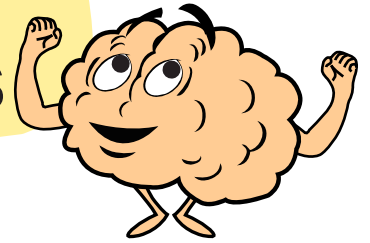


Take Home Messages



This series answers five questions about problem gambling and the brain that often come up in treatment. Below are the take home messages from each of these handouts. A take home message is a brief summary of the handout's content along with some ideas about changes you can make if you are concerned about your, or a loved one's, gambling. For more information on the five topics, please read the handouts in this series.

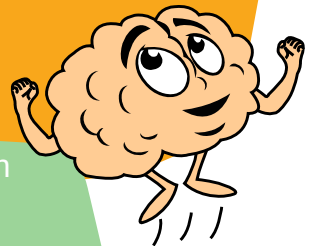


Stop and Go Networks: How is problem gambling like an addiction to alcohol or drugs, from my brain's point of view?

When anticipating rewards, the 'GO!' network can show less activity in people with addictions. This means that they might seek out unnatural rewards to activate the 'GO!' network and push the gas pedal to the extreme. This is why people with an addiction may not be as excited by natural rewards and they might also have trouble learning how new experiences could be enjoyable. In addition, people might not notice the need to stop an addictive behaviour and, even if they do, their 'brakes' may not work as well. Nonetheless, the 'GO!' and 'STOP!' networks can change how they respond to natural rewards. **The good news is that the brain is always changing. Keep rewarding yourself with natural, healthy activities in moderation. Repeat these activities because it will take time for your brain to find pleasure again. Avoid unnatural rewards that could wear out your pedal and brakes.**

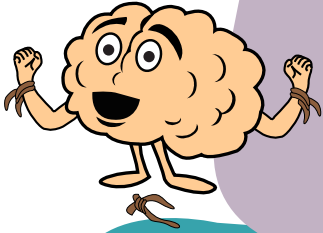
'Liking' vs. 'Wanting': Why do people keep gambling even when it's not fun anymore?

When someone has an addiction problem, there may be a shift in activity from the 'Reward Hub' to the 'Habit Hub'. As the person becomes more addicted, there is a shift from *liking* to *wanting* the reward. A person may want to gamble and not even like it anymore. The brain is also overly aware of the gambling cues which can trigger powerful urges to gamble. But gambling won't feel as fun as it used to because gambling is now a habit and habits don't give us the same pleasure as new experiences. Instead, gambling might have become a way to ease the discomfort of strong urges. **The good news is that our brain learns quickly, so over time we can form new associations to help develop healthy behaviours that we find pleasurable.**



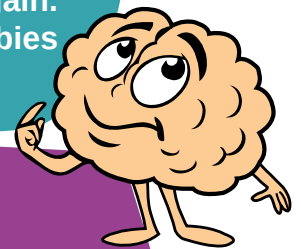
Urges: Why is it hard to say 'no' to a gambling urge?

Saying 'no' to an urge is not always easy. This is because of changes in the brain that occur once gambling has become a problem or a harmful habit. Many parts of the brain are involved, including: the Striatum (which makes you overly-sensitive to gambling cues), the dACC and the mPFC (involved in attention and 'braking'), and the Insula (signalling 'gut feelings'). This is why an urge can feel like a powerful, full-body experience and why willpower alone (without other strategies in place) may not be enough to stop you from acting on an urge. **The good news is that staying in treatment and abstaining from gambling can lead to fewer urges and less sensitivity to gambling cues. Talk to your counsellor about other strategies that might work best for you.**



Setpoints: When I'm not gambling, why does it feel like nothing else – even activities I used to enjoy – will ever be fun again?

The early stages of recovery from problem gambling are associated with anhedonia, which is the reduced ability to experience pleasure. This is a sensitive time period when an individual may have a very low mood, high gambling urges, and experience little pleasure from natural rewards. **The good news is that the brain can also change again during recovery. You may start to enjoy natural rewards again. These improvements take time so it is important to keep practicing hobbies you enjoyed and trying out new activities.**



Substitution: Why do people sometimes switch from gambling to another addiction?

Sometimes people switch to another addiction when trying to cut back on problem gambling. This is because activity in the Reward Hub and the Top-down Control Network is reduced, which could lead you to pursue unhealthy behaviours and prefer small, immediate rewards over larger, delayed ones. **Be careful with these 'quick fix' rewards that can hijack your attention and cause you to substitute one damaging behaviour with another. The biggest and best rewards often take time but are well worth the effort.**

