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Review

Managing Yourself

How to Break Up with Your Bad Habits

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Summary. Why is breaking a habit so difficult? Because habits are made up of three components: a trigger (for example, feeling stressed), a behavior (browsing the Internet), and a reward (feeling sated). Each time we reinforce the reward, we become more likely to repeat the behavior. This is why old habits are so hard to break — it takes more than self-control to change them. But after 20 years of studying the behavioral neuroscience of how habits form, and the best way to tackle them, researchers have found a surprisingly natural solution: using mindfulness training to make people more aware of the "reward" reinforcing their behavior. Doing so helps people tap into what is driving their habit in the first place. Once this happens, they are more easily able to change their association with the "reward" from a positive one to a more accurate (and often negative) one.

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Breaking habits is hard. We all know this, whether we've failed our latest diet (again), or felt the pull to refresh our Instagram feed instead of making progress on a work project that is past due. This is

largely because we are constantly barraged by stimuli engineered to make us crave and consume, stimuli that hijack the reward-based learning system in our brains designed initially for survival.

Put simply, reward-based learning involves a trigger (for example, the feeling of hunger), followed by a behavior (eating food), and a reward (feeling sated). We want to do more of the things that feel good and less of the things that feel bad — or stressful. These three components (trigger, behavior, and reward) show up every time we smoke a cigarette or eat a cupcake. This is especially true at work. Each time we try to soothe ourselves from a taxing assignment we reinforce the reward, to the point where unhealthy distractions can become habits.

So why can't we just control ourselves and decide to replace bad habits with good ones? The doctrine of self-control has been promulgated for decades, despite the fact that researchers at Yale and elsewhere have shown that the brain networks associated with self-control (e.g. the prefrontal cortex) are the first to go "offline" when faced with triggers such as stress. Still, in medical school, I was taught to pass self-control rhetoric on to my patients. "Need to lose weight? Quit eating junk food. Trying to quit smoking? Stop cold turkey or use a nicotine replacement."

When I started actually practicing medicine, however, I quickly learned that it doesn't work this way in real life.

Self-control theories have missed something critical: reward-based learning is based on rewards, not behaviors. How *rewarding* a behavior is drives how likely we are to repeat that behavior in the future, and this is why self-control as an approach to breaking habits often fails.

Over the past 20 years, I've researched ways to create a better method by bringing the scientific and clinical practices together. My time spent studying the behavioral neuroscience of how

habits form, and the best way to tackle them, helped me find a surprisingly natural way to do this: mindfulness.

By using mindfulness training to make people more aware of the "reward" reinforcing their behavior, I can help them tap into what is driving their habit in the first place. Once this happens, they are more easily able to change their association with the "reward" from a positive one to a more accurate (and often negative) one.

When someone joins our quit smoking program, for example, the first thing I have them do is pay attention while they're smoking. They often give me a quizzical look, because they're expecting me to tell them to do something other than smoke, like eat candy as a substitute when they have a craving. But because a "reward" drives future behavior, and not the behavior itself, I have my clients pay attention to what it tastes and feels like when they smoke. The goal is to make the patient aware of the "reward value," or the level of positive reaffirmation they are getting from the habit they want to change. The higher the value, the more likely they are to repeat the behavior.

I see the same thing happen over and over again — the reward value of the habit decreases because it isn't as gratifying as people remember. One client of mine, for instance, thought the act of smoking made her look cool as a teenager. Even though that motivation had dissipated in her adulthood, her brain still associated positive feelings with smoking. Hence, her reward value was high. When that same client started paying attention as she smoked, she realized that cigarettes taste bad, commenting, "Smells like stinky cheese and tastes like chemicals. Yuck." This helped her brain update the reward value of her habit. She was able to get accurate information about how smoking feels *right now*, which then helped her become disenchanted with the process.

After seeing how effective this practice was with my clients, I decided to test it even further. My lab and I developed three apps that deliver this same kind of mindfulness training to anyone

with a smartphone via short sequential lessons over a period of three to four weeks. The apps are designed to help people break bad habits such as smoking, overeating, and anxiety (which oddly enough, is driven by the same habit loops as the other two behaviors).

Tens of thousands of people from around the world have used these apps, and my lab has published a number of studies showing significant, clinically meaningful results: 5x the smoking quit rates of gold standard treatment, 40% reductions in craving-related eating, and a 63% reduction in anxiety. In a recent randomized controlled trial, we even found that our mindfulness app for smoking cessation taught users how to better control the part of their brain that gets over-activated by smoking cues and chocolate cravings.

While our research has been focused primarily on changing health-related habits, we believe it is highly relevant to the workplace. Our strategy can help workers up their productivity, morale, and overall performance by teaching them how to overcome the habits that may be holding them back from thriving. Here's how to get started:

1. Map out your habit loops

Similar to the advice I give to people in my outpatient clinic, the first step to breaking a habit (no matter what it is) is to figure out your triggers. If the habit is procrastination or stress eating at work, for example, pay attention to the circumstances surrounding you when you do those things. Do you have a big project you're trying to avoid? Do you have too much on your plate to manage?

Once you know your triggers, try to identify the behaviors you engage in when you are acting out. Do you check social media instead of doing work? Do you snack on sweets during

challenging assignments? You must be able to name the actions you turn to for comfort or peace of mind before you can evaluate their reward values.

2. See what you actually get out of those actions

The next step is to clearly link up action and outcome. Remember my patient who struggled to quit smoking? Just like I asked her to pay attention to the act of smoking, I am asking you to pay attention to how you feel when you partake in your habit.

If you stress eat, how does it feel to eat junk food when you aren't hungry? How does what you eat impact the state of your mind, and body, fifteen minutes after the fact? If you procrastinate, what do you get from surfing the internet for pictures of cute puppies? How rewarding is it in the moment, especially when you realize that it isn't helping you get your work done?

Remember your answers to these questions, or write them down to help solidify them in your mind.

This new awareness you have developed will help your brain accurately update the reward value of the habit you want to break. You will begin to see that "X" behavior leads to "Y" consequences, and often, those consequences are holding you back from reaching your full potential.

3. Replace the reward with curiosity

The final step to creating sustainable, positive habit change is to find a new reward that is more rewarding than the existing behavior. The brain is always looking for that bigger, better offer.

Imagine you are trying to break a bad habit like stress eating at work, and willpower hasn't quite worked out for you. What if, instead of indulging in your candy craving to counteract a negative emotion, you substituted it with curiosity about why you are having that craving in the first place, and what it feels like in your body and your mind?

The reward value of curiosity (opening yourself up) is tangibly different than stress eating (closing yourself down) in this instance. Ultimately, curiosity feels better in the moment and is much more enjoyable than the rumination that often occurs after giving into a bad habit.

To tap into their curiosity, I teach my patients a simple mantra: *Hmmmm*. As in, be curious about your feelings. What does this craving feel like when it first arrives, before I have decided to indulge it?

People often learn, pretty quickly, that cravings are made up of physical sensations and thoughts, and that these come and go. Being curious helps them acknowledge those sensations without acting on them. In other words, they can ride the wave of a craving out by naming and sitting with the thoughts and feelings that arise in their bodies and minds from moment to moment — until those moments pass.

If you're curious to see how well this might work for you, now is a good time to give it a try.

The next time you find yourself indulging in a bad habit, take a moment to pause and consider using mindfulness to help you overcome it. Your behaviors may not change immediately — but stick with it. If you can hack your mind using our methods, you will eventually be able to break free of unwanted habits and comfortably watch your cravings pass by.

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