Will past experimentation with drugs lead to permanent brain damage? [1]

Dear Alice,

I have a history of "experimentation" (infrequent or occasional use of ecstasy, 'shrooms, and other drugs?mostly prescription pills). I am completely sober now, but am worried about long-term damage to my brain. I used drugs infrequently (no more than three to five times for each substance), but drank regularly. How worried should I be? Is there anything I can do to combat long-term effects?

Answer

Dear Reader,

While it’s possible for the substances you’ve mentioned (ecstasy, mushrooms, prescription pills, and alcohol) to alter brain functioning and neurotransmitter activity, infrequent experimentation hasn’t been shown to cause long-term brain damage (insert sigh of relief). That being said, using these substances may cause undesirable short-term effects like insomnia, diarrhea, vomiting, changes in respiration and blood pressure, accidents and injuries, and possibly overdose. Some of these short-term effects may have long-term consequences and there are other variables you may want to consider beyond how many times you’ve used a drug. While you may not be able to change all of the effects these substances have had on your body, there are ways to engage in a healthier lifestyle in the future, so read on for some ideas to help enhance your overall well-being.

The drugs you listed vary in their long-term effects (and may also be said for the ?other drugs? you didn’t explicitly list). One thing you may want to keep in mind is that many of these long-term effects are associated with heavy use beyond experimentation (therefore, you may not necessarily experience these effects). For instance, extensive use of ecstasy is linked to symptoms of paranoia, as well as some cases of liver damage and heart attack. For hallucinogens, such as LSD or 'shrooms, possible long-term effects include impaired memory and experiencing flashbacks, which involve re-experiencing the drug’s effects at a later date. Recreational use of prescription medication can lead to addiction, drug tolerance, and risk for withdrawal symptoms. It’s also worth mentioning that tolerance may reduce the drugs’ effectiveness for a user in the event that s/he is ever prescribed it for medicinal purposes. Depending on the prescription drug of choice, there might also be some changes with brain or neurotransmitter functioning. While intermittent use of many of these substances has not been shown to cause long-term brain damage, there are some substances, such as nitrous oxide.
that may causes permanent brain damage with only a few uses. Curious about other drugs and their long-term effects? Check out the Go Ask Alice! Alcohol & Other Drugs archives for more information.

Beyond the number of times a drug was used, you may want to consider how much of the drug you used. Although, keep in mind, a higher dose doesn’t necessarily equate to poorer health outcomes. Reader, in your question you mention that you drank regularly. When looking at the long-term effects of drinking, both length of time and amount play a significant factor. Prolonged alcohol abuse (drinking for a long amount of time) can lead to liver damage and cognitive impairment. But a large amount of alcohol over a short amount of time can cause damage as well. Intermittent high-risk (five or more drinks in one sitting for males or four or more for females) drinking may cause long lasting cognitive effects such as poor attention span and memory recall. Another factor to consider is age. Using drugs during adolescence, while the brain is still developing, may have impacts on the brain’s structure and function. How the drug enters your body can also impact effects. Routes of intake like smoking, snorting, and injection increase how quickly the substance reaches the brain. The quicker it gets to the brain, the more likely it is to be addicting. Finally, a family history of substance-use disorders and/or the existence of other health conditions may affect how vulnerable you are to brain damage and other poor health outcomes.

To further complicate matters, adding alcohol to the mix can also impact effects on the body and mind. Alcohol is a depressant, and mixing it with other drugs can impact the way substances (both legal and illegal) affect the body. This is one of the reasons why it’s generally recommended to avoid mixing alcohol with other drugs. For more information check out mixing alcohol and Xanax (benzodiazepines) and Is it okay to drink alcohol while on Zoloft?

Though you can’t change the past, it sounds like you’ve made a commitment to put your health first going forward. There are additional steps to consider when you’re investing in your physical and mental health; such as eating a balanced diet, being physically active on the regular, and getting plenty of quality sleep. Looking for other ways to compliment your commitment and have a good time without drugs? Check out fun without drugs and natural highs for some inspiration. Partnering with your health care provider is wise if you still have concerns about lasting effects of drugs on your body or you want additional support in maintaining your healthy lifestyle.

Best of luck!

Alice!

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