

Example of critical thinking on abuse of heroine vs. methadone therapy

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Heroin is an opioid synthesized from morphine, which is extracted from opium poppy plant seed. In 2011, about 1.6% of the American population above 12 years of age had abused heroin at least once in their life. Heroin dependency is estimated at 23% of all its users. The routes of administration of heroin include smoking, inhalation and intravenous injection. The drug is then rapidly distributed to the brain where its effects predispose the user to health and addiction risks. While in the brain, heroin is reconverted to morphine, which binds to opioid receptors. These receptors are numerous in the brain stem and mediate processes such as blood pressure, respiration, and arousal. An overdose of heroin could lead to breathe suppression and death. Regular use of heroin alters the functioning of the brain. It could lead to tolerance, whereby a higher dose of the drug is required to achieve the same effect. Dependence is another adverse effect, in which an individual continues to use heroin to avoid withdrawal symptoms. Individuals who inject heroin are exposed to infectious diseases such as hepatitis C and HIV. These viral diseases are transmitted through blood contact or body fluids. The drug also exposes the users to risky sexual behavior like engaging in unprotected sex.

The most effective method of treatment of heroin dependence is by use of methadone. It acts by binding to the same opioid receptors that bind heroin. Methadone blocks the sedative effects of heroin, reduces the craving of heroin, and relieves withdrawal symptoms associated with heroin. When given in stable doses, methadone does not cause intoxication. Maintenance treatment with methadone reduces the use of injection drugs, overdose risk and transmission or acquisition of infectious diseases like HIV

and hepatitis C. It has also been shown that it reduces the occurrence of risky sexual behavior, criminal activities, improves stability in families and outcomes of pregnancies. The most commonly used dose is 60-120mg/day. Higher doses are needed by other patients to achieve effective treatment. Higher doses have been shown to be more effective in reducing the use of heroine, and helping patients to observe and stay in treatment. The minimum length of methadone therapy is 12 months. Those who discontinue treatment relapse to heroin use.

References

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