



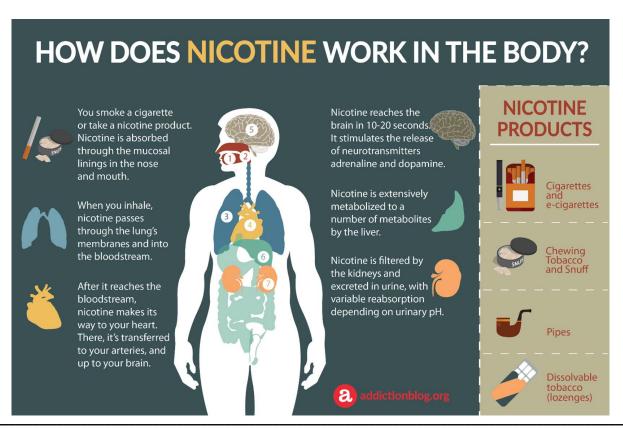
**Tobacco Free Living** 

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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.<sup>1</sup> 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.<sup>1</sup>



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 Receptors Dopamine **Triggers** Brain

Kidneys

The chemical \_\_\_\_ is released when nicotine activates the receptors.

Changes in the brain are what causes \_ makes it harder to quit.

Nicotine is filtered by the and excreted in urine.

Nicotine reaches the 10-20 seconds.

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.

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 harder in your brain.

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

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

Triggers - These \_\_\_ can cause intense cravings for a smoke even if a person has stopped smoking. Brain - Nicotine is affected by the \_\_\_ and excreted in urine.

Kidneys - Nicotine 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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## Community **Events**

HERE'S WHAT'S GOING ON WHERE YOU LIVE

Your Local Health **Promotion Office** 







Contact: Phone:

Email:

Monday	Tuesday	Wednesday	Thursday	Friday