

Peri- and postmenopausal screening and tests:

Osteoporosis screening

At present, population screening for osteoporosis is not advised but selective examination of high-risk women with dual-energy X-ray absorptiometry (DXA) should be undertaken. The US Preventive Services Task Force in 2025 recommended screening for women aged 65 years or more and for postmenopausal women younger than 65 years who are at increased risk for an osteoporotic fracture as estimated by clinical risk assessment.

Web-based tools for the calculation of fracture risk

- The **FRAXplus tool** estimates probabilities of hip fracture and major osteoporotic fracture
- **QFracture** estimates the risk of hip or any osteoporotic fracture (i.e. hip, wrist, shoulder or spine) over 1–10 years
- The **Garvan risk calculator** estimates fracture risk at 5 and 10 years on the basis of gender, age, fractures since the age of 50, falls in the past 12 months and weight

Dual-energy X-ray absorptiometry (DXA)

DXA is used to assess **bone mineral density** (BMD), mainly at the lumbar spine and hip. BMD can then be compared against an established norm (e.g. that in a healthy young adult)

The T-score

The T-score is the number of standard deviations (SDs) below the average value for the bone mineral density (BMD) of a young adult at peak bone density, adjusted for gender and ethnicity. The World Health Organization has defined the following categories based on BMD:

- **Normal bone.** T-score greater than -1
- **Osteopenia.** T-score between -1 and -2.5
- **Osteoporosis.** T-score less than -2.5

Tools other than DXA to assess BMD

These are not all recognized by healthcare systems.

- **QCT** (quantitative computed tomography) – measures spine or hip
- **pQCT** (peripheral QCT) – measures forearm and tibia
- **QUS** (quantitative ultrasound) – measures the heel
- **REMS** (radiofrequency echographic multi-spectrometry) technology

Further information

FRAX Fracture Risk Assessment Tool <https://www.fraxplus.org/>

Garvan Institute of Medical Research. Bone fracture risk calculator <https://www.garvan.org.au/research/bone-fracture-risk-calculator>

International Osteoporosis Foundation. Other diagnostic tools <https://www.osteoporosis.foundation/health-professionals/diagnosis/other-diagnostic-tools>

US Preventive Services Task Force (2024). Recommendation statement. Screening for osteoporosis to prevent fractures <https://doi.org/10.1001/jama.2024.27154>

Welcome to the QFracture®– 2016 risk calculator <https://qfracture.org>