

Medications Associated with Bone Loss

- Anticonvulsants (only some such as Dilantin and Phenobarbital)
- Aromatase Inhibitors including Arimidex, Aromasin, Femara, Letrozole, Anastrosole and Exemestane
- Chemotherapy agents including Methotrexate
- Cholestyramine for controlling blood cholesterol levels
- Glucocorticosteroids including Cortisone and Prednisone
- Gonadotropin releasing hormones used in the treatment of endometriosis, including Lupron and Zoladex
- Heparin for blood clots
- Immunosuppressive drugs used to treat autoimmune disorders and to prevent organ transplant rejection. Some of the drugs include calcineurin inhibitors such as Cyclosporine A, Tacrolimus (FK 506).
- Lithium
- Medroxyprogesterone acetate or Depo-Provera for birth control
- Proton pump inhibitors including Nexium, Prevacid and Prilosec
- Selective Serotonin Re-uptake Inhibitors (SSRIs) such as Lexapro, Prozac and Zoloft
- Tamoxifen when used for premenopausal women
- Thiazolidinediones including Actos, Avandia, Pioglitazone and Rosiglitazone
- Thyroid hormones in excess

This list may not include all medications that cause bone loss.

1. Panday, K. et al. Medication-induced osteoporosis: screening and treatment strategies. *Ther Adv Musculoskelet Dis.* 2014 Oct; 6(5): 185–202.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4206646/>

Medical Conditions/Diseases Associated with Low Bone Mineral Density

- Anorexia nervosa
- Amyloidosis
- Bulimia
- Celiac
- Cystic fibrosis
- Cancer
- Cerebral palsy
- Crohn's disease
- Chronic Obstructive Pulmonary Disease (COPD)
- Chronic Kidney Disease
- Cushing's
- Cerebral vascular accident or stroke
- Congestive heart failure
- Depression
- Diabetes Mellitus
- Down's syndrome
- Ehlers-Danlos Syndrome
- Female Athlete Triad
- Gastrectomy
- Gastrointestinal bypass procedure
- Haemophilia
- HIV-infection
- Hyperparathyroidism
- Hypoparathyroidism
- Intestinal disorders/malabsorption
- Lactose intolerance
- Liver disease
- Lupus
- Lymphoma and leukaemia

- Metabolic acidosis (chronic)
- Metal toxicity
- Multiple myeloma
- Multiple sclerosis
- Muscular dystrophy
- Osteogenesis imperfecta
- Osteomalacia
- Paraplegia
- Parenteral nutrition
- Parkinson's
- Post-polio
- Post-organ transplant bone disease
- Prolonged bedrest/ immobility
- Renal disease (end stage)
- Rheumatoid Arthritis
- Sarcoidosis
- Scleroderma
- Scoliosis (idiopathic)
- Sickle cell anemia
- Thalassemia
- Thyrotoxicosis
- Vitamin D insufficiency

1. Lewiecki, M.E., Osteoporosis: Clinical Evaluation. Endotext. Last Update: April 23, 2018
2. Hsu C-Y, et al. Osteoporosis in Patients with Chronic Kidney Diseases: A Systemic Review. Int J Mol Sci. 2020 Sep 18;21(18):E6846