

The Language of Anatomy

Surface Anatomy

1. Match each of the following descriptions with a key equivalent, and record the key letter or term in front of the description.

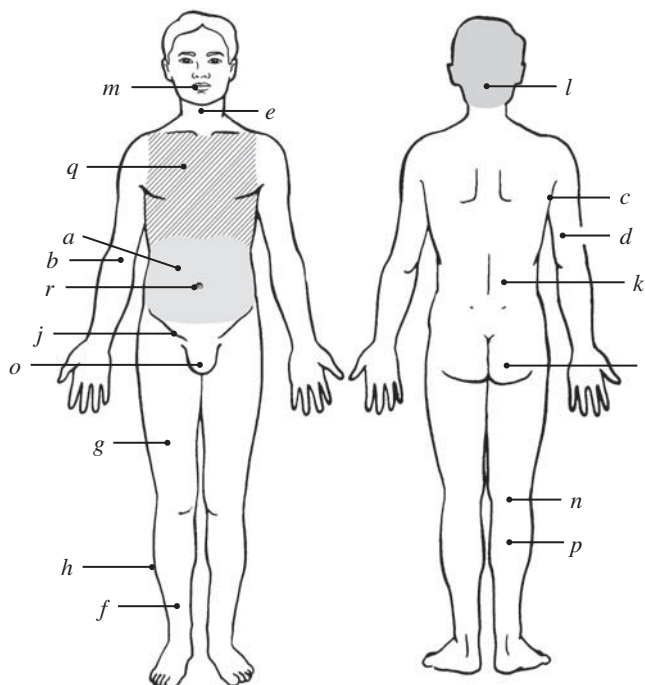
Key: a. buccal c. cephalic e. patellar
b. calcaneal d. digital f. scapular

a; buccal 1. cheek e; patellar 4. anterior aspect of knee
d; digital 2. pertaining to the fingers b; calcaneal 5. heel of foot
f; scapular 3. shoulder blade region c; cephalic 6. pertaining to the head

2. Indicate the following body areas on the accompanying diagram by placing the correct key letter at the end of each line.

Key:

a. abdominal
b. antecubital
c. axillary
d. brachial
e. cervical
f. crural
g. femoral
h. fibular
i. gluteal
j. inguinal
k. lumbar
l. occipital
m. oral
n. popliteal
o. pubic
p. sural
q. thoracic
r. umbilical



3. Classify each of the terms in the key of question 2 above into one of the large body regions indicated below. Insert the appropriate key letters on the answer blanks.

b, c, d, f, g, h, n, p 1. appendicular a, e, i, j, k, l, m, o, q, r 2. axial

Body Orientation, Direction, Planes, and Sections

4. Describe completely the standard human anatomical position. Standing erect, feet together, head and toes pointed forward, arms hanging at sides with palms forward.

5. Define *section*. A cut along an imaginary plane through the body wall or organ.

6. Several incomplete statements are listed below. Correctly complete each statement by choosing the appropriate anatomical term from the key. Record the key letters and/or terms on the correspondingly numbered blanks below.

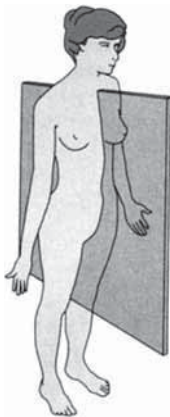
Key: a. anterior d. inferior g. posterior j. superior
b. distal e. lateral h. proximal k. transverse
c. frontal f. medial i. sagittal

In the anatomical position, the face and palms are on the 1 body surface; the buttocks and shoulder blades are on the 2 body surface; and the top of the head is the most 3 part of the body. The ears are 4 and 5 to the shoulders and 6 to the nose. The heart is 7 to the vertebral column (spine) and 8 to the lungs. The elbow is 9 to the fingers but 10 to the shoulder. The abdominopelvic cavity is 11 to the thoracic cavity and 12 to the spinal cavity. In humans, the dorsal surface can also be called the 13 surface; however, in quadruped animals, the dorsal surface is the 14 surface.

If an incision cuts the heart into right and left parts, the section is a 15 section; but if the heart is cut so that superior and inferior portions result, the section is a 16 section. You are told to cut a dissection animal along two planes so that both kidneys are observable in each section. The two sections that will always meet this requirement are the 17 and 18 sections. A section that demonstrates the continuity between the spinal and cranial cavities is a 19 section.

