



## Chapter 3: Fact or Fiction

### Your Brain on Drugs: The Science of Addiction and the Laws of Substance Abuse

1. **Fact or Fiction** - *The human brain is fully developed at the age of 18?*

#### Fiction

**Response** - *The human brain is going through the greatest period of growth from ages 11-25.*

2. **Fact or Fiction** - *The effects of substance use on the brain can be reversed if the individual stops using?*

#### Fiction

**Response** - *It is unknown what the long term consequences of substance use has on the brain.*

3. **Fact or Fiction** - *The active ingredient in marijuana THC looks like natural chemicals to the brain which confuses the body's system to the point that it can not function like it is supposed to?*

#### Fact

**Response** - *The Endocannabinoid System regulates and controls many of our most critical bodily functions such as learning and memory, emotional processing, sleep, temperature control, pain control, inflammatory and immune responses, and eating. When using marijuana, THC floods the brain, confusing the system which leads to an inability to regulate your critical body functions, mood, and emotions.*

4. **Fact or Fiction** - *Every individual has the same reaction and physical response to using certain substances?*

#### Fiction



**Response** - *You can not predict how your body is going to react to the substance and what effects or consequences the substances may have on your body and on your life. Some individuals have a predisposition, or greater likelihood, of becoming addicted to substances than others. Even after one-time use.*

**5. Fact or Fiction** - *Tolerance describes the bodies need to use a greater and greater amount of the substances to feel the same effect.*

### Fact

**Response** - *Tolerances means your body becomes used to the substance, and you don't get the same effects as before. Sometimes tolerance can develop quickly, even the first few times you take a substance. Tolerance can increase the risk of dependence, addiction, and overdose.*

**6. Fact or Fiction** - *Symptoms of withdrawal from a substance can be so severe that it may discourage the user from trying to quit even when they want to.*

### Fact

**Response** - *The withdrawal symptoms experienced as well as the severity of the symptoms will depend on factors such as tolerance, type of drug, and how someone's body reacts to the drug and the withdrawal. Withdrawal symptoms can become unbearable, and a person may begin using the substance again to avoid the effects. Symptoms may include excessive sweating, chills, headaches, abdominal cramping, nausea, vomiting, diarrhea, loss of appetite, insomnia and or extreme pain.*

**7. Fact or Fiction** - *Your DNA is fixed or unchangeable. It can not be altered by external factors such as substance use?*

### Fiction

**Response** - *Scientists used to think that DNA, the blueprint of your life, was fixed and unchangeable. Recent evidence on Epigenetics shows that substance use alters the way that your DNA expresses itself. Substance use can permanently change how your body is instructing itself to develop.*