Dual X-Ray Absorptiometry (DXA) measures **Bone Mineral Density** (mass)
And is a key part of fracture risk/ osteoporosis assessment
Changes in bone mass (bone mineral density [BMD]) throughout life

- **Attainment of peak bone mass**
- **Consolidation**
- **Age-related bone loss**
- **Menopause**

![Graph showing changes in bone mass throughout life for men and women, with peak bone mass attainment, consolidation, and age-related bone loss highlighted.](image)
Determinants of high peak bone mass

- Negative influences:
  - Genetics
  - Nutrition
  - Eating disorders
  - Drug exposures
  - Non weight-bearing
  - Smoking
  - XS alcohol
  - Low calcium
  - Vitamin-D deficiency
  - Amenorrhea
  - Late onset puberty
  - Steroids
  - Chronic Illness

Bone mass

- Attainment of peak bone mass

- Men

- Women

Age (years)
Determinants of low bone mass with ageing

Negative influences
- Low peak bone mass
- Poor Nutrition
- Drug exposures
- Low weight-bearing
- Smoking
- XS alcohol
- Low calcium intake
- Vitamin-D deficiency
- Early menopause
- Other illness*
- Steroids
- Drugs**

*eg Rheumatoid arthritis; Crohn’s Disease; Myeloma; Kidney Disease, Liver Disease, Endocrine Disease

**eg Aromatase inhibitors used in Breast cancer; some anticonvulsants; hormonal therapy for Prostate Cancer