,000 heroin addicts, a methadone program awaits only the final report of a crash study commissioned by Washington's Health Department chief, Dr. Murray Grant.

Methadone as an answer is still experimental and highly controversial. New York City has been pioneering in its use, and attention in other cities is focusing hard on the New York effort, where more than a thousand former heroin users are leaning on the methadone crutch to keep from sliding back into anomie (SN: 12/21, p. 621).

Much smaller methadone programs, usually run in cooperation with local universities and community mental health centers, have begun in Chicago, Newark, Philadelphia, Baltimore, New Orleans, St. Louis, New Haven and Albuquerque.

Methadone is also being evaluated by the National Institute of Mental Health, which is sponsoring small research projects in which methadone is used against heroin. But these do not employ the massive daily maintenance doses used in the New York program. Some of these efforts treat the addicts only as outpatients, while others use only a very small dose of methadone and then attempt to take the patient completely off drugs.

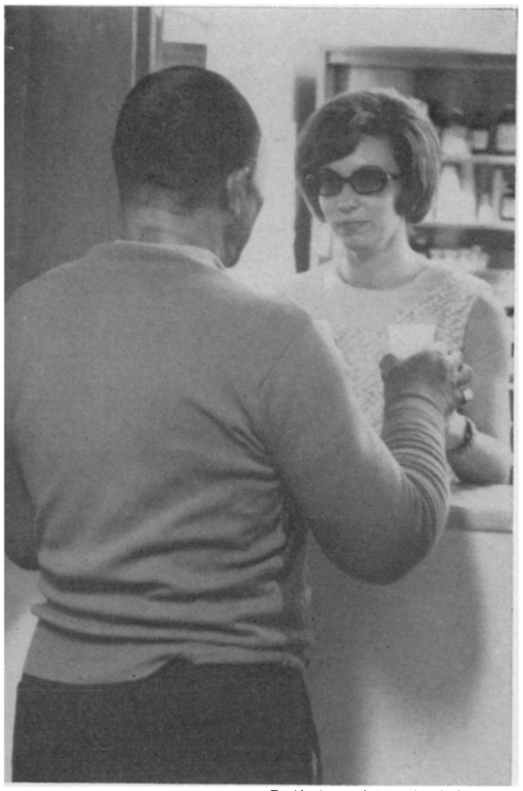
These programs seek out adolescent addicts, in contrast to the New York effort, which limits its age group to those from 20 to 39.

Results reported from the New York program, now directed by Dr. Harvey Gollance, but begun in 1964 by Dr. Vincent Dole of Rockefeller University and his wife, Dr. Marie Nyswander, indicate that more than 80 percent of the patients are still coming in for their daily doses of methadone, and are off heroin.

The exceptionally high rate of adherence to therapy drew the attention of the Columbia University School of Public Health, which last year examined the program and recommended both continuation and expansion. The state of New York responded by infusing nearly $2 million into the effort.

Yet in spite of its impressive catalogue of rebuilt lives, the Methadone Maintenance Treatment Program, as the New York project is called, has aroused considerable ethical and scientific controversy.

Chief objections center on the moral



Beth Israel Medical Center

Methadone: crutch in a paper cup.

question of treating a drug user by addicting him to another drug, possibly for the rest of his life, and the medical question of whether methadone has bad physiological effects.

These are the questions holding up a Washington decision.

"In our deliberations at the bureau," Dr. Lewis observes, "we are going to consider the moral objections to methadone, but we are also going to consider the argument advanced by some that if you have an addict, it is far better for him to be on methadone than heroin."

Dr. Nyswander considers the ex-addict's reliance on methadone no worse than a diabetic's reliance on insulin. The partisans of methadone maintenance stress the point that their patients are able to lead socially useful lives, their self-respect is largely restored and they no longer must prey on society.

The Columbia appraisal appears to answer some physiological objections by concluding that there are no observed toxic effects of methadone on either the liver or the kidneys, and no impairment of motor functions. Another study reports that no abnormalities were found in women who used methadone either before, during or after pregnancy. The only physiological side effect noted so far in the five years of the New York program has been constipation.

There is also the fact that since methadone is administered orally, as either a liquid or a powder dissolved in orange juice, there are none of the dangers of hepatitis or jaundice which plague the needle-wielding heroin addict. The addict need take methadone only once each day, while heroin users must have a fix three or four times daily.

One possible side effect of the methadone program, however, is the chance that an addict will either hold back some of the drug or secure it through illegal channels. He might then try, by taking enormous amounts, to achieve some kind of euphoria. But Dr. Lewis notes that although the bureau is concerned about the possibility of such behavior, it has no data to support the view that it is a current problem. "Of course," Dr. Lewis adds, "if you took a massive enough dose of methadone, it would probably kill you."

The methadone addict might also try to induce non-addicts to take the drug, but scientific opinion is still divided as to whether there would be a euphoric experience even for the neophyte.

The New York program brings the heroin user into the hospital for six weeks, where he is treated with gradually increasing doses of methadone until his heroin hunger vanishes. After leaving the hospital, he reports daily to a clinic and is given his maintenance dosage, which varies, according to the patient, from 80 to 150 milligrams. He must also submit to a periodic urinalysis to prove that he is staying off heroin.

The maintenance dose of methadone blocks the heroin craving, thus enabling the addict to put his mind to productive uses.

Even should he take heroin, he will not be able to achieve the euphoria which is that drug's major lure. An abrupt, or cold turkey, withdrawal without using any other drug as a palliative is favored by some therapists, but Dr. Nyswander believes that it is too easy to fall back into the heroin track this way. To help the addict rehabilitate himself, the New York program enlists a wide array of therapists and vocational advisers. It makes the program more expensive, but Dr. Nyswander notes that the average heroin addict costs the city $25,000 each year in crime, welfare and hospitalization. If this figure is accurate, it would mean that the city's estimated 60,000 heroin addicts cost it $1.5 billion each year.

"One of our big problems," says Dr. Lewis, "is a lack of statistical data. We need a set of uniform guidelines for these programs."

The concern with methadone therapy for heroin addicts seems to be a peculiarly American one. In England, by contrast, an addict is treated by his own doctor with the drug on which he is hooked. ◇