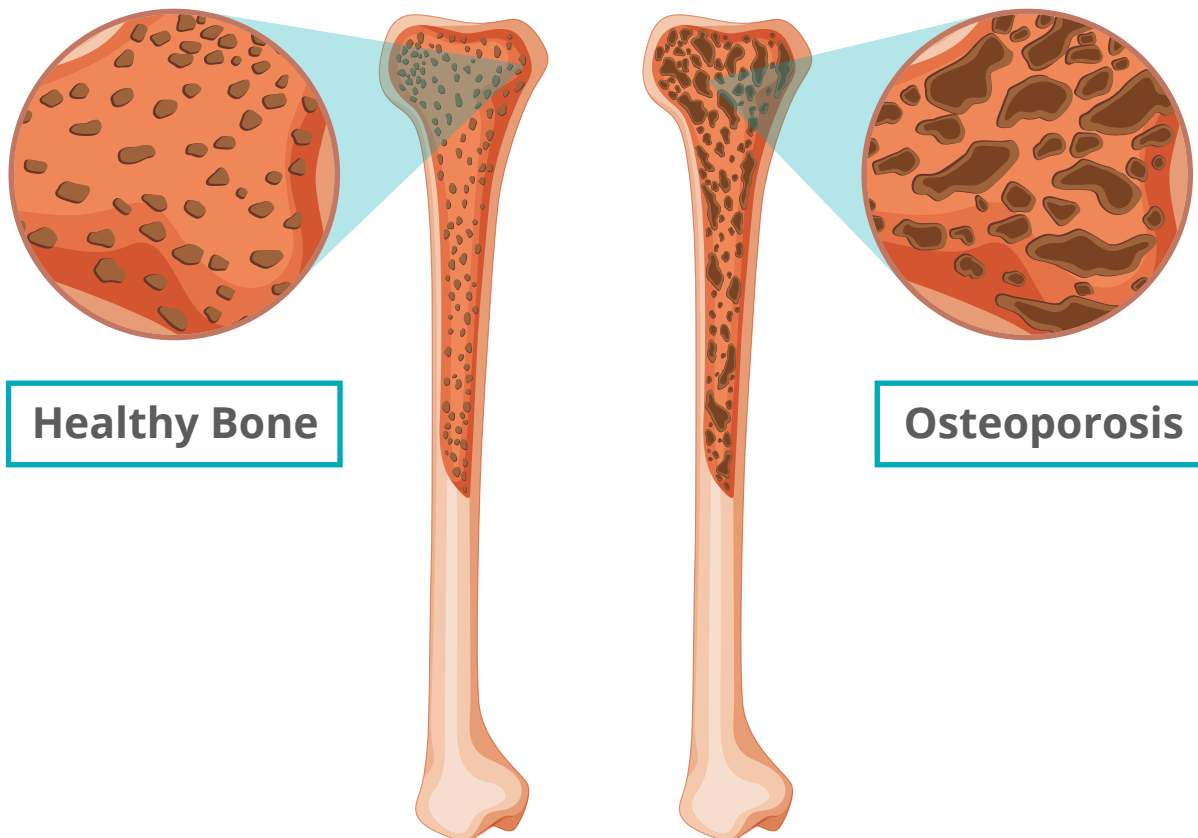


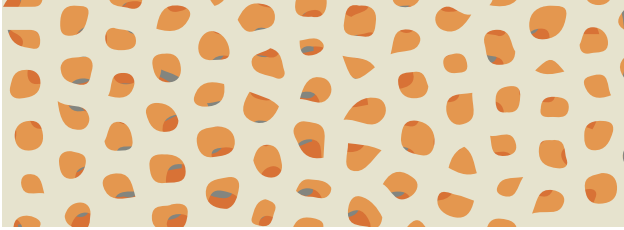
# Understanding Osteoporosis

## What is Osteoporosis?

- Osteoporosis is a bone condition characterised by thinner and weaker bone.
- Bone is a living, active tissue that is constantly renewing itself, where old bone tissue is broken down and new bone tissue is produced.
- Osteoporosis occurs when the bone starts to be broken down more quickly than it is replaced. As more bone is lost, it eventually weakens and becomes more susceptible to fractures.

