

## Hopkins Study Shows Languishing Addictions Drug Really Works

ScienceDaily (Aug. 17, 1998) — A longer-acting alternative to methadone that never quite caught on following its FDA approval in 1993 may now greatly increase the number of addicts who stick with treatment, thanks to a new Johns Hopkins study.

The study suggests better ways of taking LAAM (levomethadyl acetate hydrochloride), a drug similar to methadone in its capacity to discourage heroin use and block withdrawal symptoms. However, unlike methadone, which addicts must use daily, LAAM can be taken three times a week, making it far more convenient and potentially less expensive.

LAAM isn't widely used, because of both uncertainties about how effective it is in the first stages of addiction treatment and doubts that it would be accepted by addicts. Earlier this year, for example, only about 3,000 U.S. patients were getting the drug.

"Use of LAAM has been less than hoped for since its approval by the Food and Drug Administration," says Rolley E. Johnson, Pharm.D, associate professor of psychiatry, who headed the Hopkins study. Early studies didn't test participants' responses at various dosages, and under the cautious little-by-little approach to giving the medication, it appeared less effective than methadone at the first stage of treatment. Because of this, many assumed that LAAM lacked the necessary opiate-like effects early on. "Users said they couldn't feel the drug working and were more likely to drop out of treatment," Johnson noted.

The new Hopkins study, however, reported in this month's Archives of General Psychiatry, shows that at the proper dosage on the proper schedule, LAAM is safe, effective and acceptable to addicts. "It could become a valuable addition to heroin addiction programs. Its convenience compared with methadone is a great advantage for addicts who hold jobs," says Hendree Jones, Ph.D., one of the investigators. "They can earn a living more easily while continuing to receive treatment."

To test LAAM, researchers gave 180 heroin-addicted volunteers either low-, medium-, or high-dose schedules, phasing in the drug over 17 days. They then looked at a combination of drug tests on subjects' urine samples and subjects' own reports to get a picture of how their heroin use had changed.

Heroin use dropped in all groups. The reduction was significant, though, in the high-dose group, showing a more than 80 percent plunge in self-reported heroin use. Also, more than 80 percent of the volunteers stayed with the trials, says Johnson. "That's high for a study like this. It's a good sign that most participants accepted LAAM."

Though LAAM seems to work best on the high-dose course, Johnson says, that dose also had the most subjects drop out of the study. "It's mostly because side effects begin to appear at higher doses." So he suggests an approach that uses careful monitoring as the dose gets higher. Johnson would like to see more studies to help figure the optimal LAAM dose for individual patients: "Then we'll be able to help even more addicts."

LAAM works on the tiny receptors in the membranes of nerve cells in the brain. It binds to the so-called mu opioid receptors, the same ones that heroin and methadone target. Once attached, molecules of LAAM stimulate

the receptors. But because LAAM remains there for a relatively long time, it blocks receptor access for other opioid drugs: addicts take heroin, for example, and it has none of its usual effects.

The study was funded by a U.S. Public Health System grant.

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Johns Hopkins Medical Institutions (1998, August 17). Hopkins Study Shows Languishing Addictions Drug Really Works. *ScienceDaily*. Retrieved May 15, 2009, from <http://www.sciencedaily.com/releases/1998/08/980817081828.htm>