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Research Findings

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Heroin Snorters Risk Transition To Injection Drug Use And Infectious Disease

By Robert Mathias, NIDA NOTES Staff Writer

Heroin users who think they can avoid the harmful consequences of drug injection by snorting or smoking the drug may be dangerously mistaken. A NIDA-funded study indicates that noninjecting heroin users (NIUs) are at considerable risk of becoming drug injectors, thereby incurring risks for HIV, hepatitis, and other serious diseases. Moreover, regardless of whether they go on to inject drugs, a significant number contract hepatitis, the study shows.

"This is the era of AIDS, and everyone knows about the risks from needles. When you sniff, you don't have to worry about AIDS."

- Noninjecting heroin user interviewed in New York City

"Becoming a drug injector is not inevitable for heroin snorters who have never injected drugs, but the risk of making the transition to injection drug use is fairly substantial," says Dr. Alan Neaigus of National Development and Research Institutes (NDRI), Inc., in New York City. Dr. Neaigus and his colleagues at NDRI have been examining rates of transition to injection drug use and disease incidence among 560 NIUs recruited from March 1996 through April 1998. The study group consists of heroin users who have never injected drugs and former heroin injectors who had not injected drugs for at least 6 months prior to the study. Data from followup interviews conducted with 331 study participants show that more than 15 percent transitioned to drug injection during an average period of a little more than a year. The researchers found no significant difference in the transition rate between NIUs who had never injected heroin and the 31 percent of the study group who were former injectors.

Previous studies have found higher rates of transition from noninjection to injection drug use, particularly among former injectors. However, Dr. Neaigus says a number of factors may now be slowing the rate at which heroin snorters are initiating or resuming injection of the drug. First, a dramatic increase in the purity of heroin during the 1990s has made it possible for snorters to achieve a high that is similar to what they can obtain from injection. Second, greater awareness of the risk of contracting AIDS from injecting drugs may be dissuading more users from the practice.

The NIU study supported earlier research findings that NIUs who socialize, use drugs, or have sex with IDUs significantly increase their risk of crossing the line from snorting to injecting

drugs. Preliminary analysis further suggests that being in the presence of an IDU who is injecting drugs may play an important role both in the initiation and resumption of injection drug use, Dr. Neaigus says. This finding suggests that the direct transfer of information and techniques used to inject drugs may be an important factor in the transition to injection drug use.

The level of heroin addiction is another major factor in the transition to injection. The NIU study participants' levels of addiction ranged from snorting heroin occasionally on weekends through using several bags a day, Dr. Neaigus says. Previous research has suggested that even with the availability of high-purity heroin, more heavily addicted heroin snorters may turn to drug injection because it remains a more effective way to take the drug. For example, in a study conducted between 1991 and 1993 by Dr. Samuel R. Friedman, also of NDRI, 30 percent of 755 IDUs in Brooklyn, New York, reported they started to inject to get a better high.

NIUs and Infectious Disease

The health risks associated with noninjecting heroin use are substantial, both for NIUs who become IDUs and for those who don't, the study found. All study participants received counseling about the risks of drug injection, hepatitis, and HIV. Nevertheless, almost 23 percent of the NIUs who began to inject drugs contracted hepatitis C (HCV) over the average followup period of a little over a year. HCV leads to chronic liver infection in about 80 percent of patients, most of whom eventually develop fatal liver diseases such as cirrhosis and liver cancer, says Dr. Henry Francis, who directs NIDA's Center on AIDS and Other Medical Consequences of Drug Abuse.

