

Your brain is made up of billions of nerve cells that communicate with each other by releasing chemicals called neurotransmitters. These neurotransmitters act like little “keys” that attach to special “locks” called receptors located on the surface of nerve cells. When a neurotransmitter locks into a receptor, it activates the nerve cell. One particular neurotransmitter is called acetylcholine (uh-seet-l-koh-leen), and it’s responsible for things like muscle movement, breathing, heart rate, learning and memory. Pretty important stuff. When nicotine gets into the brain, it acts just like acetylcholine. This is why you may have noticed that when you smoke, your heart rate goes up, and you feel “perked up.”

Recently, scientists have discovered that nicotine also acts like another neurotransmitter in the brain called dopamine. Dopamine works on receptors in the part of the brain that cause feelings of pleasure. When you smoke, it feels good, right? That’s dopamine at work triggered by nicotine. Interestingly enough, drugs like heroin and cocaine also trigger dopamine.

So...what happens when you quit smoking? Think of brain receptors as little critters that can get very irritable if they do not get their way. They like nicotine and have become accustomed to getting it.

So when the nicotine isn’t delivered, the little critters get upset, which produces withdrawal symptoms and cravings. So when you stop smoking, to keep you comfortable while the critters settle down, we suggest using nicotine replacement medications or other medications to help. They keep the receptors happy — or at least a little less “mad” — while you learn to live your life without cigarettes.

The good news is that withdrawal symptoms don’t last forever, and there are some really effective medications to help soften the blow. They help reduce the withdrawal symptoms and cravings caused by those receptors in your brain.

As you prepare for this quit attempt, remember three things.

1. The withdrawal symptoms don’t last forever. While some of us at **EX**[®] were preparing to quit, we feared we’d spend the rest of our lives grouchy and nervous. But most withdrawal symptoms begin to peak within the first week after quitting and are much less within two to four weeks.

2. Withdrawal symptoms may not be as bad as you remember from the last time you tried to quit. The important thing is to learn from your past experience and come up with a plan to cope with withdrawal symptoms and manage your high-risk situations that trigger cravings to smoke.

3. Withdrawal symptoms are like bullies. And bullies can be bullied back. Withdrawal symptoms can be reduced with medication. Once you quit, your brain will likely be throwing a small tantrum because it isn’t getting its nicotine. What medications do is help reduce withdrawal symptoms and cravings during the short term while you get ready to deal with the behavior changes you’re going to have to make to stay off cigarettes.

You may feel some or all of these symptoms:

- Depression
- Insomnia
- Irritability, frustration or anger
- Anxiety
- Difficulty concentrating
- Restlessness
- Decreased heart rate

- Increased appetite or weight gain
- Trouble sleeping
- Fatigue
- And of course, a craving for cigarettes

In addition to these, there are other symptoms many smokers report after quitting: everything from dry mouth to constipation. Since nicotine affects virtually every part of the body, it's not surprising that quitting smoking can affect people in lots of different ways. The jury's still out about whether the following effects are truly caused by nicotine withdrawal, but you may also experience:

- Dry mouth
- Headaches
- Racing heart
- Skin rash
- Sweating and tremors
- Constipation
- Cough
- Dizziness
- Mouth ulcers

It's not the same for everyone. Some people may get an increase in anxiety and depression, while others report an increase in positive mood. Some people feel fatigue and others feel more energetic. It all depends on your particular brain chemistry. The key is to pay attention to what you're feeling and come up with a plan to cope with your symptoms.

Also, remember that quitting smoking is a big life change, and some of the feelings you may experience could be from the stress of a major life event. That's why it's important to learn new ways to deal with stress. This will help you as you quit smoking and with life in general. Visit our [Staying an EX](#) section for new ways to deal with stress and other tips.