PUBLIC HEALTH

Plan Outlawing Heroin

International pharmacologists advocate replacing heroin, favorite of drug addicts, with other safer drugs. Heroin still used medically in some countries.

➤ DRUG ADDICTS throughout the world will have an increasingly harder time getting their favorite drug, heroin, thanks to the efforts of the pharmacologists who make up the World Health Organization's Expert Committee on Drugs Liable to Produce Addiction.

U. S. member of this committee is Dr. N. B. Eddy of the National Institutes of Health.

Heroin, the international pharmacologists believe, should be replaced for medical purposes by other, safer drugs. The committee recommended that WHO's executive board take steps to approach again countries in which it is still used for medical purposes to see whether these countries can do without the drug.

Similar action by WHO has resulted in 50 member states discontinuing or stating they are willing to discontinue the medical use of heroin.

Surprising and heartening to the committee was the change on the part of the Swiss with regard to heroin. For many years Swiss medical scientists had insisted they could not do without heroin because of the large number of tuberculosis patients coming to their country for treatment. Heroin was formerly greatly valued by doctors the world over because of its effect in controlling coughing. Now the Swiss are convinced that heroin is no longer necessary for this purpose and that they can do without it.

Heroin, Dr. Eddy explained, is no better for relieving coughs than codeine. Both are morphine derivatives, but codeine has less addiction liability and is also safer than heroin from the standpoint of overdosage.

Besides heroin, 13 of some 15 new synthetic pain-relieving drugs should be under international control, the committee recommended. These drugs belong to the pethidine, methadone and morphinan types.

The barbiturate sleep-inducing drugs are being produced in increasing quantities in several countries, often in excess of the amount needed for medical purposes. To guard against the danger of misuse and abuse of these drugs, the committee recommended that: 1. they should be dispensed only on a doctor's prescription; 2. each prescription should specify the number of times it can be refilled; 3. the prescriptions should be recorded.

Members of the Committee besides Dr. Eddy who were at the meeting in Geneva are: Dr. J. Labarre, Belgium; Dr. G. Joachimoglu, Greece, who was chairman of the group's latest meeting; Col. Sir Nam Nath Chopra, India; Dr. B. Lorenzo Velasquez, Spain; Dr. H. Fisher and Dr. F. Verzar, Switzerland; and Dr. J. Nicholls, United Kingdom.

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CHEMISTRY

New Plastics, New Uses

➤ THE WORLD is not alone plastic in the sense that it is in a continual state of change. In the chemical sense, plastics play an important role in the materials used by industry and the armed services.

In World War II plastics took over many of the jobs of leather and rubber. They even replaced metal in many instances. Nylon was used for so many essential war jobs that nylon stockings were scarce. Silk is almost completely replaced and synthetic plastic fibers move rapidly ahead in displacing wool and cotton.

The critical metal, tin, is finding plastics substituting for it. Plastic molded parts are replacing laboriously machined parts in war materials; for example, proximity fuse heads formerly made of copper requiring 38 man-hours each, are now molded of polystyrene in one and a half hours each.

More new kinds of plastics and new uses are being developed.

One of the most promising is polyester plastic that already has four promising applications. As Dacron it is a textile fiber that surpasses nylon. Men's shirts and other apparel are being made from it. It was first called Fiber V. In the form of film, transparent, stable and tough, it is having two important uses: Base for photographic emulsions that is better than the conventional cellulose nitrate, cellulose acetate and even the newer cellulose triacetate. As a film for electrical applications, called Mylar, it is a superior insulation and dielectric. Blown into very fine fibers, it is an extraordinary filter medium that will catch deadly germs that might be used in warfare.

A new fluorinated plastic recently announced is resistant to most highly corrosive chemicals and impervious to salt, heat and moisture. Veloform F-10, as it is called, is used as a protective coating against fuming nitric acid.

Water pipes of various plastics are being used more extensively. Pipes are manufactured of polystyrene, polyethylene, cellulosic materials and copolymers of polyvinyl chloride.

Feminine shoes that at first glance seem to be strange colorings of calf, elk and reptile leathers turn out to be vinyl plastic material.

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METALLURGY

Magnetic Device Detects Danger Spots in Planes

➤ SAFER AIRPLANE flights should result from a magnetic device revealed in Silver Spring, Md. It locates the dangerous, weak areas in exhaust systems and tail pipes instantly, whether such parts are in place in the aircraft or detached.

Badly scaled and brittle areas of exhaust systems, usually made of stainless steel and inconel alloys, are permeable to magnetism, Max Brodofsky of Pan American Airways discovered. The penetration of the magnetism through the metals increases in direct relation to the change in crystal structure caused by too much heat at the various hot spots of the manifolds and headers.

The Magne-Probe, as the device is called, can detect danger spots just as soon as the metals begin to show signs of weakening so that they may be patch-welded or replaced to avoid failure in flight. The instrument is made by the American Instrument Company in Silver Spring.

Previously the method used was to pound the systems with a hammer until areas weakened by hot exhaust gases gave way. Such "hammer tapping" is often damaging to the part being tested and sometimes critical areas can be missed.

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