

Chapter 9
Obstetrics and
Neonatology



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OBJECTIVES

Upon completion of this chapter you will be able to:

1 Identify organs and structures relating to pregnancy.

2 Define and spell word parts related to obstetrics and neonatology.

3 Define, pronounce, and spell disease and disorder terms related to obstetrics and neonatology.

4 Define, pronounce, and spell surgical and diagnostic terms related to obstetrics.

5 Define, pronounce, and spell complementary terms related to obstetrics and neonatology.

6 Interpret the meaning of abbreviations related to obstetrics and neonatology.

7 Interpret, read, and comprehend medical language in simulated medical statements and documents.

ANATOMY

Obstetrics is the branch of medicine that deals with childbirth and the care of the mother before, during, and after birth. **Neonatology** is the branch of medicine that deals with the diagnosis and treatment of disorders of the newborn.

Terms Relating to Pregnancy

Term	Definition
gamete	mature germ cell, either sperm (male) or ovum (female)
ovulation	expulsion of a mature ovum from an ovary (Figure 9-1)
conception, or fertilization	beginning of pregnancy, when the sperm enters the ovum. Fertilization normally occurs in the uterine tubes (Figure 9-1).
zygote	cell formed by the union of the sperm and the ovum
embryo	undborn offspring in the stage of development from implantation of the zygote to the end of the eighth week of pregnancy. This period is characterized by rapid growth of the embryo.
fetus	undborn offspring from the beginning of the ninth week of pregnancy until birth (Figure 9-2)
gestation, pregnancy	development of a new individual from conception to birth
gestation period	duration of pregnancy; normally 38 to 42 weeks, which can be divided into three equal periods, called <i>trimesters</i>
implantation	embedding of the zygote in the uterine lining. The process normally begins about 7 days after fertilization and continues for several days (Figure 9-1).
placenta, or afterbirth	a structure that grows on the wall of the uterus during pregnancy and allows for nourishment of the unborn child (Figure 9-1)
amniotic, or amnionic, sac	membranous bag that surrounds the fetus before delivery (also called bag of water) (Figure 9-1)
chorion	outermost layer of the fetal membrane
amnion	innermost layer of the fetal membrane
amniotic, or amnionic, fluid	fluid within the amniotic sac, which surrounds the fetus

SKIN CHANGES THAT OCCUR THROUGHOUT PREGNANCY

- **striae gravidarum**: "stretch marks" occurring on the abdomen, breast, buttocks, and thighs from weakening of elastic tissues
- **linea nigra**: dark medial line extending from the pubis upward
- **chloasma**: hyperpigmentation of blotchy brown macules usually evenly distributed over the cheeks and forehead



A & P Booster

For students desiring more anatomy and physiology or to view animations, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select A & P Booster, Chapter 9.

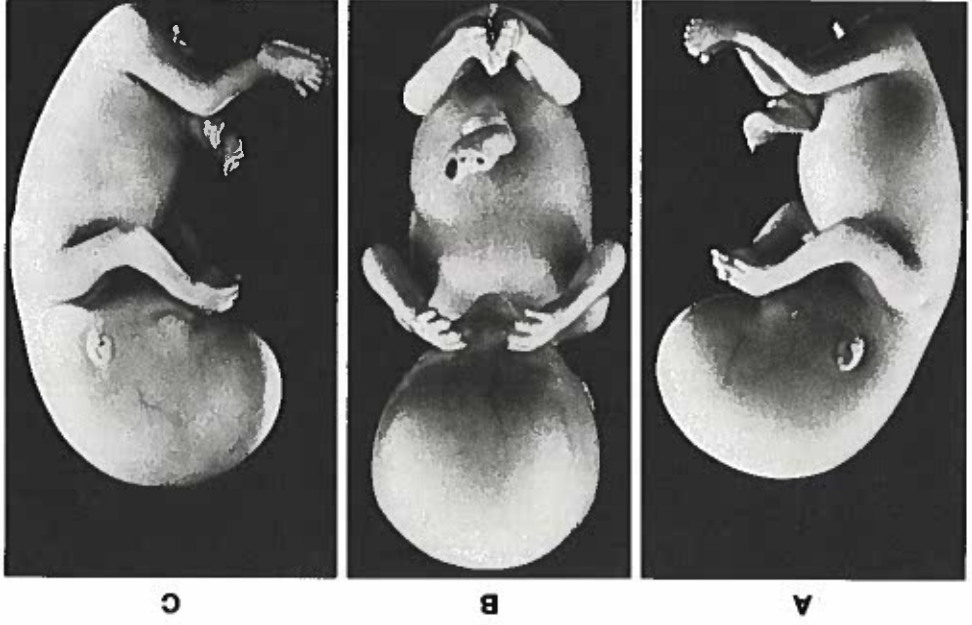


FIGURE 9-2 Human male fetus at 68 days (1.85 inches, 47 mm). A, Right. B, front. C, left.

