BIOLOGY

Synthetic Pain-Killing Drug May Be Morphine Substitute

Although Demerol Is Habit-Forming, It Does Not Cause Physical Craving for the Drug as Does Morphine

DEMEROL, new synthetic pain-killing drug that comes closest of any so far developed to being the long-sought safe substitute for the poppy's morphine, was introduced to American scientists at the meeting of the Federation of American Societies for Experimental Biology in Boston.

Favorable results from its first U. S. trials on nearly 1,000 patients and laboratory animals were reported by Dr. David R. Climenko, of the Research Laboratory of the Winthrop Chemical Co., Dr. Robert C. Batterman, New York University College of Medicine, and Dr. H. L. Andrews and Dr. C. K. Himmelsbach, of the U. S. Public Health Service's hospital for narcotic drug addicts at Lexington, Ky.

Summing up the observations of these men, it appears that relief of pain requires larger doses of Demerol than of morphine. Making up for this is the greater safety of Demerol which allows physicians to give much larger doses of it than of morphine.

The pain-relieving effect starts within 15 or 20 minutes and lasts for as long as six hours. It is most dramatic in patients suffering from the excruciating pain caused by kidney stones and gallstones.

Demerol, like morphine, is habit-forming, but unlike morphine, it has almost no addiction property, that is, it does not cause physical craving for the drug to the extent that morphine does. Laboratory animals could not be addicted to Demerol. Humans who had been morphine addicts became addicted to Demerol but only when given daily doses 35 times the size used to relieve pain in sickness or after surgical operations.

Demerol was first developed in Germany but is now being made in the United States. It is not yet available except to research institutions, pending approval by the U. S. Food and Drug Administration of an application for its more general release. Even if it becomes available commercially, it will probably not be sold without a physician's prescription. This is because it is a habit-forming drug and one which makes a person feel so good right after taking it that it would be unsafe to allow it to be sold without restrictions.

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May Not Need Extra B_1

HEAVY drinkers of whisky and other alcoholic beverages probably do not require extra amounts of vitamin B_1 to protect their nerves and keep them healthy.

Experiments casting "considerable doubt" on the current theory that alcohol increases the body's need for this vitamin were reported by Dr. J. V. Lowry, Dr. W. H. Sebrell, Dr. F. S. Daft and Dr. L. L. Asburn, of the U. S. National Institute of Health.

In these experiments rats kept on the water wagon without exception developed the severe nervous disorder believed due to B_1 deficiency in alcoholism before their litter mates that were getting alcohol or whisky. The nervous disorder could be prevented and cured by the vitamin, regardless of whether the rats drank alcohol, water or whisky.

These experiments give the first indication that alcohol does not require vitamin B_1 to help burn it in the body. They suggest that a person who sticks to a good diet could probably drink a quart of whisky daily without needing extra vitamin B_1 to burn the alchohol. If, however, he neglects his diet, as alcoholics probably do, and fails to eat enough foods containing vitamin B_1, he would develop the nervous disorder. The whisky or alcohol could be blamed for causing the change in diet but not for causing the sickness by depleting the body of the vitamin.

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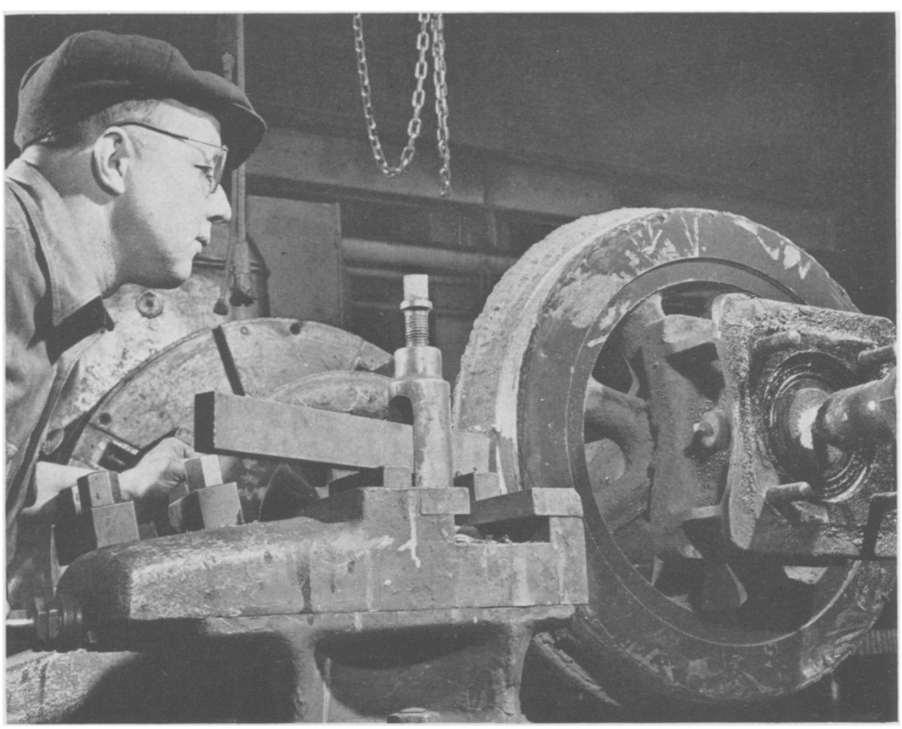

RETREADING

Locomotive tires can be retreaded now even if automobile tires may not. Worn mine locomotive tires, once junked, are now being retreaded several times with each retread good for as much mileage as the original tire. The retread is steel.