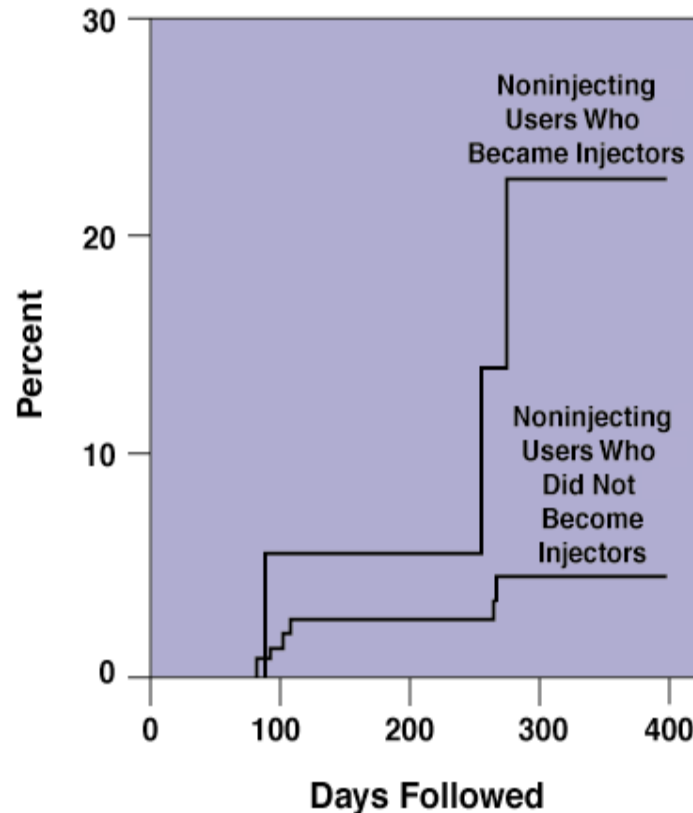
NIUs who socialize, use drugs, or have sex with IDUs significantly increase their risk of crossing the line from snorting to injecting drugs.

Because injection drug use is the primary mode of HCV transmission, "the rapid rate of transmission of hepatitis C among NIUs who initiate or resume injecting was expected," Dr. Neaigus says. "However, it is still alarming," he adds. What was unexpected was that some NIUs who did not begin to inject drugs—about 4 percent—also contracted HCV during the followup period. NDRI researchers now are attempting to determine how these NIUs contracted the infection, Dr. Neaigus says.

NIUs who did not transition to injection drug use were also at substantial risk of becoming infected with hepatitis B (HBV), the study shows. About 9.5 percent contracted HBV during the followup period. Though it receives less attention than HCV, HBV can develop into chronic infection and serious liver disease in up to 20 percent of cases, says NIDA's Dr. Francis.

The considerable amount of HBV found among NIUs, particularly among those who have never injected, reflects substantial sexual transmission of this disease, Dr. Neaigus says. Though the study only measured sexual activity over a 30-day period, "we found a lot of sexual risk in this group," he says. For example, about 70 percent of NIUs were sexually active during this period with two-thirds of them engaging in unprotected sex, many with partners who had HIV or were IDUs, says Dr. Neaigus.

Hepatitis C Among Noninjecting Heroin Users



Drug injection is the primary mode of hepatitis C transmission. In a New York City study, a large percentage of noninjecting heroin users who transitioned to injection drug use contracted the disease.

To date, the study has not found any new cases of HIV either among NIUs who began injecting drugs or among those who did not. However, Dr. Neaigus says that the high rates of new HBV and HCV infections found among NIUs may serve as markers for sexual behaviors and drug injection practices that continue to put NIUs at risk for infection with HIV. In addition to finding extensive high-risk sexual activity among NIUs, the study found NIUs who had recently transitioned to injection drug use commonly shared injection equipment, such as cookers, cotton, and rinse water. However, they infrequently shared syringes and over half obtained all their syringes from syringe exchange programs.

Noninjection drug use is two-edged in its effect on heroin users' risk of contracting infectious diseases, Dr. Neaigus concludes. On the one hand, the considerable numbers of former IDUs who are now snorting heroin instead of injecting it have reduced their risk of AIDS and HCV considerably. On the other hand, NIUs who have never used heroin before have increased their risk of heroin addiction, transition to injection drug use, and contracting HIV, HCV, and HBV.

Sources

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