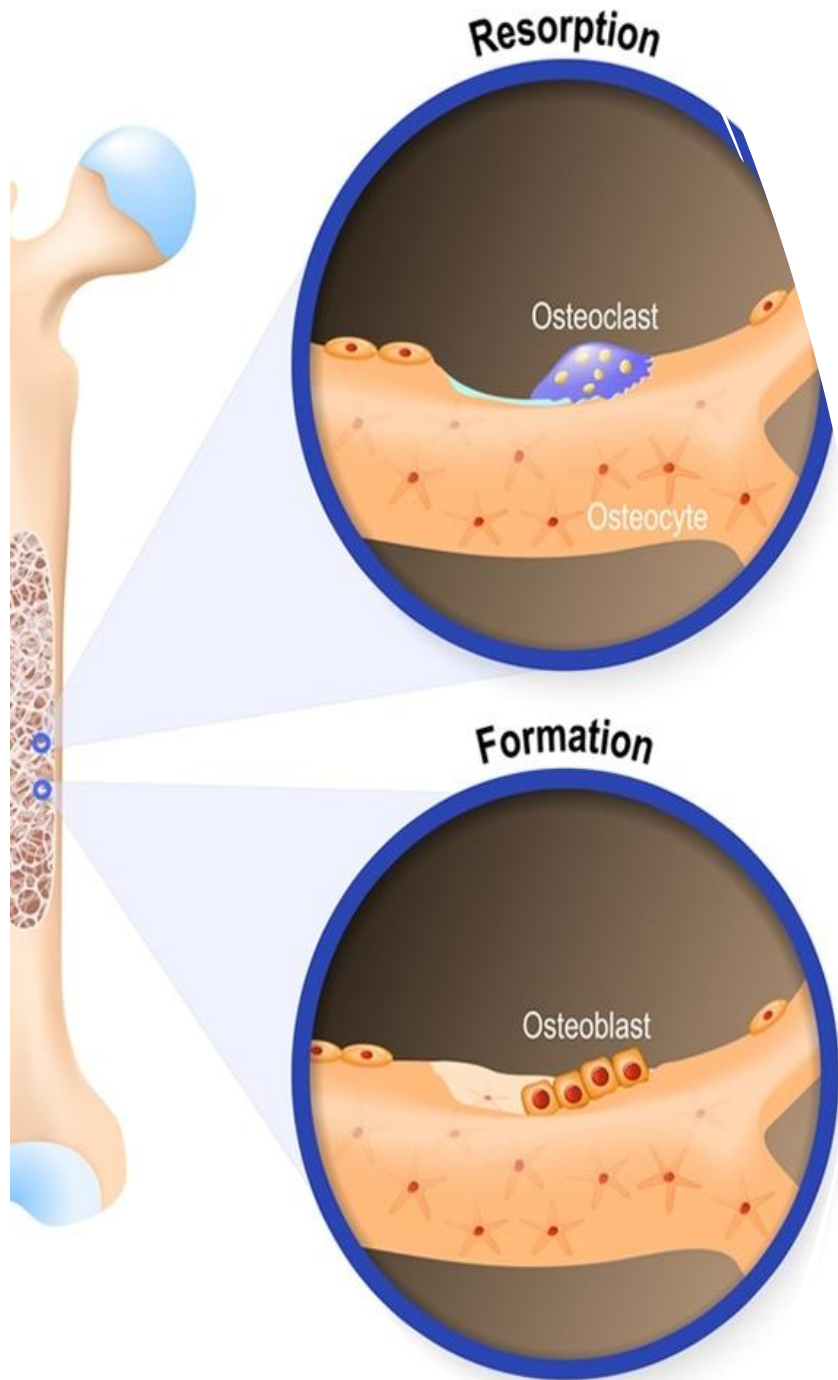




BONES & MUSCLES LONGEVITY

Norse Foundation

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AGING BONES

- Osteoblasts and osteoclasts constantly remodel the bones honeycomb structure.
- **By the age of 30 bones reach their maximum strength and density.**
- By the **age of 50** bones start to **thin** and reduce density.
- By the **age of 75** bones are **thinning considerably** due to last of osteoblast activity.
- This leads to bones become fragile and one fall away from fracture.

NEGATIVE FACTORS THAT AFFECTS BONES

- **Lack of exercise**
- **Prolonged immobilization.**
- **Certain medications, steroids, thyroxine etc**
- **Diseases**
 - **Hyperthyroidism**
 - **Hyperparathyroidism**
 - **Hypercalciuria**
 - **Neuropathies**
 - **Arthritis**
 - **Gastrectomy**
- **Alcoholism**
- **Smoking**





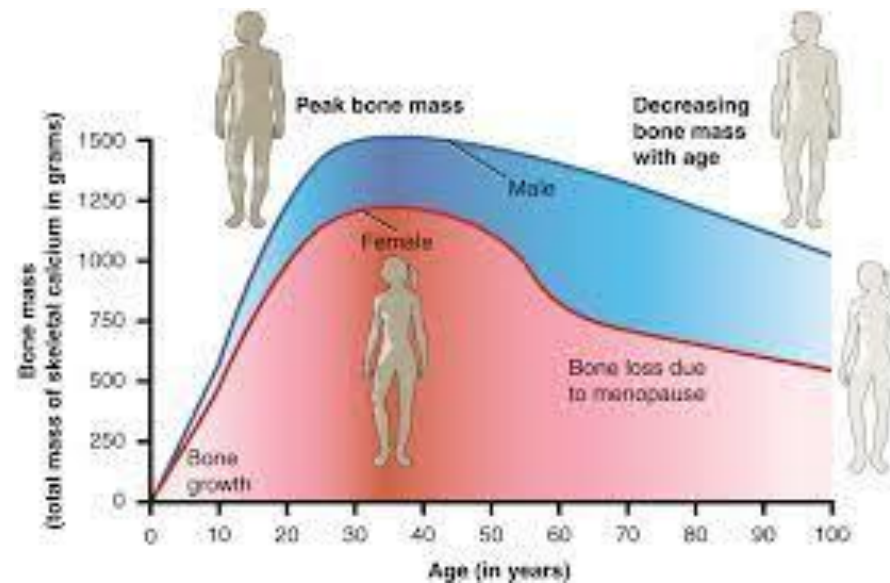
BONE LOSS – MEN VS WOMEN

Bone loss usually begins after 30 in females. Then speeds up after 45 as estrogen decreases.

You can lose as much as 30% by 70 years old.

In men starts after 60 years old.

Thereafter 3% lost every 10 years.





MUSCLE LOSS – SARCOPENIA



- **One of the first signs of aging is the loss of muscle mass.**
- Sarcopenia is the age-related progressive loss of muscle mass and strength.
- We reach **peak muscle mass by our early 40's**, if you do nothing then it is downhill from there onwards!
- The reduction in muscle mass can **reach 50% by the time you reach your 80s or 90s.**
- **Most people will lose 30% of muscle mass.**



MUSCLE LOSS – SARCOPENIA

- There is a change in muscle mass and muscle composition. There is an **increase in fat tissue** in the muscle tissue.
- We need to keep our muscle mass to maintain movement and strength, reduce chances of diabetes, reduce obesity.
- We must maintain physical activity, **60% of the people over 65 are insufficiently active.**
- **Walking, gardening, playing tennis, stretching going to the gym** are a must.

