Nicotine Dependence

Nicotine Dependence is an addiction to nicotine, the chemical in tobacco. Research suggests that nicotine is as addictive as heroin, cocaine, or alcohol.

How does nicotine change your brain?

Nicotine turns on areas in your brain called receptors. The receptors release dopamine, which causes a “feel good” rush. The more you smoke, the more receptors you have.

Addicted smokers have billions more receptors than nonsmokers do. But not all smokers have the same level of receptors. That is why some regular smokers can stop smoking easily and others really struggle.

“For me, it had a lot to do with the addiction. It wasn’t because I was addicted to the cigarettes only; it was mental as well. It was a mental release and mental satisfaction for me.”

—Past Participant

2 types of dependence:

Physical dependence:
The body has been altered in ways that create cravings for the drug.

Psychological dependence:
A person’s resources for coping with daily life wither as a drug becomes “needed” to relax, socialize, or sleep.

Signs that you may be addicted:

• Smoking when you first wake up.
• Going to extreme measures to get a cigarette.
• Smoking even when you’re sick.
• Smoking outside despite severe cold weather or rain.
• Experiencing withdrawal symptoms when you stop.

What happens when you stop smoking?
When the receptors in your brain do not get nicotine, the “feel-good” rush is cut off.

Low levels of nicotine lead to “nicotine withdrawal” — headaches, bad mood, hunger, or low energy.

Receptors also expect nicotine in certain situations. For example, if you usually smoked when you felt stressed, your brain was trained to pair stress with nicotine and the “feel-good” rush. These “trigger” situations can cause serious cravings for a cigarette, even if you’ve stopped smoking for several months.

The Good News?

1. When you quit, the number of nicotine receptors in your brain will eventually return to normal.

2. As that happens, the cravings will happen less and less. They also won’t last as long or be as intense. In time, the cravings will fade away completely.