



Lec.4.

Body movements :

Flexion

Extension

Rotation

flexion of the elbow joint approximates the anterior surface of the forearm to the anterior surface of the arm. It is usually an anterior movement, but it is occasionally posterior, as in the case of the knee joint.

Extension means straightening the joint and usually takes place in a posterior direction (see Fig. 2).

Lateral flexion is a movement of the trunk in the coronal plane (Fig. 1.3).

Abduction is a movement of a limb away from the midline of the body in the coronal plane (see Fig. 1.2).

Adduction is a movement of a limb toward the body in the coronal plane (see Fig. 1.2). In the fingers and toes, abduction is applied to the spreading of these structures and adduction is applied to the drawing together of these structures .

Rotation is the term applied to the movement of a part of the body around its long axis.

Medial rotation is the movement that results in the anterior surface of the part facing medially.

Lateral rotation is the movement that results in the anterior surface of the part facing laterally.

Pronation of the forearm is a medial rotation of the forearm in such a manner that the palm of the hand faces posteriorly (see Fig. 1.3).

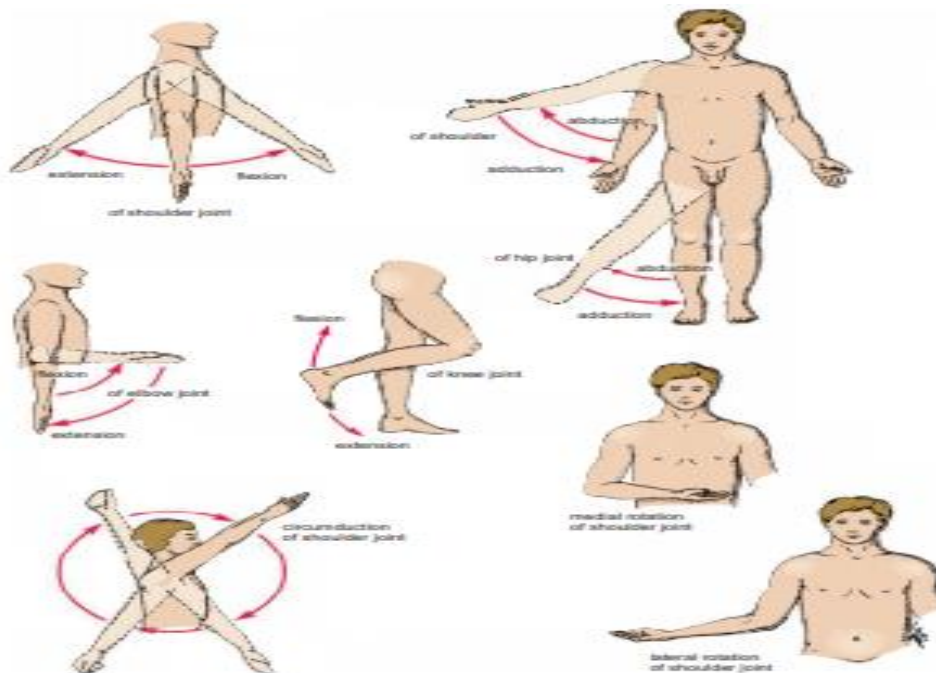
Supination of the forearm is a lateral rotation of the forearm from the pronated position so that the palm of the hand comes to face anteriorly .

Circumduction is the combination in sequence of the movements of flexion, extension, abduction, and adduction (see Fig. 1.2).

Protraction is to move forward; retraction is to move backward (used to describe the forward and backward movement of the jaw at the temporomandibular joints).

Inversion is the movement of the foot so that the sole faces in a medial direction .

Eversion is the opposite movement of the foot so that the sole faces in a lateral direction (see Fig. 1.3).



REGIONS :

- Abdominal cavity is divided into nine regions.
- Regions are used to describe the location of the organ, injury or pain.

