

Five Principles of Pilates

Intro Session for Colorado College Beginning Pilates Matwork Classes
Inger M. Bull

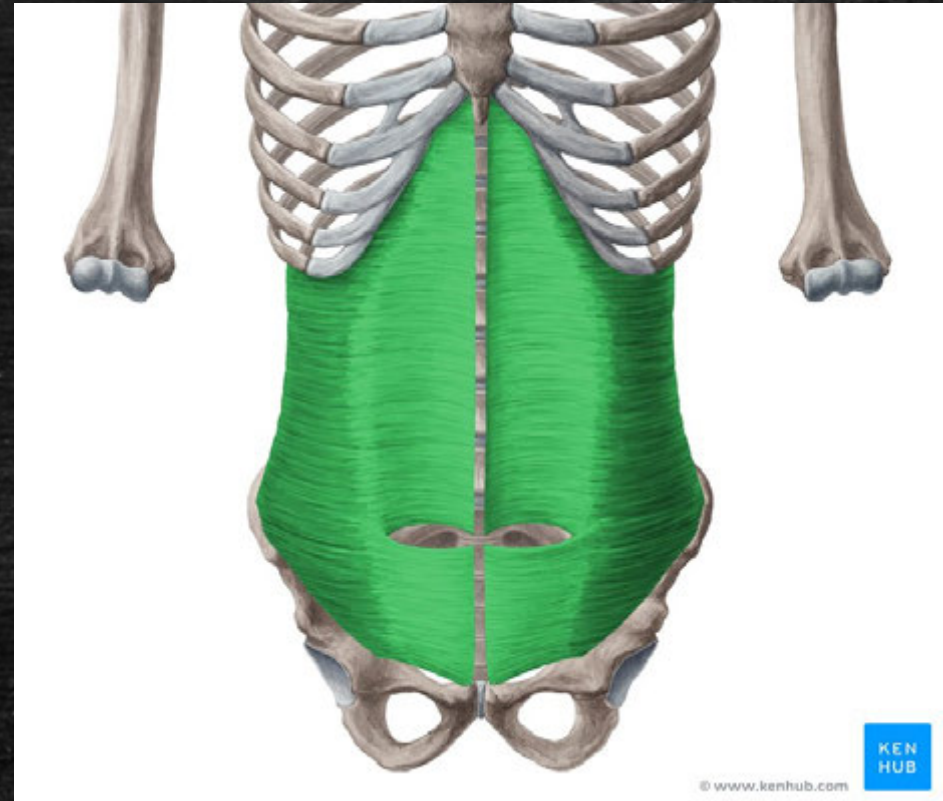
Anatomy of the abdominals and back

- Abdominals
 - Transversus abdominus
 - Obliques
 - Rectus abdominus
- Spine
 - Vertebrae
 - Articulation
- Bony landmarks
 - Sit bones
 - Hip pointers



Transversus abdominus

- Deepest layer of the abs
- Function is to compress the abdomen, support the lumbar spine during motion, and contain internal organs
- “corset” or “cummerbund”



