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:
- **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

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**NOTE:** The image contains a diagram of the human body, highlighting various muscle groups and their functions. The text describes the anatomy and functions of these muscles, with emphasis on their roles in movement and physical processes. The text is rich with anatomical terms and descriptions, providing a comprehensive overview of the axial muscles of the trunk and the abdominal wall.