



# Why is it so hard to quit smoking?

Mark Twain said, "Quitting smoking is easy. I've done it a thousand times." Maybe you've tried to quit, too. Why is quitting and staying quit hard for so many people? The answer is nicotine.

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## Nicotine

Nicotine is a drug found naturally in tobacco. It is as addictive as heroin or cocaine. Over time, a person becomes physically dependent on and emotionally addicted to nicotine. The physical dependence causes unpleasant withdrawal symptoms when you try to quit. The emotional and mental dependence (addiction) make it hard to stay away from nicotine after you quit. Studies have shown that smokers must deal with both the physical and mental dependence to quit and stay quit.

### How nicotine gets in, where it goes, and how long it stays

When you inhale smoke, nicotine is carried deep into your lungs. There it is quickly absorbed into the bloodstream and carried throughout your body. Nicotine affects many parts of the body, including your heart and blood vessels, your hormones, the way your body uses food (your metabolism), and your brain. In fact, nicotine inhaled in cigarette smoke reaches the brain faster than drugs that enter the body through a vein (intravenously or IV). Nicotine can be found in breast milk and even in mucus from the cervix of a female smoker. During pregnancy, nicotine freely crosses the placenta and has been found in amniotic fluid and the umbilical cord blood of newborn infants.

Different factors affect how long it takes the body to remove nicotine and its by-products. In most cases, regular smokers will still have nicotine or its by-products, such as cotinine, in their bodies for about 3 to 4 days after stopping.

### How nicotine hooks smokers

Nicotine causes pleasant feelings and distracts the smoker from unpleasant feelings. This makes the smoker want to smoke again. Nicotine also acts as a kind of depressant by interfering with the flow of information between nerve cells. Smokers tend to increase the number of cigarettes they smoke as the nervous system adapts to nicotine. This, in turn, increases the amount of nicotine in the smoker's blood.

After a while, the smoker develops a tolerance to the drug. Tolerance means that it takes more nicotine to get the same effect that the smoker used to get from smaller amounts. This leads to an increase in smoking over time. The smoker reaches a certain nicotine level and then keeps smoking to keep the level of nicotine within a comfortable range.

When a person finishes a cigarette, the nicotine level in the body starts to drop, going lower and lower. The pleasant feelings wear off, and the smoker notices wanting a smoke. If smoking is postponed, the smoker may start to feel irritated and edgy. Usually it doesn't reach the point of real withdrawal symptoms, but the smoker gets more uncomfortable over time. At some point, the person smokes a cigarette, the pleasant feelings return, and the cycle continues.

## **Nicotine withdrawal symptoms can lead quitters back to smoking**

When smokers try to cut back or quit, the lack of nicotine leads to withdrawal symptoms. Withdrawal is both physical and mental. Physically, the body reacts to the absence of nicotine. Mentally, the smoker is faced with giving up a habit, which calls for a major change in behavior. Both the physical and mental factors must be addressed for the quitting process to work.

Those who have smoked regularly for a few weeks or longer, and suddenly stop using tobacco or greatly reduce the amount smoked, will have withdrawal symptoms. Symptoms usually start within a few hours of the last cigarette and peak about 2 to 3 days later when most of the nicotine and its by-products are out of the body. Withdrawal symptoms can last for a few days to up to several weeks. They will get better every day that you stay smoke-free.

Withdrawal symptoms can include any of the following:

- Dizziness (which may only last 1 to 2 days after quitting)
- Depression
- Feelings of frustration, impatience, and anger
- Anxiety
- Irritability
- Sleep disturbances, including having trouble falling asleep and staying asleep, and having bad dreams or even nightmares
- Trouble concentrating
- Restlessness or boredom
- Headaches
- Tiredness
- Increased appetite
- Weight gain
- Constipation and gas
- Cough, dry mouth, sore throat, and nasal drip
- Chest tightness
- Slower heart rate

These symptoms can lead the smoker to start smoking cigarettes again to boost blood levels of nicotine back to a level where there are no symptoms. (For information on coping with withdrawal, see the section, "[How to quit](#).")

Smoking also makes your body get rid of some drugs faster than usual. When you quit smoking, it may change the levels of these drugs, which can cause problems. Ask your doctor if any medicines you take need to be checked or changed after you quit.

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