- | | | |
|------------------------|-------------------------|--------------------------|
| 1. <u>a; anterior</u> | 8. <u>f; medial</u> | 14. <u>j; superior</u> |
| 2. <u>g; posterior</u> | 9. <u>h; proximal</u> | 15. <u>i; sagittal</u> |
| 3. <u>j; superior</u> | 10. <u>b; distal</u> | 16. <u>k; transverse</u> |
| 4. <u>f; medial</u> | 11. <u>d; inferior</u> | 17. <u>c; frontal</u> |
| 5. <u>j; superior</u> | 12. <u>a; anterior</u> | 18. <u>k; transverse</u> |
| 6. <u>e; lateral</u> | 13. <u>g; posterior</u> | 19. <u>i; sagittal</u> |
| 7. <u>a; anterior</u> | | |

7. Correctly identify each of the body planes by inserting the appropriate term for each on the answer line below the drawing.



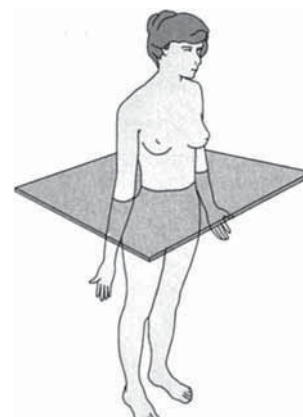
(a)

median (mid-sagittal) plane



(b)

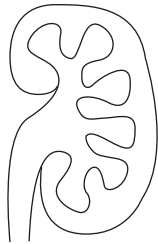
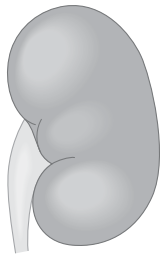
frontal plane



(c)

transverse plane

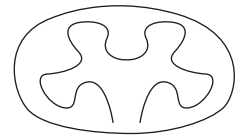
8. Draw a kidney as it appears when sectioned in each of the three different planes.



frontal section



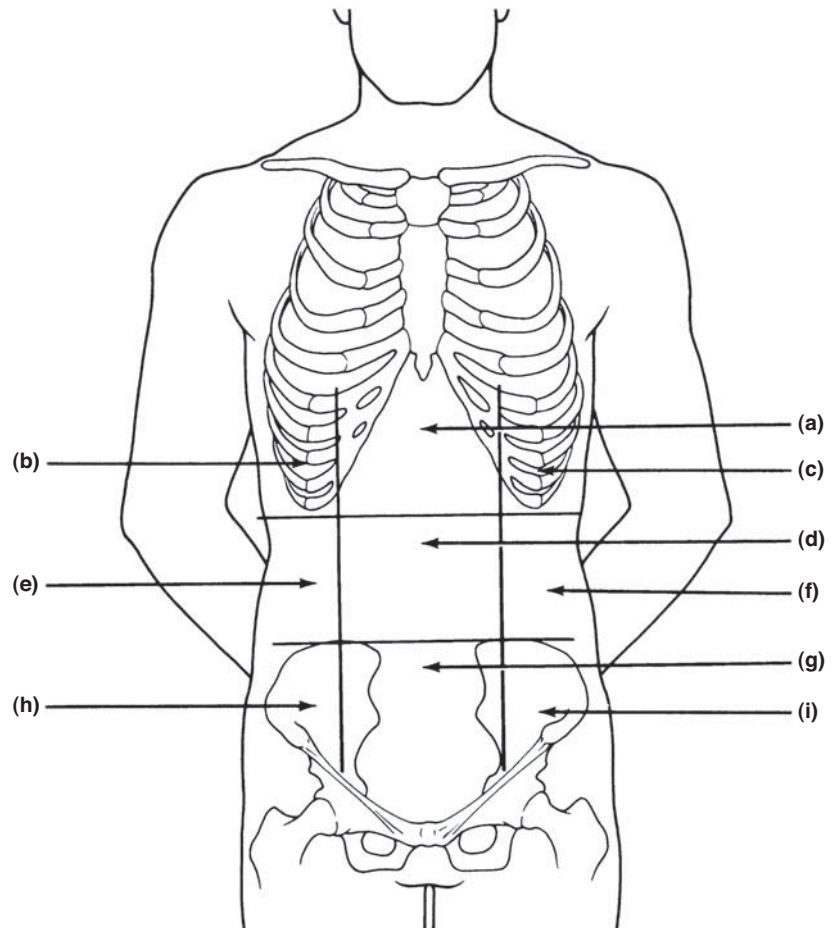
sagittal section



transverse section

9. Correctly identify each of the nine areas of the abdominal surface by inserting the appropriate term for each of the letters indicated in the drawing.