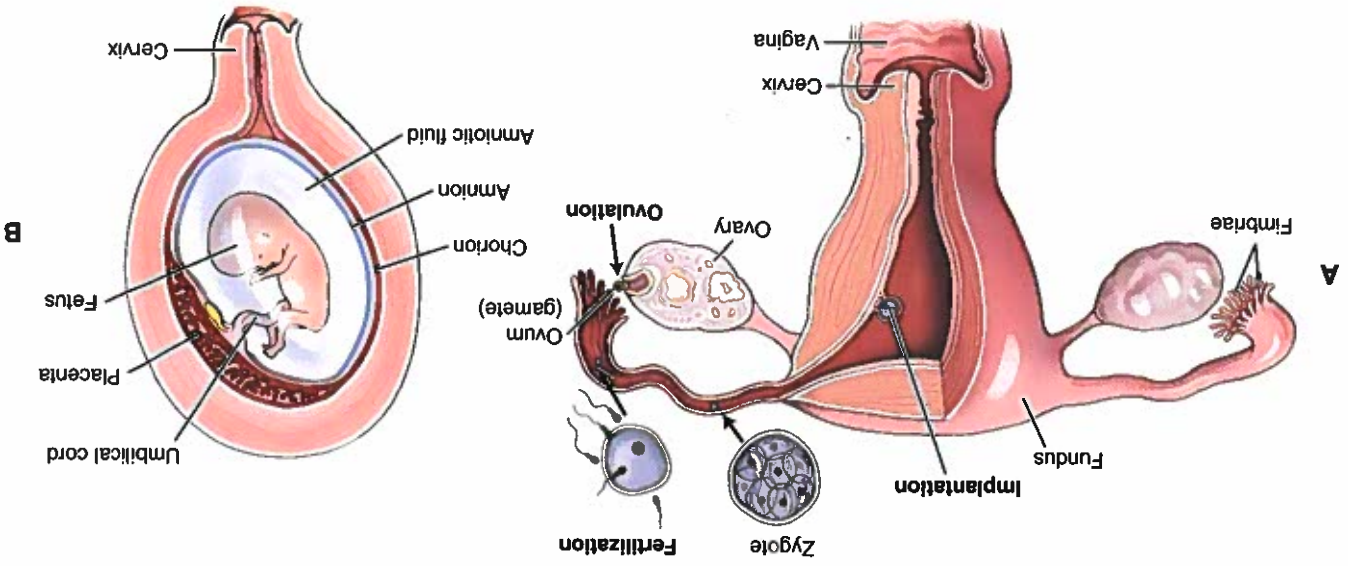


FIGURE 9-1 A, Ovation, fertilization, and implantation. B, Development of the fetus.

EXERCISE 1

Fill in the blanks with the correct terms. To check your answers to the exercises in this chapter, go to *Answers*, p. 401, at the end of the chapter.

1. The expulsion of a mature ovum, or _____, from an ovary is called _____. When the male gamete enters the female gamete, _____ occurs, and a(n) _____ is formed. This marks the beginning of the _____ period.
2. Once the zygote is implanted, it becomes a(n) _____ until the end of the eighth week of gestation. The unborn offspring from the beginning of the ninth week until birth is called a(n) _____.
3. The fetus is surrounded by a(n) _____ sac, which has an outermost layer, called the _____, and an innermost layer, called the _____. This sac contains the _____ fluid that surrounds the fetus.

WORD PARTS

Combining Forms of Obstetrics and Neonatology

Word parts you need to learn to complete this chapter are listed on the following pages. The exercises at the end of each list will help you learn their definitions and spelling.



Use the flashcards accompanying this text or electronic flashcards to assist you in memorizing the word parts for this chapter.



To use electronic flashcards, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Flashcards, Chapter 9.

Combining Form **Definition**

amni/o, amnion/o	amnion, amniotic fluid
chorio/	chorion
embryo/	embryo, to be full (Figure 9-3)
fet/o, fet/i	fetus, unborn child
(NOTE: both <i>i</i> and <i>o</i> may be used as combining vowels with fet/)	
gravid/o	pregnancy
lacto/	milk
nato/	birth
omphalo/	umbilicus, navel
par/o, parto/	bear, give birth to, labor, childbirth
puerper/o	childbirth

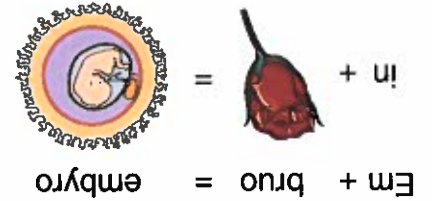


FIGURE 9-3

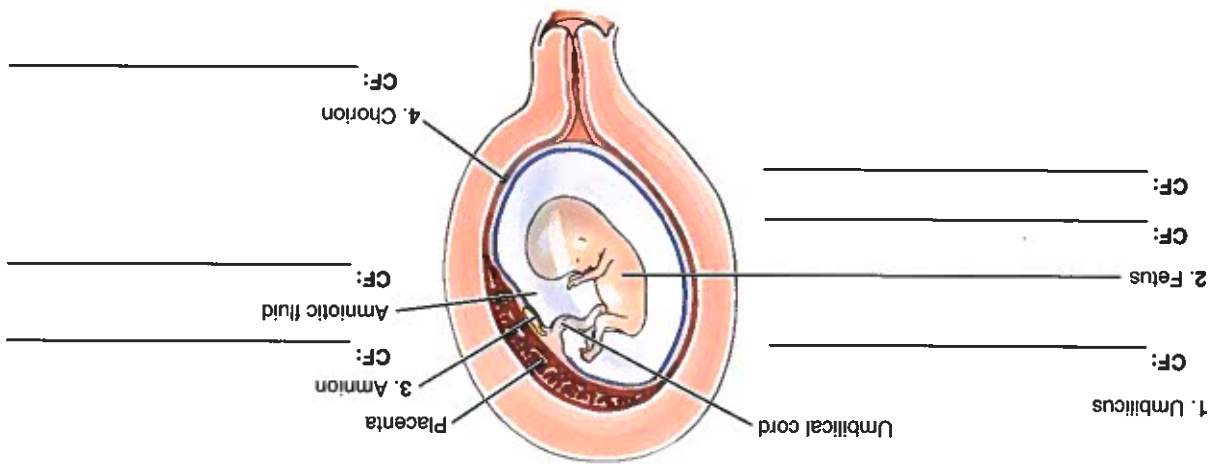
Embryo comes from the Greek *em*, meaning *in*, plus *bruo*, meaning *to bud* or *shoot*.

PUERPER

is made up of two Latin word roots: *puer*, meaning *child*, and *per*, meaning *through*.

EXERCISE FIGURE A

Fill in the blanks with combining forms in this diagram of fetal development. To check your answers, go to p. 401.



EXERCISE 2

Write the definitions of the following combining forms.

- 1. fet/o, fect/ _____
- 2. lact/o _____
- 3. part/o, part/o _____
- 4. omphal/o _____
- 5. amni/o, amnion/o _____
- 6. puerper/o _____
- 7. gravid/o _____
- 8. nat/o _____
- 9. chori/o _____
- 10. embry/o _____

EXERCISE 3

Write the combining form for each of the following terms.

