



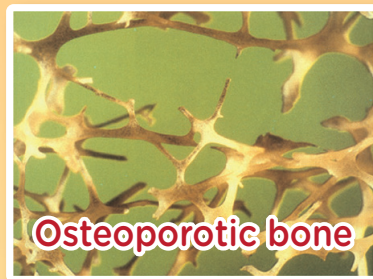
Act Now to Prevent Osteoporosis

Key Facts of Osteoporosis

- Bone is a metabolically active tissue. The emergence of osteoporosis is due to the bone loss rate exceeding the reconstruction rate, leading to a decrease in bone density and making the bones fragile and prone to fractures



Healthy bone



Osteoporotic bone

- This phenomenon occurs in both men and women but is more commonly seen in women after menopause
- Osteoporosis becomes more significant with age and physical inactivity



Understanding Your Bones

- The adult human skeleton is composed of 206 pieces of bones
- Bones are living tissue and constantly undergoing metabolism
- The process of bone metabolism is as follows:

1. Osteoclasts break down and absorb the surface tissue of the bone



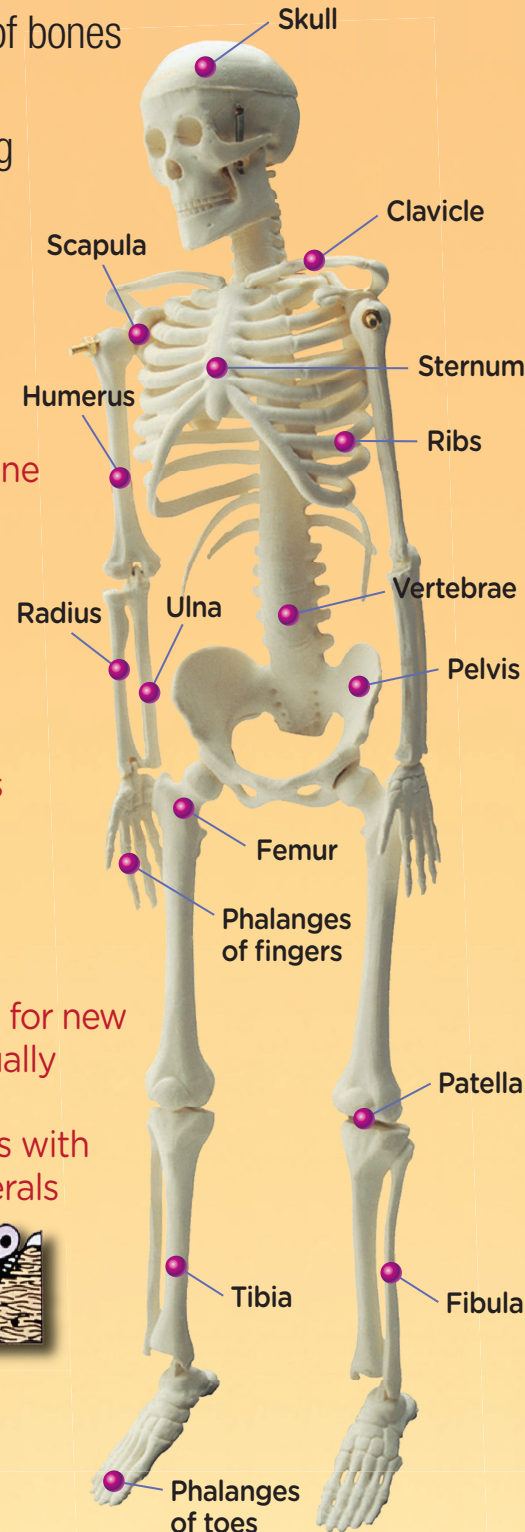
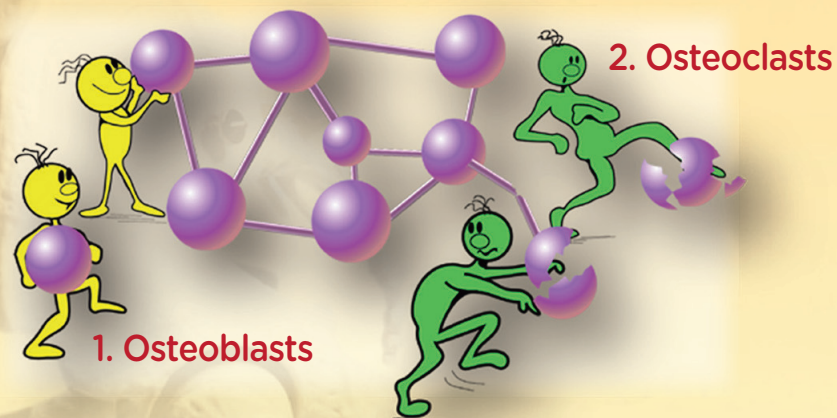
2. The bone surface that has been absorbed causes many tiny pores



3. Osteoblasts responsible for new bone generation, gradually repairing the pores and consolidating the bones with calcium and other minerals



- Two groups of cells primarily manage bone metabolism:



Symptoms of Osteoporosis

- There are no specific symptoms in the early stage
- Certain patients may experience lower back pain due to spinal fractures
- The elderly may become shorter or develop a stooped posture
- Patients often realize that they have osteoporosis only after experiencing a fracture



As age advances, bone density gradually decreases, leading to a reduction in height and increased bone fragility. The potential for fractures and a stooped posture become higher. This condition is particularly common in post-menopausal women.