Obliques

- Middle layer of abs
- Function is to rotate the spine

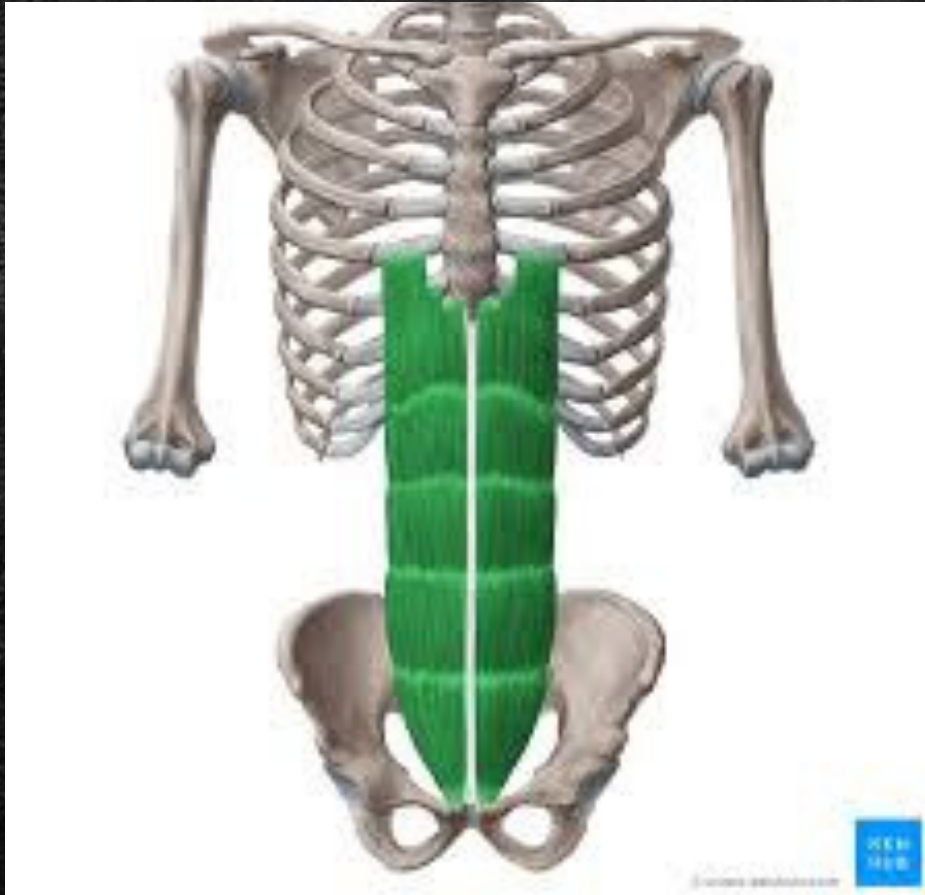


- Internal obliques



- External obliques

Rectus abdominus



- Most superficial layer of the abs (lies on top of others)
- Function is to flex the spine
- “six pack”