- 1. milk _____
- 2. fetus _____
- 3. chorion _____
- 4. amnion, amniotic fluid _____
- 5. childbirth _____
- 6. bear, give birth to, labor, childbirth _____
- 7. pregnancy _____
- 8. embryo _____
- 9. birth _____
- 10. umbilicus, navel _____

Combining Forms Commonly Used in Obstetrics and Neonatology

Combining Form	Definition
cephal/o	head
esophag/o	esophagus (tube leading from the throat to the stomach) (see Figure 11-1)
pelv/o, pelvi/	pelvic bone, pelvis (see Chapter 14 Exercise Figure A and Exercise Figure B)
prim/i	first
(NOTE: both <i>i</i> and <i>o</i> may be used as the combining vowel with pelv/)	
(NOTE: the combining vowel is <i>i</i> .)	
pseud/o	false
pylor/o	pylorus (pyloric sphincter) (see Figure 11-2)
terat/o	malformations

TERAT/O
is translated literally as **monster**; however, in terms containing terat/o relating to obstetrics, terat/o refers to malformations or abnormal development.

EXERCISE 4

Write the definition of the following combining forms.

1. prim/i _____
2. pylor/o _____
3. cephal/o _____
4. esophag/o _____
5. pseud/o _____
6. pelv/o, pelvi/ _____
7. terat/o _____

EXERCISE 5

Write the combining form for each of the following.

1. head _____
2. pylorus _____
3. false _____
4. esophagus _____
5. first _____
6. malformations _____
7. pelvic bone, pelvis
 - a. _____
 - b. _____

Prefixes

Prefix	Definition
ante-, pre-	before
micro-	small
multi-	many
nulli-	none
post-	after

EXERCISE 6

Write the definitions of the following prefixes.

1. post- _____
2. multi- _____
3. nulli- _____
4. micro- _____
5. ante- _____
6. pre- _____

EXERCISE 7

Write the prefix for each of the following definitions.

1. none _____
 2. small _____
 3. many _____
 4. before _____
 5. after _____
- a. _____
- b. _____

Suffixes

Suffix	Definition
-amnios	amnion, amniotic fluid
-cyesis	pregnancy
-e	noun suffix, no meaning
-is	noun suffix, no meaning
-partum	childbirth, labor
-rrhexis	rupture
-tocia	birth, labor
-um	noun suffix, no meaning
-us	noun suffix, no meaning

-RRHESIS is the last of the four -rth suffixes to be learned. The other three introduced in earlier chapters are: -rrhea—flow or discharge -rrhagia—rapid flow (of blood) -rrhaphy—suturing, repair

The noun suffix -a, introduced in Chapter 4, also has no meaning.

Refer to Appendix A and Appendix B for alphabetized word parts and their meanings.

EXERCISE 8

Write the definitions of the following suffixes.

- rrhexis
- tocia
- cyesis
- partum
- amnios

EXERCISE 9

Write the suffix for each of the following definitions.

- birth, labor
- rupture
- childbirth, labor
- pregnancy
- amnion, amniotic fluid

EXERCISE 10

Write the noun suffixes introduced in this chapter that have no meaning.

1. _____
2. _____
3. _____
4. _____

MEDICAL TERMS

The terms you need to learn to complete this chapter are listed next. The exercises following each list will help you learn the definition and the spelling of each word.


Obstetric Disease and Disorder Terms

Built from Word Parts

The following terms are built from word parts you have already learned and can be translated literally to find their meanings. Further explanation of terms beyond the definition of their word parts, if needed, is included in parentheses.

Term	Definition
amnionitis (am-ne-o-NI-tis)	inflammation of the amnion
chorioamnionitis (kor-e-o-am-ne-o-NI-tis)	inflammation of the chorion and amnion
choriocarcinoma (kor-e-o-kar-si-NO-ma)	cancerous tumor of the chorion
dystocia (dis-TO-sha)	difficult labor
hysterorrhexis (his-ter-o-REK-sis)	rupture of the uterus
oligohydramnios (ol-i-go-hi-DRAM-ne-os)	scanty amnion water (less than the normal amount of amniotic fluid; 500 mL or less)
polyhydramnios (pol-e-hi-DRAM-ne-os)	much amnion water (more than the normal amount of amniotic fluid; 2000 mL or more) (also called hydramnios)

CAM TERM



Acupuncture is the ancient practice of inserting very thin needles into acupoints just under the skin to treat disease, increase immune response, relieve pain, and restore health. Acupuncture has been found to be effective in **providing pain relief during labor**.

EXERCISE 11

Practice saying aloud each of the obstetric disease and disorder terms built from word parts on p. 371.

To hear the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Pronunciation.

Place a check mark in the box when you have completed this exercise.

EXERCISE 12

Analyze and define the following disease and disorder terms.

1. chorioamnionitis _____
2. choriocarcinoma _____
3. dystocia _____
4. amnionitis _____
5. hysterorhexis _____
6. oligohydramnios _____
7. polyhydramnios _____

EXERCISE 13

Build disease and disorder terms for the following definitions by using the word parts you have learned.

1. cancerous tumor of the chorion
2. inflammation of the amnion
3. inflammation of the chorion and amnion
4. difficult labor
5. rupture of the uterus
6. scanty amnion water (less than normal amniotic fluid)
7. much amnion water (more than normal amniotic fluid)

WR	/CV/	WR	/	S
WR	/	WR	/	S
WR	/CV/	WR	/	S
P	/	S(WR)	/	
WR	/CV/	WR	/	S
WR	/	WR	/	S
WR	/CV/	WR	/	S

EXERCISE 14

Spell each of the obstetric disease and disorder terms built from word parts on p. 371 by having someone dictate them to you.

To hear and spell the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Spelling.

Place a check mark in the box if you have completed this exercise online.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Obstetric Disease and Disorder Terms

Not Built from Word Parts

In some of the following terms you may recognize word parts you have already learned; however, the full meaning of the terms cannot be discerned by the definition of their word parts.