Common Sites for Osteoporotic Fractures

- The trabecular bone of spine, causing vertebral collapse and resulting in a stooped posture (typically starts after the age of 65)
- The femoral neck in the hip joint (very common in elderly people)
- The distal radius in the forearm (more common in post-menopausal women)



Risk Factors for Osteoporosis

Congenital Factors

- Genetics
- Family history of osteoporotic fractures
- Small body size
- Asians and Caucasians
- Female

Acquired Factors

- Aging
- Early menopause in women before the age of 45
- Prolonged inadequate calcium intake
- Alcohol abuse and smoking
- Long-term use of oral steroids



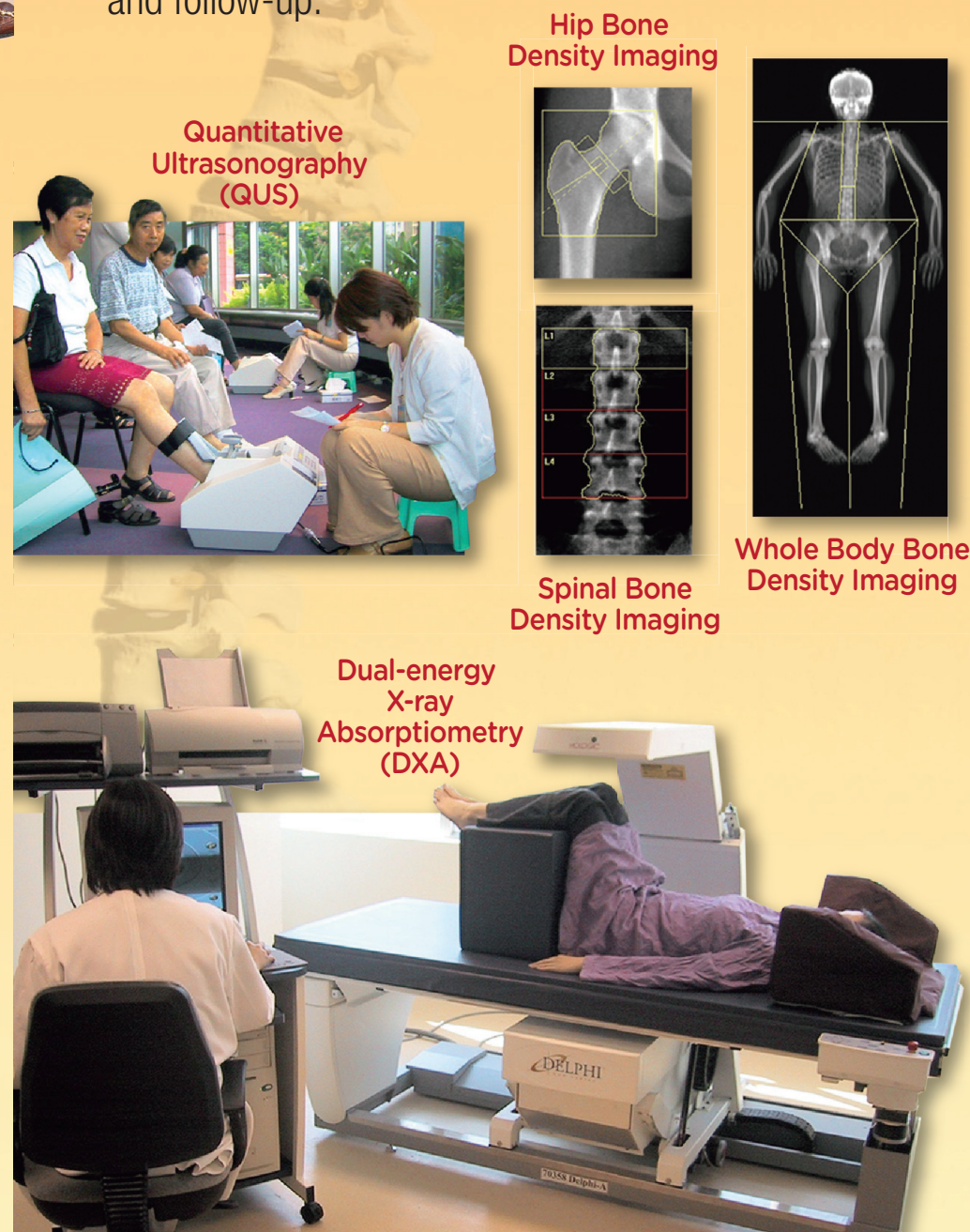
Screening and Diagnosis of Osteoporosis

Pre-screening

- Comprehensive hip fracture self-risk assessment using FRAX® in conjunction with SARC-F to effectively enhance sensitivity for predicting hip fracture risk, enabling more effective implementation of fracture prevention strategies in the elderly. (For details, please visit our Center's website: www.jococ.org and click on "Self-Assessment".)
- Ultrasound is a quick and simple tool, suitable for community mass screening and osteoporosis risk prediction

Clinical Screening & Diagnosis

- Dual-energy X-ray absorptiometry (DXA) is a more precise examination method, suitable for further medical diagnosis and follow-up.



Prevention and Treatment of Osteoporosis

- Stop unhealthy habits such as smoking and excessive alcohol consumption
- Develop regular and sustainable exercise habits, especially weight-bearing exercises.
- Ensure sufficient intake of calcium and vitamin D from the diet
- Medical treatment:



- Post-menopausal women and the elderly should undergo regular bone density checks and consult their doctors for appropriate treatment plans.



- Common medications prescribed by doctors include:

1. Anti-resorptive drugs:
 - bisphosphonates
 - denosumab
 - selective estrogen receptor modulator (SERM)
2. Bone-forming drug:
 - parathyroid hormone (PTH)
3. Dual-action drug:
 - romosozumab



Investment on Bone Health

