



EXERCISES

Remember to check your answers carefully with the Answers to Exercises, page 61.

A The listed terms are parts of a cell. Match each term with its correct meaning.

cell membrane
chromosomes
cytoplasm

DNA
endoplasmic reticulum
genes

mitochondria
nucleus

1. material of the cell located outside the nucleus and yet enclosed by the cell membrane

2. regions of DNA within each chromosome _____

3. small sausage-shaped structures within which food is “burned” to release energy

4. canal-like structure in the cytoplasm; the site of protein synthesis _____

5. structure that surrounds and protects the cell _____

6. control center of the cell, containing chromosomes _____

7. chemical found within each chromosome _____

8. rod-shaped structures in the nucleus that contain regions called genes _____

B Use medical terms or numbers to complete the following sentences.

1. A picture of chromosomes in the nucleus of a cell is a (an) _____.

2. The number of chromosomes in a normal male’s muscle cell is _____.

3. The number of chromosomes in a female’s egg cell is _____.

4. The process of building up proteins in a cell is _____.

5. The process of chemically burning or breaking down foods to release energy in cells is

_____.

6. The total of the chemical processes in a cell is _____.

7. A scientist who studies tissues is a (an) _____.

8. The medical term for internal organs is _____.

2

C Match each of the listed body parts or tissues with its correct description below.

adipose tissue
cartilage
epithelial tissue
larynx

pharynx
pituitary gland
pleura
thyroid gland

trachea
ureter
urethra
uterus

- 1. voice box _____
- 2. membrane surrounding the lungs _____
- 3. throat _____
- 4. tube from the kidney to the urinary bladder _____
- 5. collection of fat cells _____
- 6. endocrine organ located at the base of the brain _____
- 7. windpipe _____
- 8. flexible connective tissue attached to bones at joints _____
- 9. surface cells covering the outside of the body and lining internal organs _____
- 10. endocrine gland surrounding the windpipe in the neck _____
- 11. womb _____
- 12. tube leading from the urinary bladder to the outside of the body _____

D Name the five cavities of the body.

- 1. cavity surrounded by the skull _____
- 2. cavity in the chest surrounded by the ribs _____
- 3. cavity below the chest containing the stomach, liver, and gallbladder _____
- 4. cavity surrounded by the hip bones _____
- 5. cavity surrounded by the bones of the back _____

E Select from the following to define the terms listed below.

space surrounding each lung
 space between the lungs
 muscle separating the abdominal and thoracic cavities
 membrane surrounding the abdominal organs
 area below the umbilicus (as well as below the stomach)
 area above the stomach
 area of the navel
 areas near the groin
 nervous tissue within the spinal cavity
 bony tissue surrounding the spinal cavity
 pad of cartilage between two adjoining vertebrae

1. hypogastric region _____
2. mediastinum _____
3. spinal cord _____
4. diaphragm _____
5. intervertebral disk _____
6. pleural cavity _____
7. spinal column _____
8. inguinal regions _____
9. peritoneum _____
10. umbilical region _____
11. epigastric region _____

F Name the five divisions of the back.

1. region of the neck _____
2. region of the chest _____
3. region of the waist _____
4. region of the sacrum _____
5. region of the tailbone _____

G Give the meanings of the following abbreviations.

1. LLQ _____
2. L5-S1 _____
3. RUQ _____
4. C3-C4 _____
5. RLQ _____

H Give the opposites of the following terms.

- | | |
|-------------------|-------------------|
| 1. deep _____ | 4. medial _____ |
| 2. proximal _____ | 5. dorsal _____ |
| 3. supine _____ | 6. superior _____ |

I Select from the following medical terms to complete the sentences below.

distal	midsagittal	vertebra
frontal (coronal)	proximal	vertebrae
inferior (caudal)	superior (cephalic)	
lateral	transverse (cross-sectional)	

1. The kidney lies _____ to the spinal cord. (Hint: to the side of)
2. The _____ end of the thigh bone (femur) joins with the kneecap (patella).
3. The _____ plane divides the body into an anterior and a posterior portion.
4. Each backbone is a (an) _____.
5. Several backbones are _____.
6. The diaphragm lies _____ to the organs in the thoracic cavity.
7. The _____ plane divides the body into right and left halves.
8. The _____ end of the upper arm bone (humerus) is at the shoulder.
9. The _____ plane divides the body into upper and lower portions.
10. The pharynx is located _____ to the esophagus.