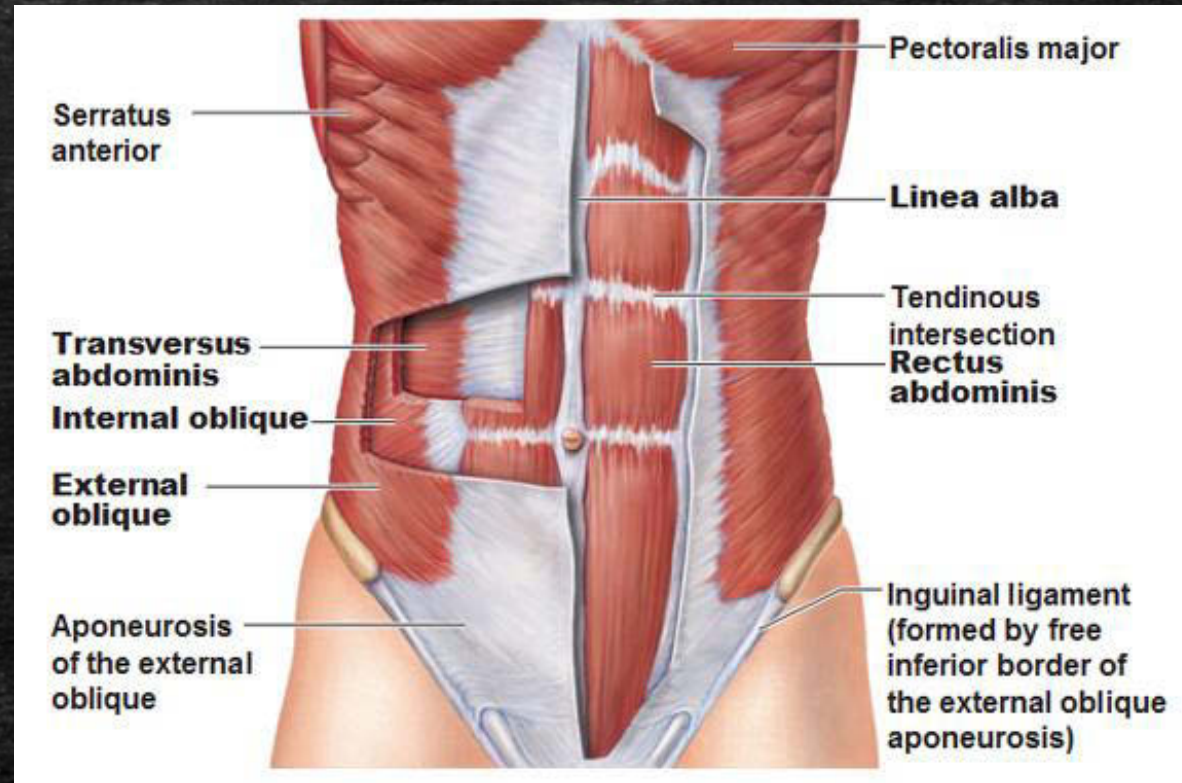
All abdominal layers

Deepest layer: transversus abdominus

Then: internal obliques

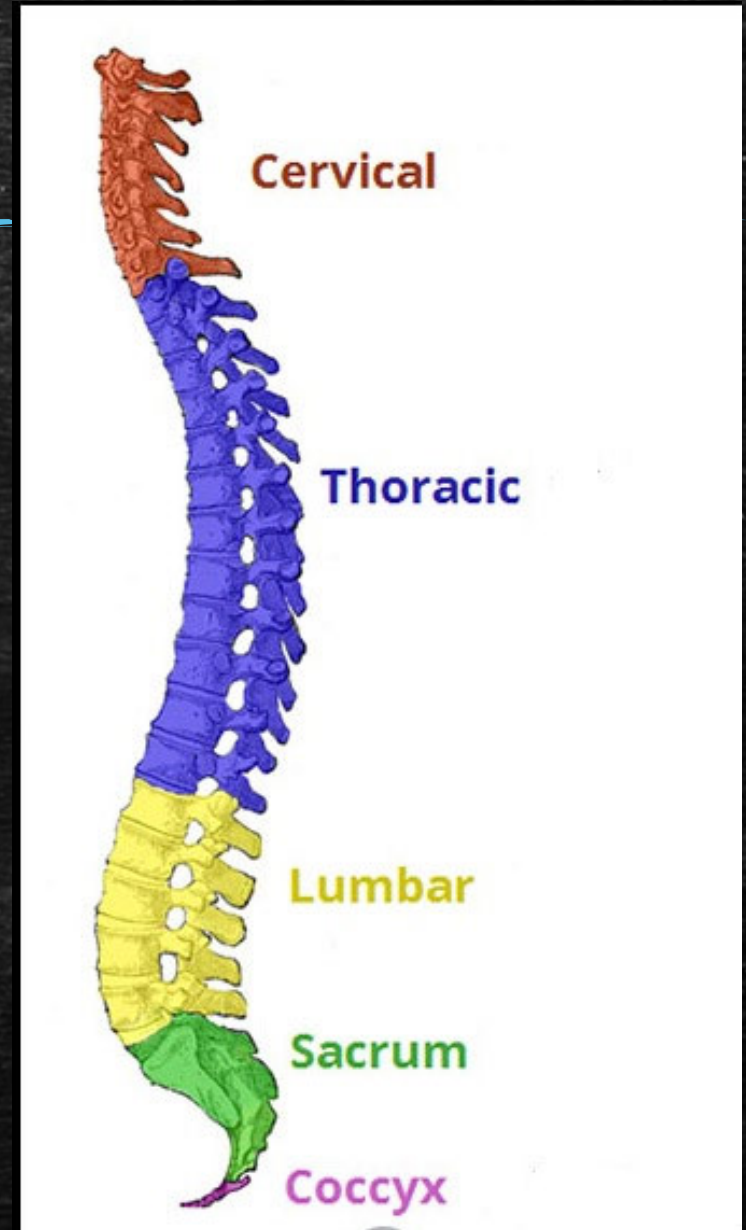
Then: external obliques

Superficial layer: rectus abdominus



Spine

- 24 vertebrae
 - 7 cervical
 - 12 thoracic
 - 5 lumbar
 - Plus sacrum and coccyx (both fused in humans)
- Articulation: movement of the spine one vertebra at a time