Term	Definition
------	------------

abortion (a-BOR-shun)
 termination of pregnancy by the expulsion from the uterus of an embryo before fetal viability, usually before 20 weeks of gestation
 premature separation of the placenta from the uterine wall (Figure 9-5, A)

abruptio placentae (ab-RUP-she-ō)
 (pla-SEN-te)

severe complication and progression of preclampsia characterized by convulsion (see *preclampsia* on the next page).
 Eclampsia is a potentially life-threatening disorder.

eclampsia (e-KLAMP-se-a)

pregnancy occurring outside the uterus, commonly in the uterine tubes (Figure 9-4)

ectopic pregnancy (ek-TOP-ik)
 (PREG-nan-se)

abnormally low implantation of the placenta on the uterine wall completely or partially covering the cervix. (Dilation of the cervix can cause separation of the placenta from the uterine wall, resulting in bleeding. With severe hemorrhage, a cesarean section may be necessary to save the mother's life.) (Figure 9-5, B)

placenta previa (pla-SEN-ra)
 (PRE-ve-a)

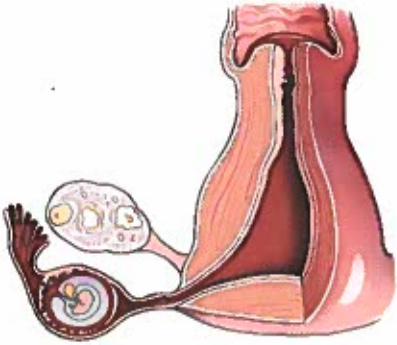


FIGURE 9-4
 Ectopic pregnancy.

Spontaneous abortion is the termination of pregnancy that occurs naturally. It is commonly referred to as *miscarriage*.
Induced abortion is the intentional termination of pregnancy by surgical or medical intervention.
Therapeutic abortion is an induced abortion performed because of health risks to the mother or for fetal disease.
Elective abortion is an induced abortion performed at the request of the woman.

TYPES OF ABORTION

Obstetric Disease and Disorder Terms—cont'd

Not Built from Word Parts

Term	Definition
<p>pre-eclampsia (pre-e-KLAMP-se-a)</p>	<p>abnormal condition encountered during pregnancy or shortly after delivery, characterized by high blood pressure, edema, and proteinuria, but with no convulsions. The cause is unknown; if not successfully treated, the condition can progress to eclampsia. Eclampsia is the third most common cause of maternal death in the United States after hemorrhage and infection.</p>

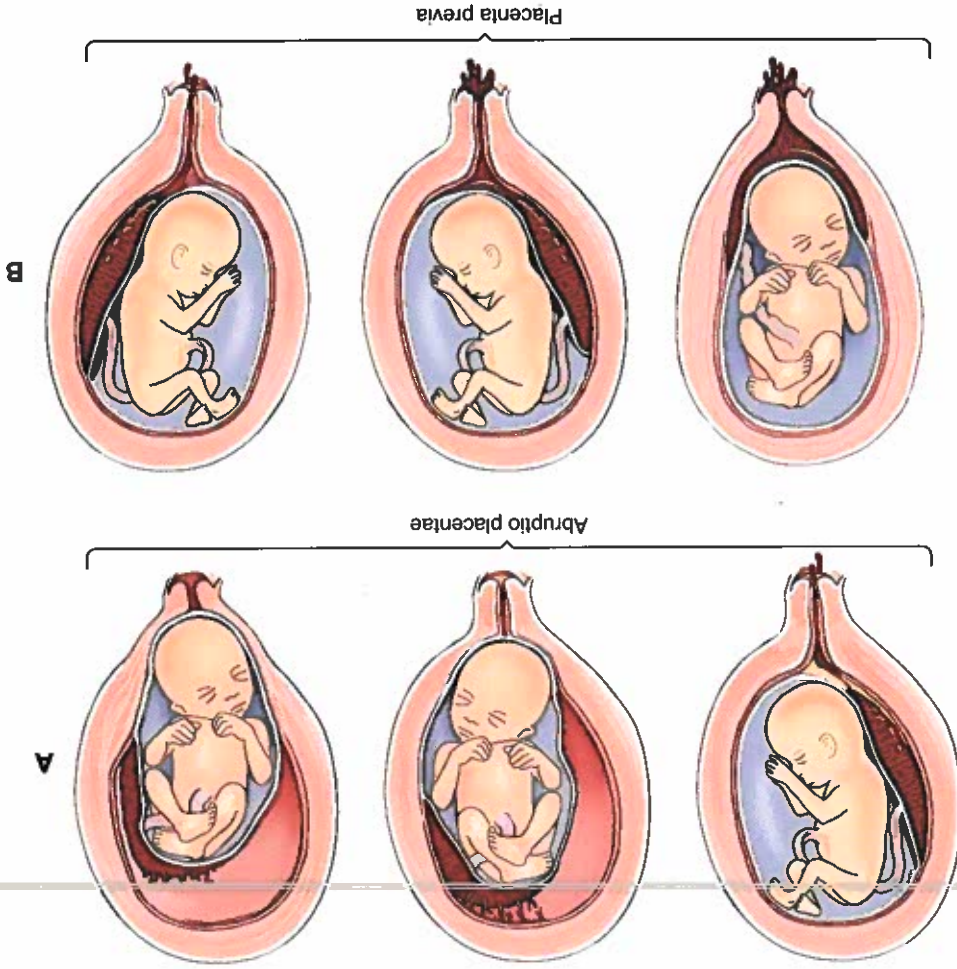


FIGURE 9-5

A, Various stages of abruptio placentae. B, Placenta previa.

Practice saying aloud each of the obstetric disease and disorder terms not built from word parts on pp. 373-374.

EXERCISE 15

To hear the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access information. Select Exercises & Review, Chapter 9, Chapter Exercises, Pronunciation.

Place a check mark in the box when you have completed this exercise.

EXERCISE 16

Write the definitions of the following terms.

1. abruptio placentae

2. abortion

3. placenta previa

4. eclampsia

5. ectopic pregnancy

6. preeclampsia

Write the term for each of the following definitions.

EXERCISE 17

1. premature separation of the placenta from the uterine wall

2. severe complication and progression of preeclampsia

3. termination of pregnancy by the expulsion from the uterus of an embryo

4. pregnancy occurring outside the uterus

5. abnormally low implantation of the placenta on the uterine wall

6. characterized by high blood pressure, edema, and proteinuria, but with no convulsions

EXERCISE 18

Spell each of the obstetric disease and disorder terms not built from word parts on pp. 373-374 by having someone dictate them to you.

