



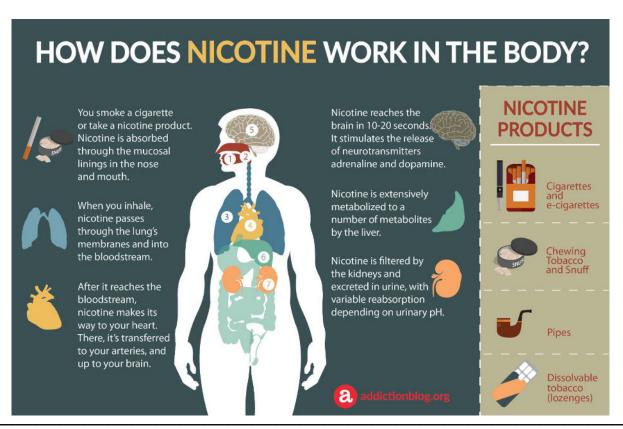
Tobacco Free Living

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Brain Health

When you smoke, your brain changes in response to the high levels of nicotine. Those changes in the brain are what causes addiction and makes it harder to quit. Once nicotine is in your body it activates your brain receptors. When these receptors are activated, it releases a "feel-good" chemical called dopamine. This pleasure response is a big factor in nicotine addiction. As you continue to smoke the number of nicotine brain receptors increases. Typically, addicted smokers have billions more of these receptors than non-smokers do.1

Ouitting is already difficult, and the brain can make it even more difficult! When a smoker attempts to quit, the brain receptors no longer receive the nicotine, so the dopamine is not being activated and the pleasure response is cut off. The brain receptors can be conditioned to expect nicotine in certain situations after you have stopped smoking.¹ For example, if you typically smoke after a stressful situation or after a drink, your brain is waiting for that dopamine rush from the nicotine. These "triggers" can cause the intense cravings for a smoke even if a person has stopped smoking for several months. However, once you stop smoking entirely, the number of nicotine receptors in the brain will eventually return to normal.¹



1 Bishop, S. (2012). How Do Smokers' Brain Change in Response to High Nicotine Levels? Mayo Clinic. Retrieved from How Do Smoker's Brains Change in Response to High Nicotine Levels? - Mayo Clinic News Network



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Check out the calendar on the other side to see what's going on this week.



Test your knowledge!

Connect the boxes on the left with the boxes on the right with the correct match.

Addiction

The chemical ____ is released when nicotine activates the receptors.

Receptors

Changes in the brain are what causes_ makes it harder to quit.

Dopamine

Nicotine is filtered by the and excreted in urine.

Triggers

Nicotine reaches the _ 10-20 seconds.

Brain

Kidneys

These _ __ can cause intense cravings for a smoke even if a person has stopped smoking.

Once nicotine is in your body, it activates something called ____ in your brain.





Answer Key.

Answer Key

Addiction - Changes in the brain are what causes ___ and makes it harder to quit.

Addiction - Changes in the brain are what causes ___ and makes it harde __ in your brain.

Dopamine - The chemical __ is released when nicotine activates the receptors.

Draigers - These ___ can cause intense cravings for a smoke even if a person has stopped smoking.

Brain - Vicotine reaches the ___ in 10-20 seconds.

Kidneys - Micotine is filtered by the ___ and excreted in urine.

Got questions on other health issues related to sleep health, physical activity, tobacco, or nutrition? Send your questions to usaf.jbsa.afmsa.mbx.afmrahpo@mail.mil. For more online health tips visit the Air Force Health Promotion webpage https://www.airforcemedicine.af.mil/Resources/Health-Promotion/



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