Five Principles

Breathing

Pelvic placement

Rib cage placement

Scapular movement & stabilization

Head & cervical placement

Breathing

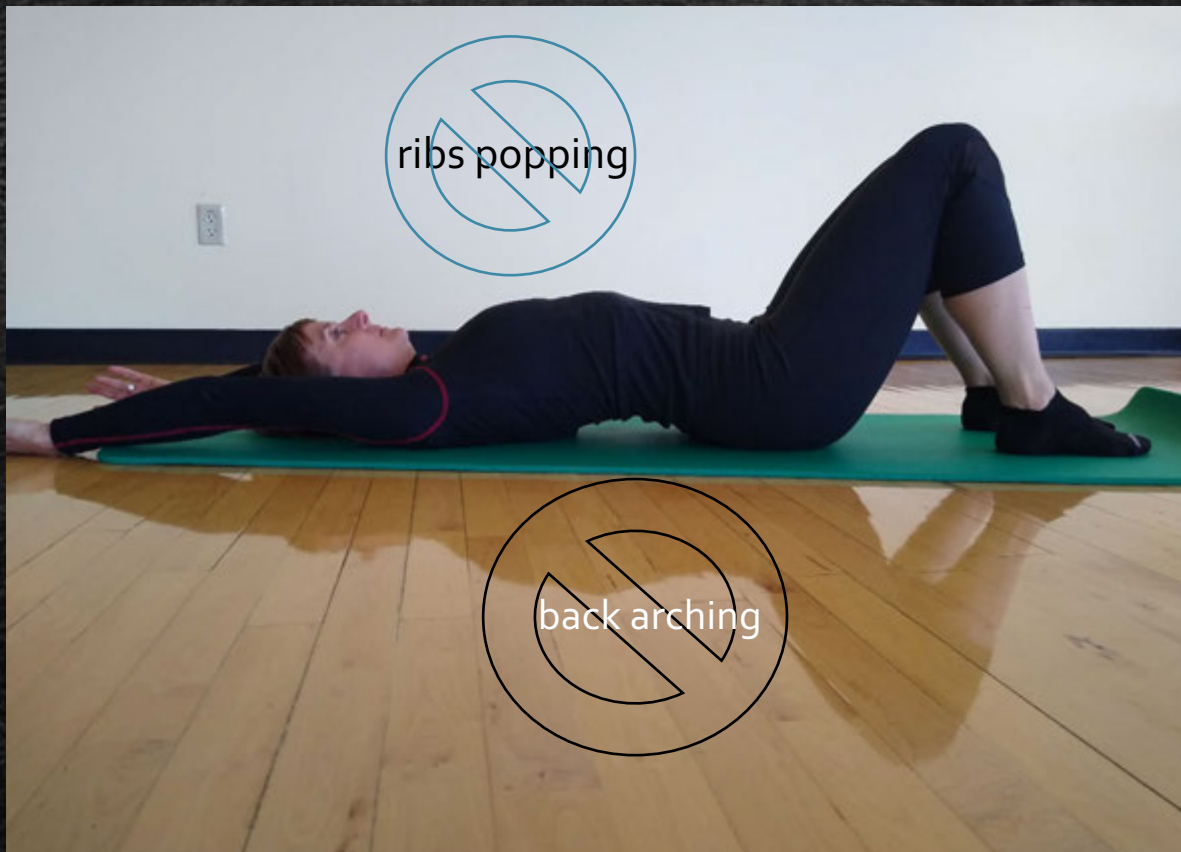
- Inhale through nose
 - Feel the rib cage expand, especially in back
- Exhale through pursed lips
 - Engages the transversus abdominus