J Use slashes to divide the following terms into component parts, and give meanings for each.

1. craniotomy _____
2. cervical _____
3. chondroma _____
4. chondrosarcoma _____
5. nucleic _____

K Give the medical term for the following definitions. Pay attention to spelling!

1. space below the chest containing the liver, stomach, gallbladder, and intestines

2. flexible connective tissue attached to bones at joints _____
3. rod-shaped structures in the cell nucleus, containing regions of DNA _____
4. muscle separating the abdominal and thoracic cavities _____
5. voice box _____
6. vertical plane dividing the body into right and left sides _____
7. pertaining to the neck _____
8. tumor (benign) of cartilage _____
9. control center of the cell; directs the activities of the cell _____
10. pertaining to the windpipe _____

L Complete each term based on the meaning provided.

1. pertaining to internal organs: _____ al
2. tumor of flesh tissue (malignant): _____ oma
3. pertaining to the chest: _____ ic
4. picture of the chromosomes in the cell nucleus: _____ type
5. sausage-shaped cellular structures in which catabolism takes place: mito _____
6. space between the lungs: media _____
7. endocrine gland at the base of the brain: _____ ary gland
8. pertaining to skin (surface) cells: epi _____
9. pertaining to far from the beginning of a structure: _____ al
10. on the surface of the body: super _____

M Circle the correct term to complete each sentence.

1. Dr. Curnen said the (**inguinal, superior, superficial**) wound barely scratched the surface.
2. Because the liver and spleen are on opposite sides of the body, the liver is in the (**RUQ, LUQ, LLQ**) of the abdominopelvic cavity and the spleen is in the (**RUQ, LUQ, RLQ**).
3. When a gynecologist performs a pelvic examination, the patient lies on her back in the (**ventral, dorsal, medial**) lithotomy position (Figure 2-17).
4. Sally complained of pain in the area surrounding her navel. The doctor described the pain as (**periumbilical, epigastric, hypogastric**).
5. After sampling the fluid surrounding her 16-week-old fetus and reviewing the chromosomal picture, the doctor explained to Mrs. Jones that the fetus had trisomy 21. The diagnosis was made by analysis of an abnormal (**urine sample, x-ray film, karyotype**).
6. The (**spinal, sagittal, abdominal**) cavity contains digestive organs.
7. The emergency department physician suspected appendicitis when Brandon was admitted with sharp (**LLQ, RLQ, RUQ**) pain.
8. Susan had hiccups after rapidly eating spicy Indian food. Her physician explained that the hiccups were involuntary contractions or spasms of the (**umbilicus, diaphragm, mediastinum**) resulting in uncontrolled breathing in of air.
9. Everyone in the society pages was noticeably slimmer this year. Could the popularity of liposuction surgery to remove unwanted (**cartilage, epithelial tissue, adipose tissue**) have something to do with this phenomenon?
10. Maria's coughing and sneezing were a result of an allergy to animal dander that affected her (**respiratory, cardiovascular, urinary**) system.
11. While ice skating, Natalie fell and landed on her buttocks. She had persistent (**cervical, thoracic, coccygeal**) pain for a few weeks but no broken bones on x-ray examination.

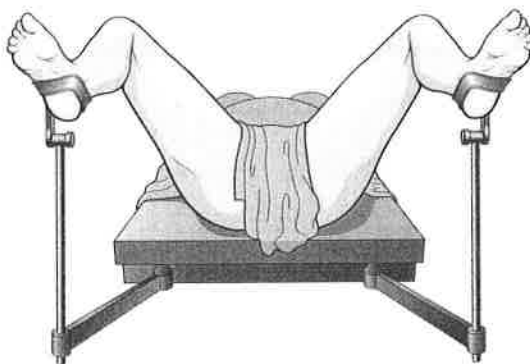


FIGURE 2-17 Dorsal lithotomy position. Lithotomy means incision to remove a stone (lith/o = stone). This position is used for gynecologic examinations and for removal of stones from the urinary tract.