Nicotine and surgery [1]

Dear Alice,

I'm going to have back surgery in a few months. I'm not suppose to smoke for two weeks before surgery. The doctor is going to do a nicotine test to see if I've been smoking. How long does it takes for nicotine to be completely out my system?

Sincerely,
Could really use a cigarette!

Answer

Dear Could really use a cigarette!,

While nicotine will usually clear your system within a day, the byproducts of smoking, such as carbon monoxide and other chemicals in cigarettes, take longer (usually about two weeks) to leave the body. Even longer still, it can take about two months for your lung tissue to begin to recover after quitting smoking. Research has demonstrated that smoking can hinder healing after surgery and cause other complications. As such, it makes sense that your surgeon would ask you to stop smoking at least about fourteen days before having a surgical procedure. However, research also shows that being proactive about quitting even sooner can further reduce the risk to your health.

By smoking, carbon monoxide and nicotine levels interfere with your red blood cells' ability to efficiently deliver oxygen to your tissues. While you may think this only impacts your ability to run long distances or climb several flights of stairs, in fact, this oxygen reduction (called perfusion, in medical speak) has major implications for your body's ability to successfully heal itself. Surgical procedures—especially ones that use general anesthetics—can actually be pretty stressful on the body. On top of this, any procedure has some amount of wound healing afterward and the potential risk for post-operative infection. Because smoking weakens your cardiovascular system due to the nicotine (which raises your blood pressure and pulse rate) and the carbon monoxide (that impairs your red blood cells' ability to carry oxygen), post-surgery wound healing can often take longer if you continue to smoke prior to the procedure. Besides compromised wound healing following a surgical procedure, smoking confers an increased risk for heart and lung complications, post-surgery infections, extended hospital stays, getting admitted to the intensive care unit, and even death.

To reduce the likelihood of complications, planning to quit smoking even further in advance (more than two weeks) of your surgery may be something to consider. One study of tobacco
cessation in pre-operative patients found that when cessation efforts (i.e. nicotine replacement therapy and cessation counseling) began four to eight weeks prior to her/his procedure, the risk for post-operative complications was lowered from 28 percent to 9 percent. Along those same lines, a meta-analysis of pre-operative tobacco cessation studies noted that for every week that you quit smoking in advance of your surgery, the risk of postoperative complications can decrease by up to 19 percent.

While quitting smoking (short- or long-term) has health benefits, it’s not necessarily easy. The good news is that there are several low- or no cost tools available to you if you’d like to quit. Consider checking out SmokeFree.gov or call 1-800-QUITNOW to get help kicking some cigarette butt. There may also be cessation programs provided by your local health department that could be worth checking out as well.

Wishing you great outcomes,

Alice!

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