Pelvic placement: neutral versus imprint



- Neutral pelvis: hip pointers (ASIS – anterior superior iliac spines) are in same plane as pubic bone (pubis symphysis); that plane is parallel to the mat
- Imprinted pelvis: transversus abdominus is contracted flattening the stomach, obliques are contracted flattening the rib cage, and pelvis tilts back slightly toward rib cage
- Photos: <https://www.merrithew.com/stott-pilates/warmup/en/principles/pelvic-placement>

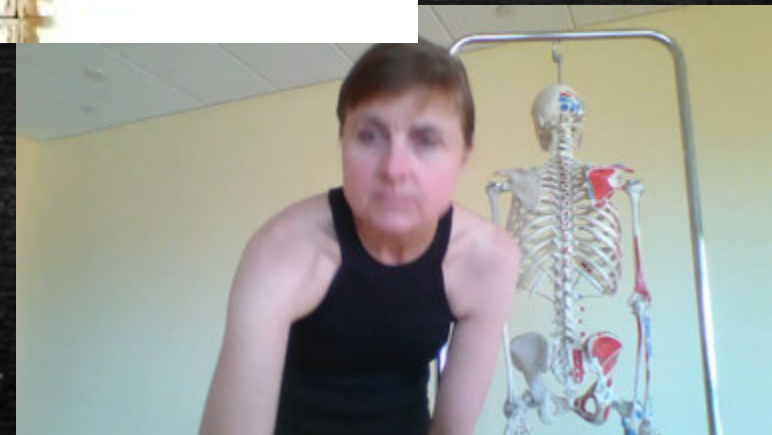
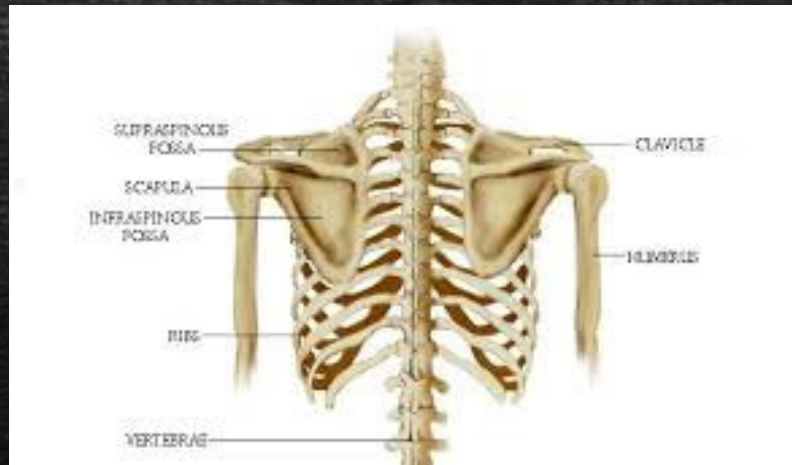
Rib cage placement



- Abdominal muscles attach to the lower ribs
- Use obliques to keep the rib cage from “popping up” when taking the arms overhead (see photo left)
- “knitting” the ribs together

Scapular movement & stabilization

- Scapula have no direct bony attachment to spine or rib cage; instead held in place by muscles
- Stabilizing the scapula during movement decreases neck tension & overuse of upper trapezius muscles
- Movements are up, down, together, apart, rotate up, rotate down



Head & cervical placement

correct positions below



The seven cervical vertebrae are small and delicate. Add to that the fact that the head is quite heavy. We need to make sure we have the cervical vertebrae in the most stable position during each exercise to avoid injury.

Imagine you are holding an orange under your chin. This puts the cervical vertebrae in approximately their neutral position. Now, when doing flexion exercises (crunches), don't drop the orange and don't squeeze the orange; just hold it in place. See top photos left.

When doing extension exercises, you should drop the orange, but don't overextend the neck. See bottom photos left.

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