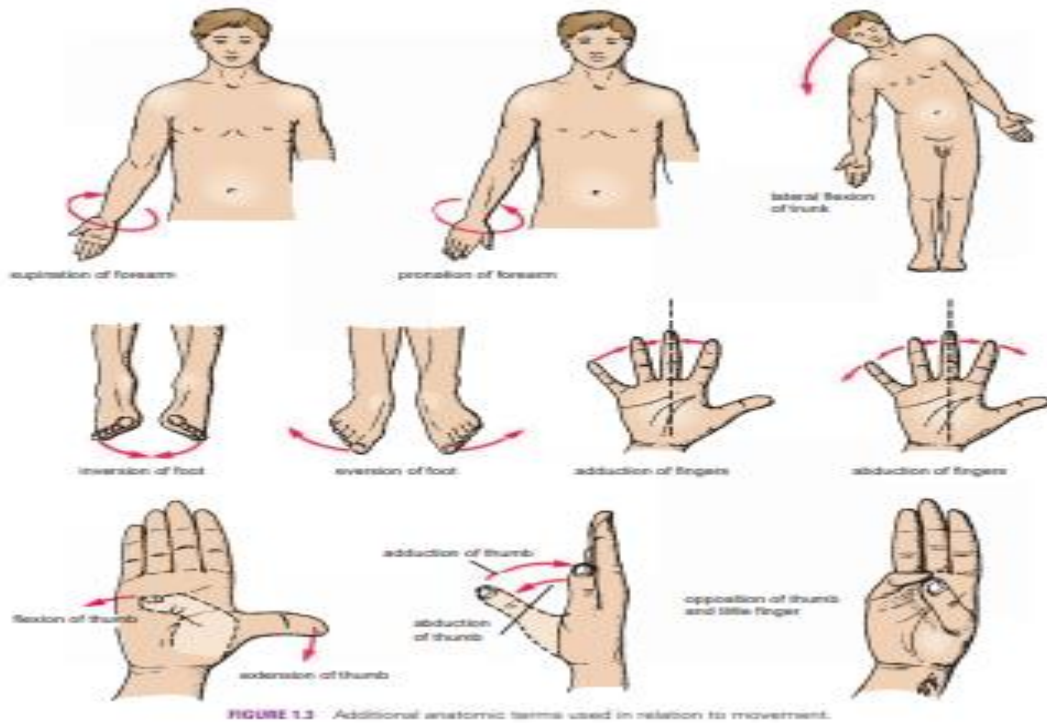


FIGURE 1.3 Additional anatomic terms used in relation to movement.

EPIGASTRIC :

- Upper, center area above the stomach.

UMBILICAL

- The region surrounding the umbilicus.

HYPOGASTRIC

- Area just below the umbilical region.

HYPOCHONDRIAC

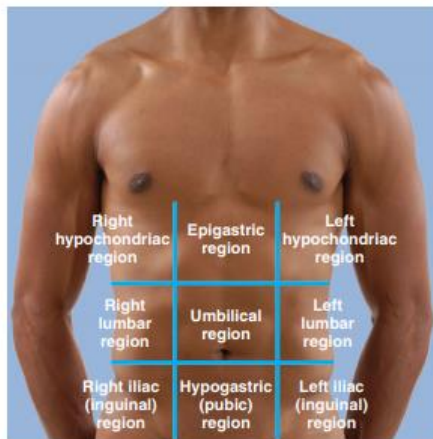
- Just below the ribs, immediately over the abdomen .
- On either side of the epigastric Region .
- A left and a right side .