To hear and spell the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Spelling.

Place a check mark in the box if you have completed this exercise online.

- | | |
|----|-------|
| 1. | _____ |
| 2. | _____ |
| 3. | _____ |
| 4. | _____ |
| 5. | _____ |
| 6. | _____ |

Neonatology Disease and Disorder Terms

Built from Word Parts

The following terms are built from word parts you have already learned and can be translated literally to find their meanings. Further explanation of terms beyond the definition of their word parts, if needed, is included in parentheses.

Term	Definition
microcephalus (<i>mī</i> -krō-SEF-a-lus)	(fetus with a very small head)
omphalitis (<i>om</i> -fa-lī-tis)	inflammation of the umbilicus
omphalocele (<i>OM</i> -fal-o- <i>sel</i>)	herniation at the umbilicus (a part of the intestine protrudes through the abdominal wall at birth) (Exercise Figure B)
pyloric stenosis (<i>pi</i> -LOR-ik) (ste- <i>NO</i> -sis)	narrowing pertaining to the pyloric sphincter. (Congenital pyloric stenosis occurs in 1 of every 200 newborns.)
tracheoesophageal fistula (<i>trā</i> -kē-ō-ē- <i>sof</i> -a- <i>fī</i> -al) (FIS-tū-la)	abnormal passageway pertaining to the esophagus and the trachea (between the esophagus and trachea)

EXERCISE 19

Practice saying aloud each of the neonatology disease and disorder terms built from word parts above.

To hear the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Pronunciation.

Place a check mark in the box when you have completed this exercise.

EXERCISE FIGURE B

Fill in the blanks to label the diagram.



umbilicus / CV / herniation

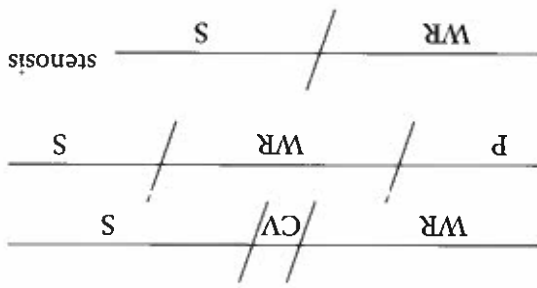
EXERCISE 20

Analyze and define the following disease and disorder terms.

1. pyloric (stenosis) _____
2. omphalocele _____
3. omphalitis _____
4. microcephalus _____
5. tracheoesophageal (fistula) _____

EXERCISE 21

Build disease and disorder terms for the following definitions by using the word parts you have learned.



1. hernia at the umbilicus
2. (fetus with a very) small head
3. (narrowing) pertaining to the pyloric sphincter

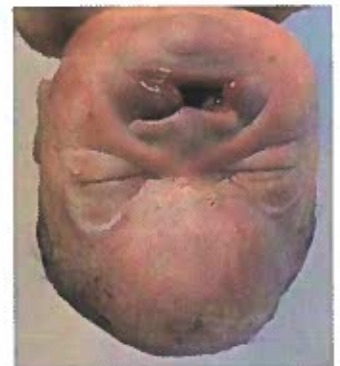


FIGURE 9-6
Cleft lip and palate.



FIGURE 9-7
Down syndrome.

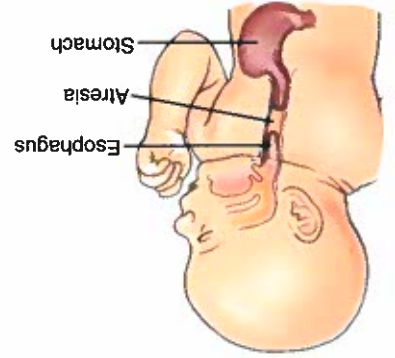


FIGURE 9-8
Esophageal atresia.

4. abnormal passageway pertaining to the esophagus and the trachea (between the esophagus and trachea)
5. inflammation of the umbilicus

WR / CV / WR / S
fistula

WR / S

EXERCISE 22

Spell each of the neonatology disease and disorder terms built from word parts on p. 376 by having someone dictate them to you.

e To hear and spell the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Spelling.

Place a check mark in the box if you have completed this exercise online.

1. _____
2. _____
3. _____

Neonatology Disease and Disorder Terms

Not Built from Word Parts

In some of the following terms you may recognize word parts you have already learned; however, the full meaning of the terms cannot be discerned by the definition of their word parts.

Term **Definition**

cleft lip and palate (PAL-at) (PAL-*at*) (left) (lip)

Down syndrome (down) (SIN-drom)

erythroblastosis fetalis (e-*ritb-ro-blas-TO-sis*) (fe-TAL-is)

congenital split of the lip and roof of the mouth (*left* indicates a fissure) (Figure 9-6)

genetic condition characterized by varying degrees of mental retardation and multiple defects (formerly called **mongolism**) (Figure 9-7)

condition of the newborn characterized by hemolysis of the erythrocytes. The incompatibility of the infants and mother's blood is Rh negative and the infant's blood is Rh positive.

congenital absence of part of the esophagus. Food cannot pass from the baby's mouth to the stomach (Figure 9-8).

Term	Definition
------	------------

fetal alcohol syndrome (FAS) (FE-tal) (AL-ko-hol) (SIN-drom)	a condition caused by excessive alcohol consumption by the mother during pregnancy. Various birth defects may present, including central nervous system dysfunction and malformations of the skull and face.
--	--

gastroschisis (gas-TROS-ki-sis)	a congenital fissure of the abdominal wall not at the umbilicus. Enterocoel, protrusion of the intestine, is usually present (Figure 9-9).
------------------------------------	--

respiratory distress syndrome (RDS) (RES-pi-ra-tor-e) (di-STRESS) (SIN-drom)	a respiratory complication in the newborn, especially in premature infants. In premature infants RDS is caused by normal immaturity of the respiratory system resulting in compromised respiration (formerly called hyaline membrane disease).
---	--

spina bifida (SPI-na) (BIF-i-da)	congenital defect in the vertebral column caused by the failure of the vertebral arch to close. If the meninges protrude through the opening the condition is called meningocele . Protrusion of both the meninges and spinal cord is called meningomyelocele . Both terms are covered in Chapter 15 (Figure 9-10).
-------------------------------------	---

EXERCISE 23

Practice saying aloud each of the neonatology disease and disorder terms not built from word parts found on pp. 378-379.

