

Body Composition (DEXA)

Precise measurement of fat, muscle & bone in one low-dose scan

In plain terms. A DEXA scan is a quick, very-low-dose X-ray that measures your body with precision: how much fat you carry (including hidden 'visceral' fat around your organs), how much muscle you have, and how strong your bones are. It gives three clinically useful results from a single 10-minute scan — and an excellent baseline to track.

WHAT THIS SCREENING INCLUDES

- **Fat mass & distribution** — total and regional body-fat percentage, and an estimate of visceral adipose tissue (VAT).
- **Lean (muscle) mass** — including the appendicular lean mass index (ALMI) used to screen for low muscle (sarcopenia).
- **Bone mineral density** — spine and hip T- and Z-scores, plus trabecular bone score (bone 'quality').

WHAT IT IS FOR & WHAT IT CAN FIND

Visceral fat is an independent driver of heart and metabolic disease — far more informative than weight or BMI alone. Low muscle mass (sarcopenia) predicts frailty, falls and poorer health outcomes, and bone-density testing detects osteopenia and osteoporosis preferably before a fracture happens.

Because DEXA is precise and reproducible, it is ideal as a baseline to re-measure against to prove whether training, nutrition, or treatment is working.

BENEFITS

- ✓ Extremely low radiation dose (about 0.001 mSv — a fraction of a day's natural background).
- ✓ Fast, precise and highly reproducible — well suited to tracking change over time.
- ✓ Three clinically useful outputs (fat, muscle, bone) from one scan.
- ✓ Detects visceral fat, low muscle and low bone density before symptoms appear.

LIMITATIONS & THINGS TO CONSIDER

- ! It still uses a tiny dose of X-rays (though very small).
- ! Bone density is a 2-D (areal) measure and can be skewed by spinal arthritis, prior fractures or body size.
- ! Body-composition reference ranges differ by scanner make and by population.
- ! DEXA measures fat, muscle and bone — it does not image your organs and does not, by itself, explain the cause of an abnormal result.

WHO SHOULD CONSIDER IT

- Anyone wanting a metabolic and body-composition baseline.
- People optimising muscle/lean mass or concerned about sarcopenia.
- Those tracking visceral fat and cardiometabolic risk.
- Bone-health surveillance — post-menopausal women, older adults, long-term steroid use, or prior fracture.

Radiation & safety. DEXA uses about 0.001 mSv — roughly a hundredth of a day of natural background radiation, and far less than a chest X-ray.

REFERENCES

Independently sourced and verified (September 2026). Links open the original publications.



1. Shuhart CR, Yeap SS, Anderson PA, et al. Executive Summary of the 2019 ISCD Position Development Conference (Adult DXA Official Positions). J Clin Densitom. 2019;22(4):453–471. <https://doi.org/10.1016/j.jocd.2019.07.001>
2. Cruz-Jentoft AJ, Bahat G, Bauer J, et al. Sarcopenia: revised European consensus on definition and diagnosis (EWGSOP2). Age Ageing. 2019;48(1):16–31. <https://doi.org/10.1093/ageing/afy169>
3. Neeland IJ, Ross R, Després JP, et al. Visceral and ectopic fat, atherosclerosis, and cardiometabolic disease: a position statement. Lancet Diabetes Endocrinol. 2019;7(9):715–725. [https://doi.org/10.1016/S2213-8587\(19\)30084-1](https://doi.org/10.1016/S2213-8587(19)30084-1)

This information sheet is for education and to help you choose appropriate screening. It is not a diagnosis or medical advice. Screening tests have benefits and harms; discuss your personal situation with your doctor. All studies are performed and interpreted by specialist or subspecialist radiologists (HPCSA-compliant; radiation kept As Low As Reasonably Achievable).