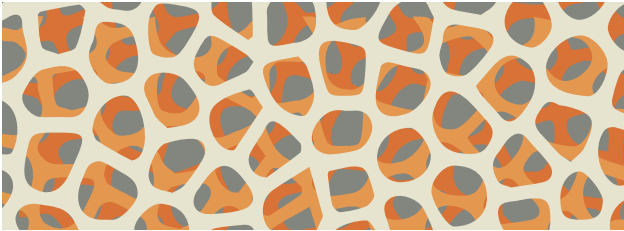


## Stages of Osteoporosis



### Normal bone

The risk of a fracture is likely to be low.



### Osteopenia

Even though the bones are becoming weaker, the risk of a fracture is still relatively low. You may or may not need treatment depending on what other risk factors you may have. You should discuss with your doctor to see how you can reduce your risk factors.



### Osteoporosis

As more bone is lost overtime, the risk of fractures will increase and you should discuss with your doctor to see if treatment is required.

## Risk Factors of Osteoporosis



Age  
(the risk increases as one gets older)



Gender  
(females are at a greater risk)



Race  
(a person of Caucasian or Asian ancestry is at a greater risk)



Genetics



Small body frame size



Hormonal changes



Dietary factors  
(excessive consumption of caffeine/low calcium intake)



Lack of exercise



Excessive consumption of alcohol



Smoking



Emotional stress

## Key Symptoms of Osteoporosis

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Osteoporosis is a progressive and 'silent' bone disease that has little or no visible signs. People usually do not realise they have osteoporosis until they have a broken bone. Common symptoms include:



Severe back pain



Loss of height



Poor posture



Fractures

## Consequences of Osteoporosis

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- Around the world, 1 in 3 women and 1 in 5 men aged 50 years and above are at risk of a fracture caused by osteoporosis.
- Bone fractures on the spine or hip are the most serious consequences of osteoporosis.
- With osteoporosis, even a minor fall can lead to a hip fracture.

## Prevention of Osteoporosis

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Ensure a nutritious diet and adequate calcium intake to avoid malnutrition



Ensure adequate intake of vitamin D



Avoid smoking



Limit alcohol intake



Exercise regularly

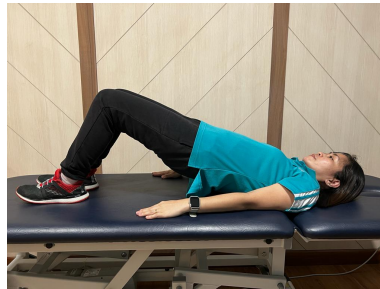
## Treatment of Osteoporosis

- Take Vitamin D supplements
- Undergo hormone therapy for post-menopausal women
- Maintain an active lifestyle through:
  - **Weight-bearing exercises** such as running, jogging, walking, and climbing the stairs, which help in increasing bone mass
  - **Strengthening exercises** such as bridging and half squat to improve your muscle strength
  - **Flexibility exercises** such as stretching and Yoga to improve your joint flexibility and posture.
  - **Balancing exercises** such as single leg stand and dancing to improve your reflexes and reduce the risk of falling.

*Note: Please consult a therapist/doctor if you have any questions regarding your condition before starting an exercise programme.*

### Bridging

To strengthen the buttocks and lower back muscles.



1. Lie on your bed or on a firm surface. Bend both knees.
2. Slowly raise your hips by pushing through your heels.
3. Your hips should be in line with your trunk and knees.
4. Hold for 10 seconds and repeat for 10 times. You may do 2 to 3 sets.

### Half Squat

To strengthen your buttocks and thigh muscles.



1. Stand in front of a chair. Keep your legs slightly apart with your toes pointing forward.
2. Slowly lower your buttocks onto the chair, just before they touch the edge of chair.
3. Hold for 5 to 10 seconds.
4. Slowly return to standing position.
5. Repeat for 10 times. You may do 2 to 3 sets.



**NTUC HEALTH CO-OPERATIVE LIMITED**

55 Ubi Ave 1 #08-01 Singapore 408935

**T:** +65 6590 4300 | **F:** +65 6590 4389 | **E:** enquiries@ntuhealth.sg

**W:** www.ntuhealth.sg | **f** NTUCHealth



Printed in October 2022