To hear the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Pronunciation.

Place a check mark in the box when you have completed this exercise.

EXERCISE 24

Match the terms in the first column with their correct definitions in the second column.

- | | |
|----------------------------------|---|
| 1. Down syndrome | a. defect of the vertebral column |
| 2. cleft lip and palate | b. respiratory complication |
| 3. spina bifida | c. split of the lip and roof of the mouth |
| 4. erythroblastosis fetalis | d. caused by incompatibility of the infants and the mother's blood |
| 5. fetal alcohol syndrome | e. congenital fissure of the abdominal wall |
| 6. respiratory distress syndrome | f. genetic condition characterized by mental retardation |
| 7. esophageal atresia | g. congenital absence of part of the esophagus |
| 8. gastroschisis | h. causes various birth defects, including central nervous system dysfunction |

BIRTHMARKS

are benign discolorations in the neonate's skin. Common birthmarks include **Mongolian spots**, which are bluish-black areas of hyperpigmentation often found on the lower back or buttocks of darker-skinned neonates, and **hemangiomas**, which are various benign vascular tumors or stains that cause reddish discoloration and/or malformations of the skin surface.

FIGURE 9-9
Gastroschisis.



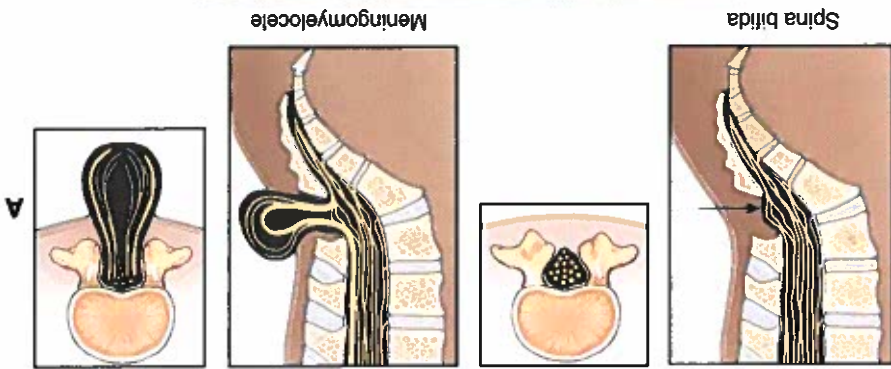


FIGURE 9-10 A, Drawings of spina bifida and meningocele. B, Photograph of meningocele.

EXERCISE 25

Spell each of the neonatal disease and disorder terms not built from word parts on pp. 378-379 by having someone dictate them to you.

To hear and spell the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Spelling.

Place a check mark in the box if you have completed this exercise online.

- | | | | |
|-------|----|-------|----|
| _____ | 4. | _____ | 1. |
| _____ | 3. | _____ | 2. |
| _____ | 2. | _____ | 3. |
| _____ | 1. | _____ | 4. |
| _____ | 8. | _____ | 5. |
| _____ | 7. | _____ | 6. |
| _____ | 6. | _____ | 7. |
| _____ | 5. | _____ | 8. |

Obstetric Surgical Terms

Built from Word Parts

The following terms are built from word parts you have already learned and can be translated literally to find their meanings. Further explanation of terms beyond the definition of their word parts, if needed, is included in parentheses.

Term	Definition
amniotomy (am-nē-ō-tō-mē)	incision into the amnion (rupture of the fetal membrane to induce labor; a special hook is generally used to make the incision)
episiotomy (ē-pīz-ē-ō-tō-mē)	incision of the vulva (perineum) (sometimes performed during delivery) (also called perineotomy) (Figure 9-11)

Obstetric Diagnostic Terms

Built from Word Parts

Term	Definition
pelvic sonography (PEL-vīk) (so-NOG-ra-tē)	pertaining to the pelvis, process of recording sound (pelvic ultrasound is used extensively to evaluate the fetus and pregnancy) (also called pelvic ultrasonography, pelvic ultrasound, and obstetric ultrasonography) (Figure 9-12)
OTHER	
amniocentesis (am-nē-ō-sen-TE-sis)	surgical puncture to aspirate amniotic fluid (the needle is inserted through the abdominal and uterine walls, using ultrasound to guide the needle. The fluid is used for the assessment of fetal health and maturity to aid in diagnosing fetal abnormalities.) (Figure 9-13).
amnioscope (AM-nē-ō-skop)	instrument used for visual examination of the amniotic fluid (and the fetus)
amniocopy (am-nē-ō-s-ko-pē)	visual examination of amniotic fluid (and the fetus)

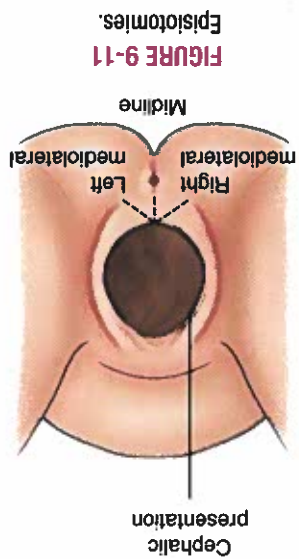


FIGURE 9-11
Episiotomies.



FIGURE 9-12 Pelvic ultrasound image showing a fetal profile. Some specific uses are to: (1) diagnose early abnormal pregnancy, (2) determine the age of the fetus, (3) measure fetal growth, and (4) determine fetal position.