LUMBAR

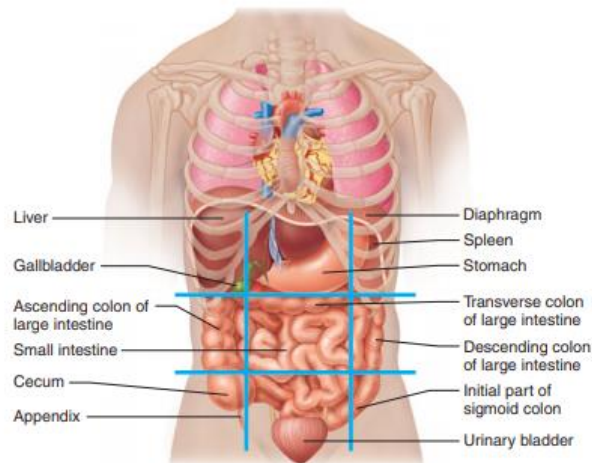
- Near the waist .
- On either side of the umbilical region .
- A left and a right side .

ILIAC or INGUINAL

- Located near the upper portion of the hipbone .
- On either side of the hypogastric region .
- A left and a right side .



(a) Nine regions delineated by four planes



(b) Anterior view of the nine regions showing the superficial organs

QUADRANTS

- A simpler way to divide the abdominal cavity is into QUADRANTS .

Right Upper Quadrant (RUQ)

- On the right upper anterior side Contains (part of the liver, the gallbladder, parts of the pancreas and intestinal Tract) .

Right Lower Quadrant (RLQ)

- On the right lower anterior side Contains (the appendix, parts of the intestines, female reproductive organs and the urinary tract) .

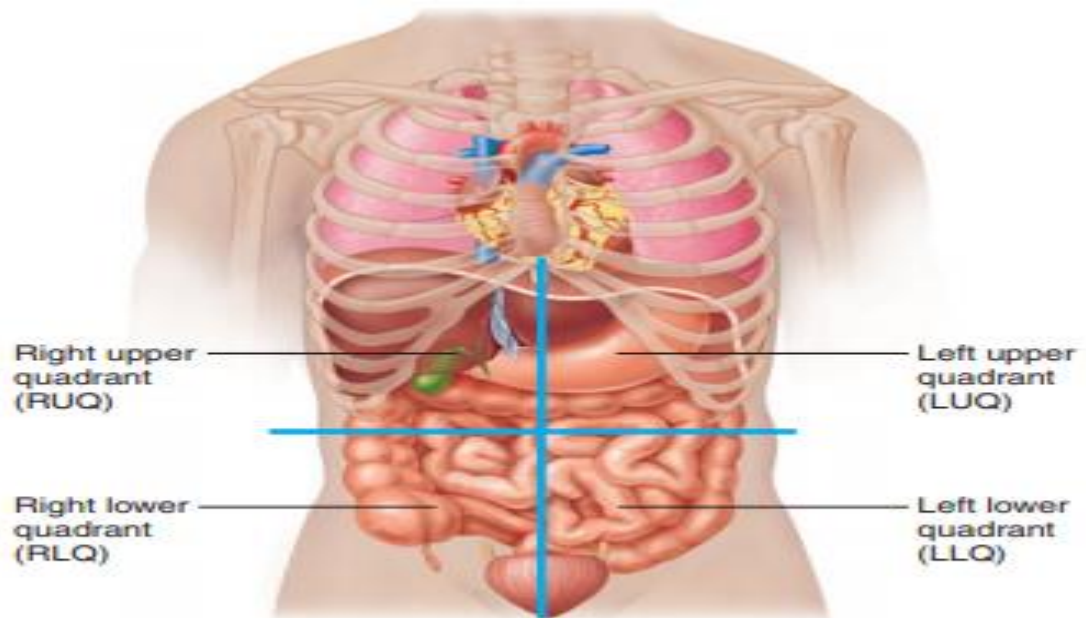
Left Upper Quadrant (LUQ) :



- On the left upper anterior side Contains (the stomach, spleen, and parts of the liver, pancreas and intestines).

Left Lower Quadrant (LLQ)

- On the left lower anterior side Contains (parts of the intestines, reproductive organs of the female and the urinary Tract).



(c) The four abdominopelvic quadrants