

Shahram Heshmat Ph.D.

<https://www.psychologytoday.com/us/blog/science-choice/201501/why-cravings-occur>

Why Cravings Occur

Craving is produced by prolonged drug use, and it is one of the most frequent causes of relapse, even after long periods of abstinence. For addicts, the trouble begins once they decide to give up the [addiction](#). Craving produces a powerful urge to consume a drug. Accompanying every withdrawal symptom is an intense craving for the drug that was withdrawn.

What is craving? Craving is an overwhelming emotional experience that takes over your body and produces a unique motivator of behavior - wanting and seeking a drug. [Wise](#) (1988) describes craving as the [memory](#) of the positively rewarding effects of [drugs](#). The addicted brain has an excellent memory for the drugs it has learned to love. For every addict, the memory is formed in the first hit. This explains why craving may occur even years after the last drug dose.

How does one make decisions when one's perception of the world is distorted by craving? Cravings narrow attention such that current desire, thoughts, and urges would be given extra weight, whereas future goals or plans seem less consequential. Under intense craving, addicts make highly distorted choices toward easing the pain of withdrawal. For example, for an addict who is craving drugs, food and [sex](#) have little appeal. It is as if drugs have hijacked the brain's natural motivational systems, resulting in drug use becoming the priority for the [individual](#).

What triggers craving? Cravings may be caused by exposure to a setting in which drugs have been used. For example, presenting [smoking](#)-related cues (e.g., a place that they usually smoke) to smokers generally increases their craving for a cigarette. Addicts may drink because the sight of a bottle elicits a craving great enough to overcome their other motives.

The perceived opportunity to use drugs is important for craving to occur. For example, when the smoker is placed in a context in which the substance is not available (during a 3-hour flight), but the craving will intensify at the airport where there is an opportunity to smoke. Thus, craving is eliminated or at least blunted when smokers believe that they will be unable to smoke in the near future. When you know a reward is unavailable, you stop craving and shift your attention elsewhere.

Cravings vary in strength and in their potential to motivate behavior. According to [the elaborated intrusive theory of desire](#), the more attention a person allocates to a rewarding stimulus (a high-caloric food), the more likely he will be to experience craving. As the person mentally elaborates on her or his cravings, the more likely it becomes that they will generate supporting cognitions that allow [\(license\)](#) them to indulge (e.g., I have not had a drink for a while). In the extreme cases, craving may overwhelm working memory that crowds out all other opposing [self-control](#) goals.

Animal and human experiment reveals a "[priming](#) effect" of a drug to which a subject was previously addicted. This means that a small dose of the drug, administered to an abstinent ex-addict, can immediately initiate craving (As the Lays Potato ad claims: *You Can't Eat Just One!*). This also explains why eating freshly baked bread or cookies makes you crave and eat more. This is the very phenomenon that AA warns of, that abstinent alcoholics can't resume occasional drinking without losing control.

Finally, [stress](#) can play a pernicious role in triggering cravings. Daily [stress](#) can paralyze the prefrontal cortex, the brain's executive function, such as [concentration](#), planning, and judgment. As a result, addicts lose the ability to be reflective (regulate behavior), and impulses take a stronger hold over their behaviors. It is instructive to note that Alcoholics Anonymous tell their members that the essence of

relapse prevention is H.A.L.T. – never get too Hungry, Angry, Lonely, or Tired. Addicts are being reminded that not to put themselves in certain situations that they will be unable to resist the temptation to consume.

Drug related cues also trigger a [wanting system](#) that produces an irresistible craving to consume the drug. However, for addicts, this intense wanting or craving is not necessarily accompanied by enjoyment of their consumption. Addicts often express that they continue to use substances even when they no longer derive any pleasure. For example, some cigarette smokers express a deep hatred of smoking, but they continue to smoke regularly. Research shows that the chronic drug use leads to a compromised brain reward system, metaphorically termed as the “[dark side of addiction](#).” This compromised reward system becomes the main [motivation](#) behind compulsive drug use.

In sum, during the state of craving, people experience a disconnection between what they desire at the moment and what is best for their long-term self-interest. Craving distorts addicts’ ability to process information due to [cognitive dissonance](#). [Cognitive dissonance](#) suggests that addicts may modify their reasoning processes to support the satisfaction of impulses. For example, a smoker may reason that “since I smoke, it cannot be very dangerous”. While craving, the decision to smoke just one cigarette is viewed in a more favorable light. While smokers are not craving, the shift in balance between benefit and negative consequences will motivate smokers to quit. That is, now the negatives (including [guilt](#) and [shame](#)) dominate the decision, and the lapsed smoker wonders how such a mistake was made. Without recognizing the powerful shifts in thinking while craving, the smoker may conclude that the relapse reflects lack of willpower or [self-efficacy](#).

What is the best way to fend off craving? [Marlatt \(2005\)](#) refers to craving as ocean waves that build up to a peak state and then subside. However, addicts may not realize that their craving may be short-lived. That is, while craving, addicts may overestimate the duration and intensity of craving. So, if we think that unpleasant feelings will soon pass, we may be better prepared to resist. Thus, an important skill in coping with cravings is the use of metacognitive process (think about thinking) that teaches addicts how to mentally take a step back from their experience and engage in mindful processes that explore their experience. Addicts are instructed to regard cravings as transient sensations and to observe and accept them as-is, without engaging in drug use. This metacognitive strategy provides a mental space between the cue and the urge or cravings.

Another strategy is to change [the environment](#). The key role of environmental cues explain the fact that Vietnam veterans who were addicted to [heroin](#) and/or opium at the end of the war experienced lower relapse rates than other young male addicts during the same period. That is, 95 percent of the soldiers who were addicted in Vietnam did not relapse when they returned to the United States. They returned to an environment very different from the place where they became addicted.