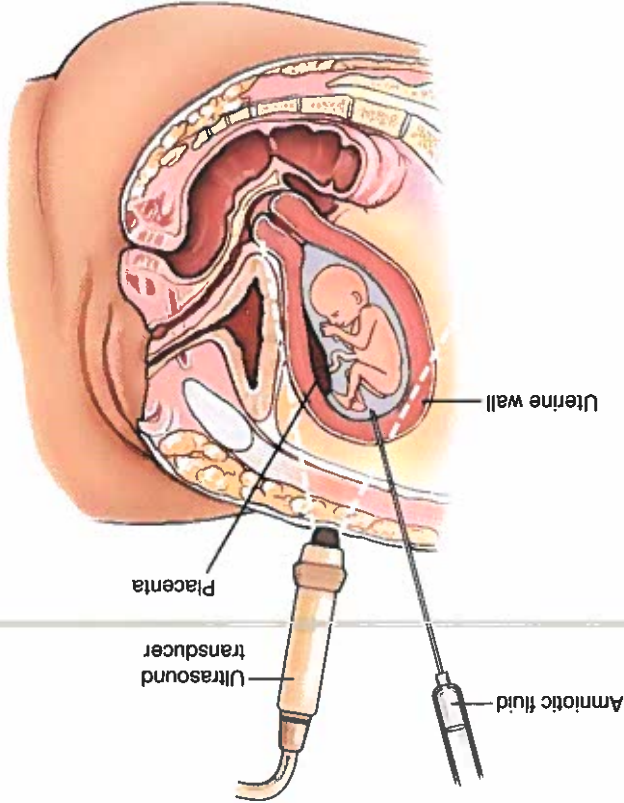


FIGURE 9-13 Amniocentesis. Ultrasound is used to guide the needle through the abdominal and uterine walls.

EXERCISE 26

Practice saying aloud each of the obstetric surgical and diagnostic terms built from word parts on p. 381.

To hear the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Pronunciation.

Place a check mark in the box when you have completed this exercise.

EXERCISE 27

Analyze and define the following obstetric surgical and diagnostic terms.

1. episiotomy _____
2. amniotomy _____
3. amnioscope _____
4. pelvic sonography _____
5. amniocentesis _____
6. amnioscopy _____

EXERCISE 28

Build obstetric surgical and diagnostic terms for the following definitions by using the word parts you have learned.


1. incision into the amnion _____
2. incision of the vulva _____
3. visual examination of the amniotic fluid (and fetus) _____
4. surgical puncture to aspirate amniotic fluid _____
5. instrument used for visual examination of the amniotic fluid (and fetus) _____
6. pertaining to the pelvis, process of recording sound _____

WR	/	/	/	S
WR	/	/	/	S
WR	/	/	/	S
WR	/	/	/	S
WR	/	/	/	S
WR	/	/	/	S
WR	/	/	/	S

EXERCISE 29

Spell each of the obstetric surgical and diagnostic terms built from word parts on p. 381 by having someone dictate them to you.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

 To hear and spell the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Spelling.

Place a check mark in the box if you have completed this exercise online.

Obstetric and Neonatal Complementary Terms

Built from Word Parts

The following terms are built from word parts you have already learned and can be translated literally to find their meanings. Further explanation of terms beyond the definition of their word parts, if needed, is included in parentheses.

Term	Definition
amniochorial (am-ne-ō-KOR-ē-al)	pertaining to the amnion and chorion
amniorrhea (am-ne-ō-RE-a)	discharge (escape) of amniotic fluid
amniorrhexis (am-ne-ō-REK-sis)	rupture of the amnion
ante-partum (an-tē-PAR-tum)	before childbirth (reference to the mother)
embryogenic (em-bre-ō-JEN-ik)	producing an embryo
embryoid (EM-bre-oyd)	resembling an embryo
fetal (FE-tal)	pertaining to the fetus
gravida (GRAV-i-da)	pregnant (woman); (a woman who is or has been pregnant, regardless of pregnancy outcome)
gravidopuerperal (grv-i-do-pū-ER-per-al)	pertaining to pregnancy and childbirth (from delivery until reproductive organs return to normal)
intrapartum (in-tra-PAR-tum)	within (during) labor and childbirth
lactic (LAK-tik)	pertaining to milk
lactogenic (lak-to-JEN-ik)	producing milk (by stimulation)
lactorrhea (lak-to-RE-a)	(spontaneous) discharge of milk
multi-gravida (mul-ti-GRAY-i-da)	many pregnancies (a woman who has been pregnant two or more times)
multi-para (multip) (mul-TIP-a-ra)	many births (a woman who has given birth to two or more viable offspring)
natal (NA-tal)	pertaining to birth
neonate (NE-ō-nat)	new birth (an infant from birth to 4 weeks of age) (synonymous with newborn [NB]) (Exercise Figure C)
neonatologist (ne-ō-na-TOL-ō-jist)	physician who studies and treats disorders of the newborn
neonatology (ne-ō-na-TOL-ō-je)	study of the newborn (branch of medicine that deals with diagnosis and treatment of disorders in newborns)

Term	Definition
nulligravida (<i>nul-li-GRAY-i-da</i>)	no pregnancies (a woman who has never been pregnant)
nullipara (<i>nu-LIP-a-ra</i>)	no births (a woman who has not given birth to a viable offspring)
para (<i>PAR-a</i>)	birth (a woman who has given birth to an offspring, viable or stillborn)
postnatal (<i>post-NA-tal</i>)	pertaining to after birth (reference to the newborn)
postpartum (<i>post-PAR-tum</i>)	after childbirth (reference to the mother)
prenatal (<i>pre-NA-tal</i>)	pertaining to before birth (reference to the newborn)
primigravida (<i>prī-mi-GRAY-i-da</i>)	first pregnancy (a woman in her first pregnancy)
primipara (primip) (<i>prī-MIP-a-ra</i>)	first birth (a woman who has given birth to an offspring after the point of viability—20 weeks)
pseudocyesis (<i>si-do-si-E-sis</i>)	false pregnancy (a woman who believes she is pregnant—this may be a psychological condition or related to underlying pathology, such as a uterine tumor)
puerpera (<i>pu-ER-per-a</i>)	childbirth (a woman who has just given birth)
puerperal (<i>pu-ER-per-al</i>)	pertaining to (immediately after) childbirth
teratogen (<i>TER-a-to-je-n</i>)	any agent producing malformations (in the developing embryo). Teratogens include chemical agents such as drugs, alcohol, viruses, x-rays, and environmental factors.
teratogenic (<i>ter-a-to-JEN-ik</i>)	producing malformations (in the developing embryo)
teratology (<i>ter-a-TOL-o-jē</i>)	study of malformations (usually in regard to malformations caused by teratogens on the developing embryo)

APGAR SCORE

Developed in 1952 by Virginia Apgar, MD, the Apgar score provides a basic framework for rapid neonatal assessment by health care providers at 1 minute and 5 minutes after birth. Five vital criteria (heart rate, respiration, muscle tone, response to stimulation, and color) are assessed. The score is totaled, with a 5-minute Apgar score of 7 to 10 considered normal. The Apgar score is used only for quickly reporting a neonate's status and does not predict future health outcomes.

