



Osteoporosis treatment options, in addition to antiresorptive and anabolic agents

There are additional pharmacological treatments for osteoporosis in **postmenopausal women**. Menopausal hormone therapy may be used as first-line in selected younger women with vasomotor symptoms. Treatment decisions should be individualised, taking into account fracture risk, contraindications and potential risks (e.g. venous thromboembolism, coronary artery disease, stroke), with periodic reassessment. Specialist referral may be considered if there is uncertainty in initiating these treatments.

Table S1. Additional pharmacological options for osteoporosis in postmenopausal women

Drug	Evidence of effectiveness in reducing risk of: ¹⁻⁴	Contraindications ^m	Clinical considerations/precautions ^m
Raloxifene (SERM, oral)	<ul style="list-style-type: none"> ✓ Vertebral fracture ✗ Non-vertebral fracture ✗ Hip fracture 	<ul style="list-style-type: none"> • Severe renal impairment • Active or previous VTE (including DVT, PE, and retinal vein thrombosis) • Hepatic impairment including cholestasis • Unexplained uterine bleeding 	<ul style="list-style-type: none"> • Use in younger postmenopausal women at low risk of strokeⁿ • Particularly beneficial in those with elevated breast cancer risk • Worsens hot flushes
Tibolone (synthetic steroid hormone, oral)	<ul style="list-style-type: none"> ✓ Vertebral fracture ✓ Non-vertebral fracture ✓ Hip fracture 	<ul style="list-style-type: none"> • Active or history of VTE (including DVT, PE, and retinal vein thrombosis) • History of angina, AMI, stroke or TIA • Active or history of breast cancer • Active endometrial cancer or hyperplasia • History of thrombophilic disorders (e.g. protein C deficiency, protein S deficiency) • Hepatic impairment 	<ul style="list-style-type: none"> • Use in younger postmenopausal women at low risk of stroke^o • May be useful for patients with vasomotor syndrome (e.g. hot flushes)

AMI, acute myocardial infarction; CrCl, creatinine clearance; DVT, deep vein thrombosis; PE, pulmonary embolism; SERM, selective oestrogen receptor modulator; TIA, transient ischaemic attack; VTE, venous thromboembolic events

^m Information on contraindications and clinical considerations/precautions were sourced from HSA-approved [Package Inserts](#) and UpToDate.^{5,6}

ⁿ There is no defined age cut-off for raloxifene. It has been studied in women up to 80 years old, but use is generally recommended in younger postmenopausal women as fatal stroke risk increases with age.⁷

^o Menopausal hormone therapy, including tibolone and combined oestrogen-progestogen regimens, can be considered for prevention of osteoporosis or fragility fractures in postmenopausal women <60 years old or within 10 years after menopause, or in women with early menopause (<45 years), unless contraindicated.⁸

References

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