



## Some Drugs Can Weaken Bones

*Several medications for other health conditions can increase the chance of osteoporosis.*

Millions of Americans are at risk for osteoporosis, and women are four times more likely to develop the condition than men. Some well-known risk factors for osteoporosis include not getting enough calcium and vitamin D, early menopause, a family history of the condition, and advanced age. However, what you may not know is that the medications you take, either prescription or over-the-counter, can also put you at risk.

“Steroids such as prednisone, used for asthma or rheumatologic conditions, anticonvulsants such as phenytoin (Dilantin), and aromatase

inhibitors used by women who have been treated for breast cancer all can cause bone loss,” says Melissa Dee Katz, MD, an endocrinologist at Weill Cornell Medical College. “Women taking these medications should take calcium and vitamin D supplements and have their blood levels monitored to make sure they are not deficient.”

### **Osteoporosis: The basics**

Bones are made up of three major components including collagen, a



protein that gives bones a flexible framework, calcium-phosphate mineral complexes that make bones hard and strong, and living bone cells that remove and replace

weakened sections of bone. Your body is constantly losing old bone and forming new bone but, as you grow older, your body becomes unable to make new bone at the same rate that old bone is lost. As a result, osteoporosis can occur. According to Dr. Katz, bones weakened by osteoporosis are more likely to break or fracture,

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MEDICATIONS LINKED TO BONE LOSS		
CLASS OF DRUGS	EXAMPLES	CONDITION(S) THEY TREAT
ALUMINUM-CONTAINING ANTACIDS	GAVICON, MAALOX, MYLANTA	HEARTBURN, INDIGESTION
ANTICONVULSANTS	PHENYTOIN (DILANTIN), PHENOBARBITAL	SEIZURE DISORDER, EPILEPSY
AROMATASE INHIBITORS	ANASTROZOLE (ARIMIDEX), EXEMESTANE (AROMASIN), LETROZOLE (FEMARA)	BREAST CANCER
IMMUNOSUPPRESSANTS	CYCLOSPORINE A, TACROLIMUS (FK506)	ORGAN TRANSPLANT
GLUCOCORTICIDS	CORTISONE, PREDNISONE	RHEUMATOID ARTHRITIS, ASTHMA
PROTON PUMP INHIBITORS (PPIs)	ESOMEPRAZOLE (NEXIUM), OMEPRAZOLE (PRILOSEC), LANSOPRAZOLE (PREVACID)	GASTROESOPHAGEAL REFLUX DISEASE (GERD)
SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)	ESCITALOPRAM OXALATE (LEXAPRO), FLUOXETINE (PROZAC), SERTRALINE (ZOLOFT)	DEPRESSION, GENERALIZED ANXIETY DISORDER, OBSESSIVE COMPULSIVE DISORDER
THIAZOLIDINEDIONES	PIOGLITAZONE (ACTOS), ROSIGLITAZONE (AVANDIA)	TYPE 2 DIABETES

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particularly the hip, spine, and wrist, which can increase your risk of future disability. The National Osteoporosis Foundation (NOF) reports that almost one-quarter of all patients age 50 and older who suffer from a hip fracture will die within one year of their injury.

**How medications affect bone health**

“Because a fracture caused by osteoporosis can be so debilitating, it’s crucial for all older adults to keep their bones healthy and strong,” says Dr. Katz. “Different types of medications cause bone loss in different ways.” For example, corticosteroids inhibit calcium absorption, impair bone formation, and accelerate bone breakdown. Anticonvulsants can cause vitamin D deficiency.

Other drugs linked to bone loss include synthetic thyroid hormones, aluminum-containing antacids, some diuretics, and antibiotics. Medications that don’t directly affect bone health but can increase

your risk of falling include tranquilizers, antidepressants, blood pressure medications, and sedatives.

If you’re taking any of these drugs, talk to your doctor about your risk of osteoporosis and what you can do to protect your bones. If you are postmenopausal, you also may want to consider taking bisphosphonates like alendronate (Fosamax), risedronate (Actonel), or ibandronate (Boniva) if you have osteopenia (low bone mineral density) or osteoporosis.

Most patients with osteoporosis are treated with bisphosphonates, but you can take other steps to improve bone health. Be sure to get your daily recommended amounts of calcium and vitamin D (according to the NOF, adults 50 and over need 1,200 mg of calcium and 800-1,000 IUs of vitamin D daily). Engage in regular weight-bearing exercises, avoid smoking and excessive alcohol consumption, and have a bone mineral density scan. 🍷

**WHAT YOU SHOULD KNOW**

*Conditions that can increase your risk of osteoporosis include:*

- Blood and bone marrow disorders
- Eating disorders/malnutrition
- Emphysema
- Hyperthyroidism  
Inflammatory bowel disease
- Kidney disease
- Lupus
- Multiple sclerosis
- Parkinson’s disease
- Rheumatoid arthritis
- Stroke