



# The Pelvic Tilt

- **pelvic tilt** is the orientation of the pelvis in respect to the femurs it rests upon
- It may be inclined or tilt in an anterior, posterior, lateral direction or rotated
- Any deviation in the inclination of pelvis is called pelvic tilt.

# Muscles involved in pelvic tilting

- Abdominals

- Rectus abdominous
- External oblique
- Internal oblique
- Transverses abdominus

- Hip abductors

- Gluteus medius
- Gluteus minimus

- Extensor of hip

- Gluteus maximus

- Extensor of spine

- Flexors of hip

- Illiopsoas

- Lumber side flexors

- Quadratus lamborum



# Anterior Pelvic Tilt

- Anterior/forward tilting:

Rotation of pelvis in the sagittal plane about a frontal horizontal axis in such a way that the symphysis pubis turns downward and posterior surface of sacrum turns upward.

This particular movements produced by hip flexor and spine lumber extensor.



# Maintenance of normal angle

- The angle of pelvic tilt in standing is stabilized either by the tension of the structures which lie anterior to the hip joint which prevent the angle from being reduced and the action of the abdominals and hip extensors which prevent it from being increased



# Pelvic tilt measurement

## Pelvic inclinometer:

In this particular method one arm of the meter is placed on symphysis pubis and the other is placed over posterior superior iliac spine.

Pelvic tilt is normal if this lies over 30 degree.

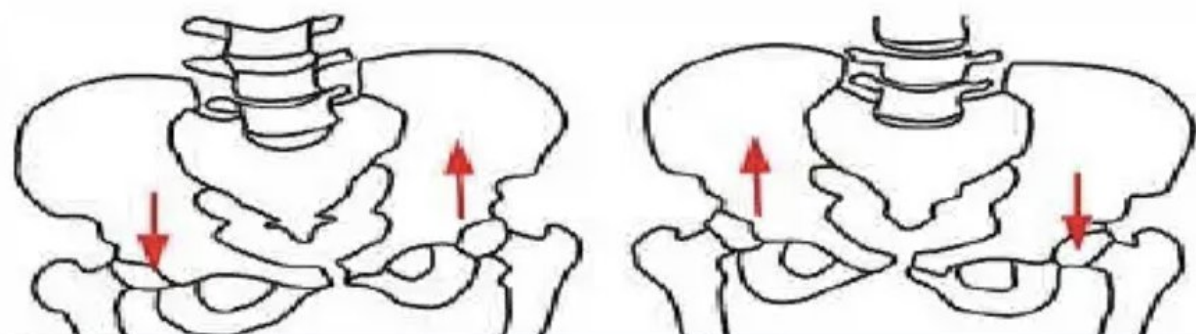


# How to measure pelvic tilt

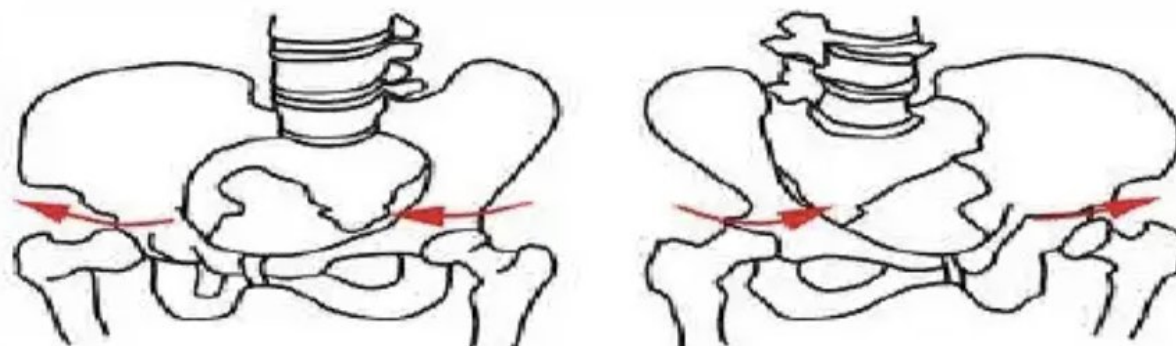
It can be measured by two ways

1. It could be measured by drawing imaginary line through symphysis pubis and lumbo-sacral angle, which lies in relation to the horizontal line can be measured.
2. Pelvic tilt is said to be normal if this angle lies b/w 50 and 60 degree.





**Figure 7a: Lateral pelvic tilt**



**Figure 7b: rotational movement (torsional)**