

AXIAL MUSCLES OF TRUNK

11/19/81, rvsd 2 Dec 1999, 21 Nov 01, 17 Nov 03, 19Nov07, 17Nov08, 16Nov09, 29Nov10, 21Nov11, 3Nov15

S&M, p. 209, Martini 5th, 320-335, Kapit and Elson: pl 27-26, Martini 6th: 340-357, Martini 7th: 334-349, 8th: 341-358, 9th: 340-347, 10th: 351-358

VERTEBRAL COLUMN: (p 352) (each of these groups is subdivided according to points of insertion.)

- erector spinae:** principal movers of back, cause muscle spasms of **back and low back pain**
- e.s. spinalis go from spinous processes to same of other vertebrae
- e.s. longissimus from transverse processes to same of other vert.
- e.s. iliocostalis from crest of sacrum or iliac crest to ribs

rectus abdominus act to flex the spine

quadratus lumborum from iliac crest to lumbar transverse processes and 12th rib

Deep Thoracic muscles: ribs slope down, thus as they are raised, thoracic cavity volume increases.

external intercostal inhalation raise the ribs fibers run down and forward

internal intercostal exhalation pull ribs down fibers run down and backward

ABDOMINAL WALL (p 354)

rectus abdominus **tendinous inscriptions** run across: three transverse fibrous bands, **linea alba** vertically

Three layers of muscles in the side (note in bacon):

external abdominal oblique extension of ex. intercostal, fibers *down medially*. (Weakness risks inguinal hernia.)

internal abdominal oblique **fibers** run mostly *upwards, medially* (down inguinal canal, forms **cremaster**)

transversus abdominis *deepest*, encircles abdominal cavity

All three form broad aponeuroses, inserts into **linea alba**

aponeuroses form **inguinal ligament** at lower margins (runs from pubic tubercle to ant sup iliac spine)

Inguinal canal opening between muscle fascia and ligament runs, ensheathed by fascia of obliques.

(Men: **Inguinal hernia** due to excess intra abdominal pressure, intestine enters canal)

quadratus lumborum posterior portion of abdominal wall, iliac crest to 12th rib and lumbar transverse processes

The above four muscles aid in forced expiration, defecation and urination

FLOOR OF ABDOMINOPELVIC CAVITY (p 357)

genitalia & coccygeus openings through these for
rectum
urethra
vagina

muscular floor:

PELVIC DIAPHRAGM:
Kegel exercises strengthen

levator ani
tenses pelvic flr
raises anus
(etc.)

ischiocavernosus
compress, stiffen
penis clitoris

bulbospongiosus
ejects urine
ejects semen.
narrows vaginal
opening
stiffens clitoris

