Smoking and Osteoporosis

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The facts about smoking and osteoporosis

Smoking cigarettes impacts your bones in more ways than you might imagine. Aside from damaging tissue on a cellular level, cigarette smoke releases a variety of toxins, triggers the overproduction of certain hormones, and even interferes directly with the osteoblasts to stifle important bone building and healing processes. The result is a weaker skeleton, more fractures, and a greater risk of medical complications following injury.

How Smoking Affects Bones at Every Age

Adolescence to age 30: These are the years of bone formation, when bone mass accumulates and the frame is solidified. Smoking impedes important hormonal processes that take place in young adults, resulting in a smaller skeleton and less bone density. In fact, osteoporosis has been called “a pediatric disease with geriatric consequences”, because the state of bone health at this point will help determine bone health later in life.

Age 40 to 60: For women, perimenopause and menopause bring a decrease in estrogen that will affect bone density. Coupled with smoking, limited estrogen production can rapidly weaken bones and lead to future complications. Men are not immune to the hazards of estrogen loss, either; hormonal imbalance coupled with smoking is detrimental, regardless of gender.

Age 60 and beyond: Bones continue to weaken as you age, and smoking continues to accelerate the process. As falls and other injuries begin to cause more damage, recovery becomes an important matter. Smoking interrupts bone healing, which means elderly smokers are less likely to recover from injury and much more likely to experience complications during the healing process.

In cases of heavy, long-term smoking, the damage could be irreversible, even if you eventually give up the habit. However, in the vast majority of cases, quitting smoking can have a noticeable impact on your bone health and osteoporosis risk.

Kick the Habit to Halt or Reverse Bone Loss

It’s been said before, but the sentiment still rings true: it’s never too late to quit smoking. Once you give up cigarettes for good, your body’s natural processes begin to normalize, and problems linked to bone health will begin to resolve:

- **Better blood flow.** Healthy blood flow brings oxygen to every part of the body, helping all cells to function better. Smoking damages blood vessels, restricting blood flow and interrupting healing processes. Once you give up smoking, your circulation begins to return to normal, which means better healing power. Good circulation also means healthy nerves in the feet, which will protect against falls and fractures.

- **Stabilized hormones.** When you smoke, your body produces more cortisol (a stress hormone that leads

to bone breakdown), and restricts the production of calcitonin (a hormone that helps build bones). In turn, giving up smoking will even out these hormones, cancelling the double dose of bone damage.
- **Improved immune function**. Cigarette smoke unleashes a huge amount of free radicals, attacking your body on a cellular level, and chipping away at your natural defenses. Once you are smoke-free, your immune system begins to function better, which will ward off infection and organ problems that can interfere with bone health.

Bone problems won't mend overnight, but patience and commitment to a healthier lifestyle – including other bone-building habits – can bring measurable improvement within a year. Talk to your doctor about a bone mineral density (BMD) test, and if osteoporosis is a threat, find a medication that is appropriate for you. Quitting smoking and battling osteoporosis are both considerable challenges, but there are many resources to help ease the burden, inspire confidence and tap into your innate abilities to take control of your health.