

# OSTEOPOROSIS TREATMENTS

**Risk factors:** age, gender, Asian or Caucasian descent, petite and thin women, prior osteoporotic fracture, femoral neck BMD, low BMI, rheumatoid arthritis, family or personal history of hip fractures, smoking, heavy alcohol intake, chronic glucocorticoid use, type 1 diabetes, hyperthyroidism, hypogonadism, menopause at <45yrs of age, malnutrition or malabsorption, chronic liver disease.

## PREVENTION:

**Recommended Calcium intake:** 1–3yrs: 700mg; 4–8yrs: 1000mg; 9–18yrs: 1300mg; 19–50yrs: 1000mg; males 51–70yrs: 1000mg; females 51–70yrs, 71+ yrs: 1200mg; pregnancy or nursing mothers: 1000–1300mg

**Recommended Vitamin D intake:** >1yr: 600 IU/day; 50+ yrs: 800–1,000 IU/day. Usually met through sunlight exposure. HRT if bone loss due to estrogen deficiency at menopause, initiate estrogen therapy at lowest effective dose. Individualize and reevaluate periodically. Intact uteri: prescribe progestin with estrogen. Hysterectomy: may prescribe estrogen continuously.

**Others:** weight-bearing exercises, fall prevention, smoking cessation, alcohol restriction, weight and dietary management, preventative drug therapy

Generic	Brand	Strength	Form	Dose
<b>BISPHOSPHONATES</b>				
alendronate	—	5mg, 10mg, 35mg, 40mg	tabs	<i>Treatment:</i> 10mg once daily or 70mg once weekly. <i>Prevention:</i> 5mg once daily or 35mg once weekly
	Binosto	70mg/75mL	oral soln	
		70mg	effervescent tabs for oral soln	<i>Treatment:</i> 70mg once weekly
alendronate/cholecalciferol (Vit. D <sub>3</sub> )	Fosamax Plus D	70mg /2800 IU, 70mg/5600 IU	tab	<i>Treatment:</i> 70mg/2800 IU or 70mg/5600 IU once weekly
	Fosamax	70mg	tab	<i>Treatment:</i> 70mg once weekly. <i>Prevention:</i> 35mg once weekly
ibandronate	Boniva	150mg	tab	<i>Prevention and Treatment:</i> 150mg once monthly
risedronate	Actonel	5mg, 30mg, 35mg, 75mg, 150mg	tab	<i>Postmenopausal:</i> 5mg once daily or 35mg once weekly or one 75mg tab taken on 2 consecutive days per month or one 150mg tab once monthly. <i>Glucocorticoid-induced:</i> 5mg once daily. <i>Osteoporosis in men:</i> 35mg once weekly.
		35mg	del-rel tabs	<i>Treatment:</i> 35mg once weekly
	Reclast	5mg/100mL	inj	<i>Treatment:</i> 5mg IV infusion once a year <i>Prevention:</i> 5mg IV infusion once every 2yrs
<b>CALCITONIN</b>				
calcitonin-salmon	—	200 IU/spray	nasal spray	<i>Treatment:</i> 1 spray in alternating nostril daily
	Miacalcin	200 IU/mL	inj	<i>Treatment:</i> 100 IU SC or IM daily
<b>HORMONE REPLACEMENT THERAPY</b>				
conjugated estrogens	Premarin	0.3mg, 0.45mg, 0.625mg, 0.9mg, 1.25mg	tab	0.3mg daily; adjust
conjugated estrogens/bazedoxifene	Duavee	0.45mg/20mg	tab	1 tab daily
conjugated estrogens, then conjugated estrogens/medroxyprogesterone	Premphase	0.625mg, then 0.625mg/5mg	tab	1 tab once daily in correct order (ie, 14 tabs of 0.625mg estrogen, then 14 tabs of 0.625mg estrogen/5mg of medroxyprogesterone; repeat)
conjugated estrogens/medroxyprogesterone	Prempro	0.3mg/1.5mg, 0.45mg/1.5mg, 0.625mg/2.5mg, 0.625mg/5mg	tab	1 tab once daily
estradiol	Alora	0.025mg/day, 0.05mg/day, 0.075mg/day, 0.1mg/day	transdermal sys	0.025mg/day patch applied twice weekly; adjust
		0.025mg/day, 0.0375mg/day, 0.05mg/day, 0.06mg/day, 0.075mg/day, 0.1mg/day		0.025mg/day patch applied once weekly; adjust
	Estrace	0.5mg, 1mg, 2mg	tab	0.5mg daily
	Menostar	14mcg/day	transdermal sys	1 patch once weekly
	Minivelle	0.025mg/day, 0.0375mg/day, 0.05mg/day, 0.075mg/day, 0.1mg/day	transdermal sys	0.025mg/day patch twice weekly (every 3–4 days); adjust
	Vivelle-Dot	0.025mg/day, 0.0375mg/day, 0.05mg/day, 0.075mg/day, 0.1mg/day	transdermal sys	0.025mg/day patch applied twice weekly
	Climara Pro	0.045mg/0.015mg/day	transdermal sys	1 patch once weekly
estradiol/norethindrone acetate	Activella	0.5mg/0.1mg, 1mg/0.5mg	tab	1 tab once daily
estropipate	—	0.75mg, 1.5mg, 3mg	tab	0.75mg once daily
norethindrone acetate/ethinyl estradiol	Femhrt	0.5mg/2.5mcg	tab	1 tab once daily
<b>INTERFERON</b>				
interferon gamma-1b	Actimmune	100mcg/0.5mL	SC inj	<i>BSA</i> ≤0.5m <sup>2</sup> : 1.5mcg/kg/dose 3 times weekly. <i>BSA</i> >0.5m <sup>2</sup> : 50mcg/m <sup>2</sup> (1 million IU/m <sup>2</sup> ) 3 times weekly
<b>OSTEOCLAST INHIBITOR (RANKL INHIBITOR)</b>				
denosumab	Prolia	60mg/mL	SC inj	60mg once every 6mos
<b>PARATHYROID HORMONE</b>				
teriparatide	Forteo	250mcg/mL	SC inj	20mcg once daily; may treat for up to 2yrs
<b>PARATHYROID HORMONE RELATED PEPTIDE ANALOG</b>				
abaloparatide	Tymlos	2000mcg/mL	SC inj	80mcg once daily
<b>SCLEROSTIN INHIBITOR</b>				
romosozumab-aqqg	Evenity	105mg/1.17mL	SC inj	210mg once monthly (given as 2 consecutive inj) for 12mos
<b>SELECTIVE ESTROGEN RECEPTOR MODULATORS (SERMs)</b>				
raloxifene	Evista	60mg	tab	<i>Prevention and Treatment:</i> 60mg once daily
<b>NOTES</b>				