- a. epigastric region
- b. right hypochondriac region
- c. left hypochondriac region
- d. umbilical region
- e. right lumbar region
- f. left lumbar region
- g. hypogastric (pubic) region
- h. right iliac region
- i. left iliac region



Body Cavities

10. Which body cavity would have to be opened for the following types of surgery or procedures? (Insert letter of key choice in same-numbered blank. More than one choice may apply.)

Key: a. abdominopelvic
b. cranial

c. dorsal
d. spinal

e. thoracic
f. ventral

e, f 1. surgery to remove a cancerous lung lobe

a, f 4. appendectomy

a, f 2. removal of the uterus, or womb

a, f 5. stomach ulcer operation

b, c 3. removal of a brain tumor

d, c 6. delivery of pre-operative "saddle" anesthesia

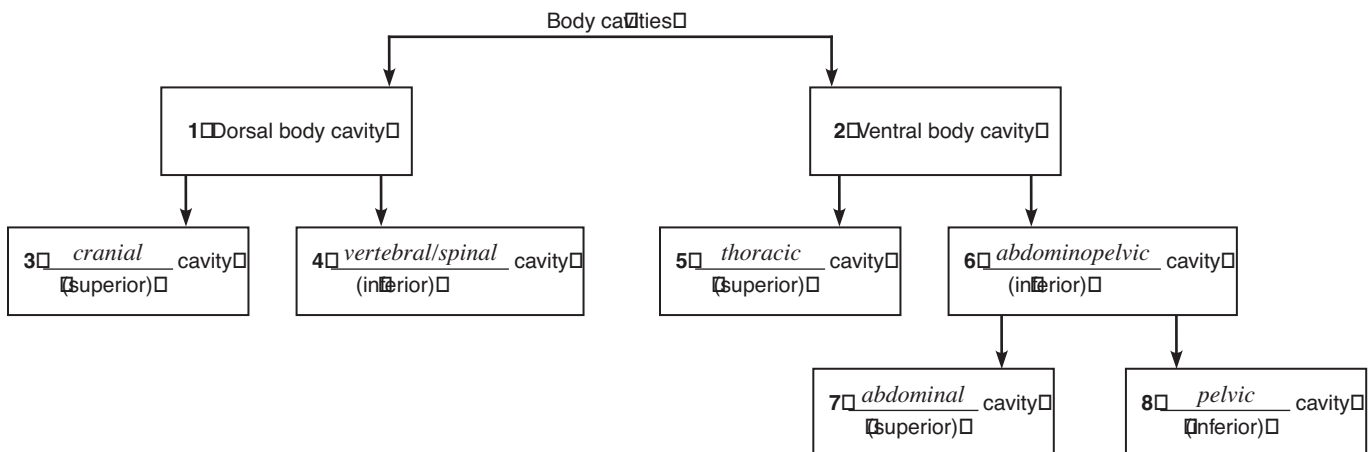
11. Name the muscle that subdivides the ventral body cavity. diaphragm
12. Which organ system would not be represented in any of the body cavities? Skeletal, muscular, integumentary
13. What are the bony landmarks of the abdominopelvic cavity? Dorsally, the vertebral column; laterally and anteriorly, the pelvis
14. Which body cavity affords the least protection to its internal structures? Abdominal
15. What is the function of the serous membranes of the body? The serous membranes produce a lubricating fluid (serous fluid) that reduces friction as organs slide across one another or against the cavity walls during their functioning.
16. Using the key choices, identify the small body cavities described below.

Key: a. middle ear cavity c. oral cavity e. synovial cavity
 b. nasal cavity d. orbital cavity

- d; orbital cavity 1. holds the eyes in an anterior-facing position c; oral cavity 4. contains the tongue
- a; middle ear cavity 2. houses three tiny bones involved in hearing e; synovial cavity 5. lines a joint cavity
- b; nasal cavity 3. contained within the nose

17. On the incomplete flowchart provided below:

- Fill in the cavity names as appropriate to boxes 3–8.
- Then, using either the name of the cavity or the box numbers, identify the descriptions in the list that follows.



- | | | | | | |
|----------------|----|---|---------------|----|------------------------------|
| <u>1</u> | a. | contained within the skull and vertebral column | <u>5</u> | e. | contains the heart |
| <u>8</u> | b. | houses female reproductive organs | <u>6 or 7</u> | f. | contains the small intestine |
| <u>1, 3, 4</u> | c. | the most protective body cavity | <u>5</u> | g. | bounded by the ribs |
| <u>2</u> | d. | its name means belly | <u>6 or 7</u> | h. | its walls are muscular |