

Lessening Your Chance of Overdose

By Regina Thompson

In a heroin filled society, the effects of overdose have touched many of us. Drug overdose has become the leading cause of injury deaths in Indiana and 36 other states (Groppe, M. 2015, June 20). Although the media is reporting the casualties of drug overdose, no one is reporting ways to avoid drug overdose. An example would be that a user injects the same amount of drug that they have been using for months, but this time they are at the home of a new friend. To the surprise of the addict, their breathing becomes difficult, their pulse slows, and they become disoriented and confused. The addict is experiencing symptoms of overdose; but why? A form of classical conditioning helped the addict to tolerate his drug and this same conditioning can help the addict survive his addiction until he can overcome his addiction and regain control of his life.

Ivan Pavlov, a Russian physiologist, was a pioneer in classical conditioning. His theory of classical conditioning has made an impact with the overall understanding of human behavior as we see it today. In order for someone to form an addiction to a drug or substance, a tolerance to the drug or stimulus has to form. Drug tolerance is formed after repeated use of the drug (e.g. heroin) in the same environment. This tolerance leads to a reduction of its psychological and toxic effects to the body. In a reaction to this, an addiction to heroin is formed. A classical conditioning to the drug forms as well. The addiction is related with the environment surrounding the user, along with drug use routine. This conditioning trains or triggers your body to compensating for the drug that has been introduced into your body. As the drug is used more and more often, the compensatory response grows in strength. These triggers, or cues, that are formed from the routine drug use and drug administration make the drug more tolerable to the addict's system than if the drug is administered from another environment. When a tolerance to

the drug fails, a drug overdose is inevitable. This would be the reason why when the drug is injected in a different environment, although the drug is the same amount, overdose can occur and it can be fatal. The role of learning, and the importance of drug-associated cues to tolerance, is combined in a study of tolerance that stresses Pavlovian conditioning principles (Siegel, S. (2001) p 506). There is an extensive amount of evidence that support this theory and along with the understanding that overdose is “situation-specificity of tolerance” (Siegel, S. (2001) p 506).

What this means is that the environment the drug is administered in can have an effect on the user’s tolerance to the drug and that tolerance to the drug are more evident in a more common drug-associated environment. Studies have gone further to conclude that changing the environment of these drug-associated cues, will increase the likelihood of lethality of several drugs including an overdose. These drugs would include opiates, barbiturates, and alcohol. Another theory as to why heroin addicts may be at risk of overdose is that in a different environment the usual conditioned compensatory responses (CCRs) that normally developed in a more common drug environment are not developed in a different environment. (Birak, K.S., Higgs, S., & Terry, P. (2011) p 686).

There have been studies with addicts who had suffered from fatal overdoses who were injected under unusual circumstances. One example of a fatal overdose was an addict who had injected heroin into his penis. In a study of ten survivors of overdoses, seven reported that the drug was not injected in an environment that was previously related with the drug (Siegel, S. (2001) p 509). Not only are there reports of overdose with addicts using opiates but there have been reports of individuals with medically prescribed opiates who had suffered an overdose following a different environmental injection (Siegel, S. (2001) p 509). An example would be someone being hospitalized for an extended period of time being administered prescription

opiates and once released from the hospital to return home and administering the opiates and suffering from an overdose due to the differences in environment.

Classical conditioning, environment, and tolerance can explain some cases of overdose. In order for the addict to lessen his chance of overdose, using the drug of choice in the same environment is a beginning. Environmental conditioning along with drug use has been researched and proven to provide a tolerance for extended use. When the tolerance fails is when overdose is foreseeable. Given this likelihood, until the addict can overcome their addiction and regain control of their lives; using their drug of choice in the same environment will lessen their chance of an accidental overdose.

References

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