By The Professionals At Evolve Indy

1. Home
2. Blog
3. What Happens To Your Brain When You Use Methamphetamine?

As a highly addictive drug, users of methamphetamine find it impossible to stop what they're doing and ask for help. The effects of methamphetamines on the brain are vast and they are dangerous, with the impact on the brain being severe. One of the biggest risks posed on the brain by methamphetamines is the increased chance of a stroke, a condition that cuts off the blood flow to the brain, which results in potential permanent brain damage.

This doesn't have to be the case, though, not with the right help out there. Finding an outpatient program to manage your addiction can help to reverse some of the effects of methamphetamine on the body and the brain. Methamphetamines have a strong effect on the dopamine and serotonin transmitters in the brain. The high that you get when you experience an excessive release of those chemicals is such that the brain is fast depleted of those neurotransmitters.

What Happens To Your Brain When You Use Methamphetamine?

Methamphetamines work in a very similar way to other stimulants. It makes the user feel euphoric because of the massive release of the hormones we mentioned earlier. It's this effect that keeps users going back again and again. A drug that makes them feel euphoria along with invulnerability and a burst of energy offers the chance to feel as if they are in control. The problem is that methamphetamines are often cut with other substances like antifreeze because it has the same white crystal look. It's dangerous to manufacture methamphetamine, but consuming it can be fatal. Brain damage is a potential side effect of using methamphetamines and depression is very common among the users waiting for their next fix.

Meth users will find that they may lose key neurons in the brain and abnormalities occur in the substantia nigra area. This places users at risk of developing neurological conditions like Parkinson's. The risk of women specifically developing this is almost five times higher! Another way it can affect the brain is with schizophrenia and psychosis, and hallucinations and paranoia are common side effects.

What About The Central Nervous System?

The central nervous system comprises both the brain and the spinal cord. It's the messenger to every area of the body and when the brain is damaged, the effects of methamphetamine can also affect the central nervous system. The research shows that the effects of chronic use of methamphetamines can cause damage to the central nervous system, causing issues throughout the entire body.

How The Brain Is Affected

There are many ways in which the brain is affected by methamphetamine usage, and these include:

- Increase in neuronal death. The number of neurons in the CNS are decreased with the continued use of methamphetamines. These neurons cannot be recovered, and brain damage occurs in the end. Neuronal death can occur in many areas of the brain, including the hippocampus, the parietal cortex and the frontal/prefrontal cortex.
- Decrease in white matter. As the brain becomes damaged, white-matter decreases and this leads to functional deficits.
- Permanent brain damage. In some cases, brain damage is irreversible and it cannot be fixed. This is something that usually occurs with chronic methamphetamine abuse and while some effects can be resolved over time, there is often irreversible damage in those who have been using methamphetamines for years.

Cognitive & Long-Term Effects

When it comes to learning what happens to your brain when you use methamphetamines, you have to understand that the long-term effects can last for years even after the person stops using the drug. There is a very long list of cognitive and emotional effects of chronic methamphetamine abuse, including:

- Shorter attention span
- Inability to focus
- Decreased judgement
- Inability to solve simple problems
- Memory issues
- Issues with movement, including with the basic functions, such as walking.
- Inability to self-regulate and control emotions
- Mood swings
- Depression
- Loss of motivation
- Aggression and hostility
- Irritability
- Suicidal behavior

Users of methamphetamines are far more susceptible to the development of serious psychiatric issues and the behavior can become more psychotic. The conditions can mean that people feel as if they have bugs crawling on the skin, but it's not real; purely psychological. The one thing that users can do is get the right help, whether that's in an outpatient setting or as part of a program. Partial hospitalization may be the best chance that users have to get away from methamphetamines altogether. Finding the right service can make a difference between life and death.

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