



## **The Impact of Tobacco on Spinal Surgery**

### **I know tobacco is bad for me, but what does that have to do with my back?**

Most patients are aware of the effect of smoking on their lungs, increasing their rates of lung diseases such as chronic bronchitis, emphysema, and lung cancer. Likewise most chewing tobacco and snuff users are aware of the risks of mouth and throat cancers. Despite these well-known effects of tobacco, there are now known to be distinct risks to spine patients.

Tobacco contains chemicals that are toxic to the body. The most studied and widely known is the chemical, nicotine. Nicotine causes the small blood vessels that deliver nutrients and oxygen to the spine to constrict and become smaller, which results in slowing of the blood flow to the spine including the cushion discs between the vertebrae.

### **How can this affect my outcome after a spine surgery?**

Studies have repeatedly shown that tobacco users take longer to heal their spine fusions and in some cases they may not heal the fusion at all. This carries a significant risk to the patient, and may result in the need for additional surgeries. This is why spine surgeons advise patients to discontinue tobacco use as soon as possible before their spine surgery.

Also, some surgeons recommend only using bone graft from the patient's own body instead of cadaver bone in patients with a recent history of smoking in order to give them the highest possible chance for a successful fusion.

Aside from the direct effect of tobacco on the spine, it also has been shown to be associated with higher rates of lung and heart complications after anesthesia, longer hospital stays, more admissions to the intensive care unit and prolonged recovery periods after any operation.

### **Does tobacco affect my spine even if I'm not having surgery?**

In our experience, tobacco users report higher rates of back pain and neck pain than the general population. Also, they tend to have back problems earlier in life than others. Nicotine may result in premature breakdown or degeneration of the spinal discs, which is a leading cause of back pain.

Smoking has been repeatedly shown to significantly increase the risk of lung and heart complications as well as wound infections after surgery. These risks are all decreased in smokers who are able to stop smoking well before (at least eight weeks) their surgery and continue to abstain afterwards.

### **What is your take on quitting methods?**

Nicotine is an addictive substance and discontinuing its use can be very difficult for some patients. Though some methods are better than others, any successful method is better than continuing the use of tobacco products.

Unfortunately, some cessation products such as chewing gums and patches actually continue to deliver nicotine to your body and can have the same effect on your spine as smoking or chewing tobacco. These products should only be used if other methods have failed. Talk to your surgeon or family physician for information and resources to assist you with tobacco cessation.



**piedmont orthopaedic associates**

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The Internet has many helpful resources that you may access from the convenience of your home or library. Links from the U.S. Department of Health and Human Resources are listed below:

- <http://www.surgeongeneral.gov/tobacco>
- <http://www.smokefree.gov>

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