EXERCISE FIGURE C

Fill in the blanks to label the diagram.



new / birth

Terms Relating to Mother and Newborn

After Birth	Before Birth	
postpartum	ante partum	Mother
postnatal	prenatal	Newborn

Comparing Terms with gravid/o and par/o

gravid/o—pregnant	par/o—birth
nulli/gravid/a—no pregnancies	nulli/par/a—no births
primi/gravid/a—first pregnancy	primi/par/a—first birth
multi/gravid/a—many pregnancies	multi/par/a—many births

EXERCISE 30

Practice saying aloud each of the complementary terms built from word parts on pp. 384–385.



To hear the terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Pronunciation.

Place a check mark in the box when you have completed this exercise.

EXERCISE 31

Analyze and define the following obstetric and neonatal complementary terms.

- 1. puerpera _____
- 2. amniorrhexis _____
- 3. antepartum _____
- 4. pseudocyesis _____
- 5. prenatal _____
- 6. lactic _____
- 7. lactorrhoea _____
- 8. amniorrhea _____
- 9. multipara _____
- 10. embryogenic _____
- 11. embryoid _____
- 12. fetal _____
- 13. gravida _____
- 14. amniochorial _____
- 15. multigravida _____
- 16. lactogenic _____
- 17. natal _____
- 18. gravidopuerperal _____
- 19. neonatology _____
- 20. nullipara _____
- 21. para _____
- 22. primigravida _____
- 23. postpartum _____
- 24. neonate _____
- 25. primipara _____
- 26. puerperal _____
- 27. nulligravida _____
- 28. inpartum _____
- 29. teratogen _____
- 30. postnatal _____
- 31. teratology _____
- 32. neonatologist _____
- 33. teratogenic _____

EXERCISE 32

Build the complementary terms for the following definitions by using the word parts you have learned.

1. pertaining to the amnion and chorion

WR / CV / S
WR / CV / S

2. before childbirth (reference to the mother)

P / WR / S
P / WR / S

3. producing an embryo

WR / CV / S
WR / CV / S

4. pertaining to the fetus

WR / S
WR / S

5. pertaining to before birth (reference to the newborn)

P / WR / S
P / WR / S

6. pertaining to milk

WR / S
WR / S

7. (spontaneous) discharge of milk

WR / CV / S
WR / CV / S

8. discharge (escape) of amniotic fluid

WR / CV / S
WR / CV / S

9. false pregnancy

WR / CV / S
WR / CV / S

10. the production of milk (by stimulation)

WR / CV / S
WR / CV / S

11. rupture of the amnion

WR / CV / S
WR / CV / S

12. resembling an embryo

WR / S
WR / S

13. pregnant (woman)

WR / S
WR / S

14. pertaining to pregnancy and childbirth

WR / CV / S
WR / CV / S

15. many births

P / WR / S
P / WR / S

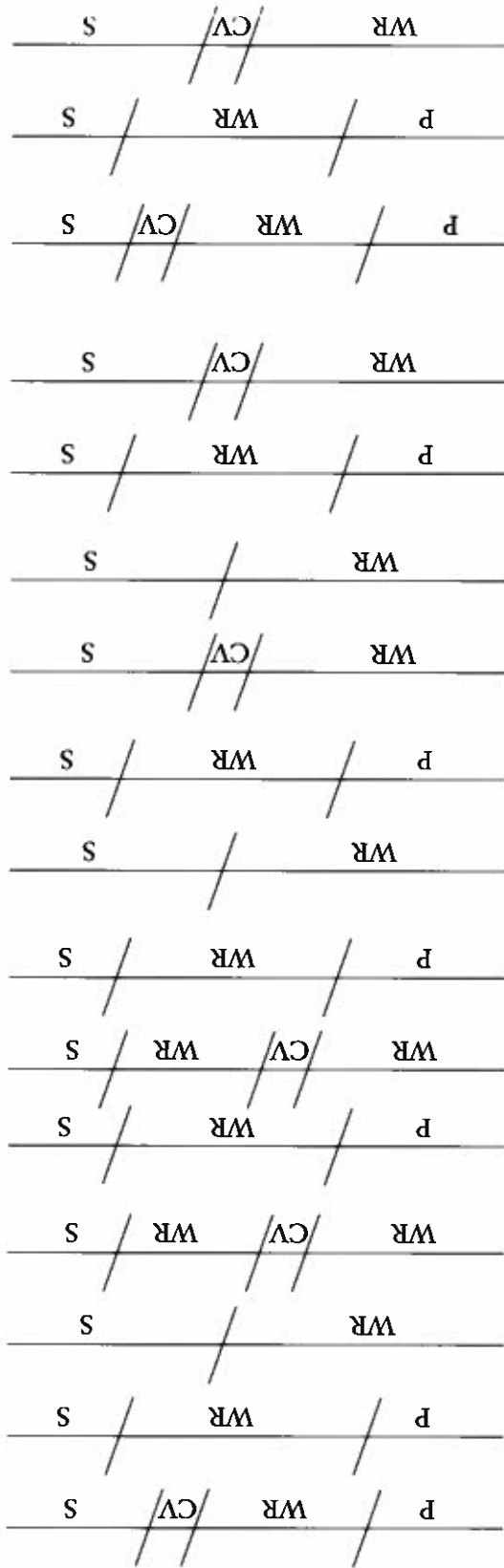
16. pertaining to birth

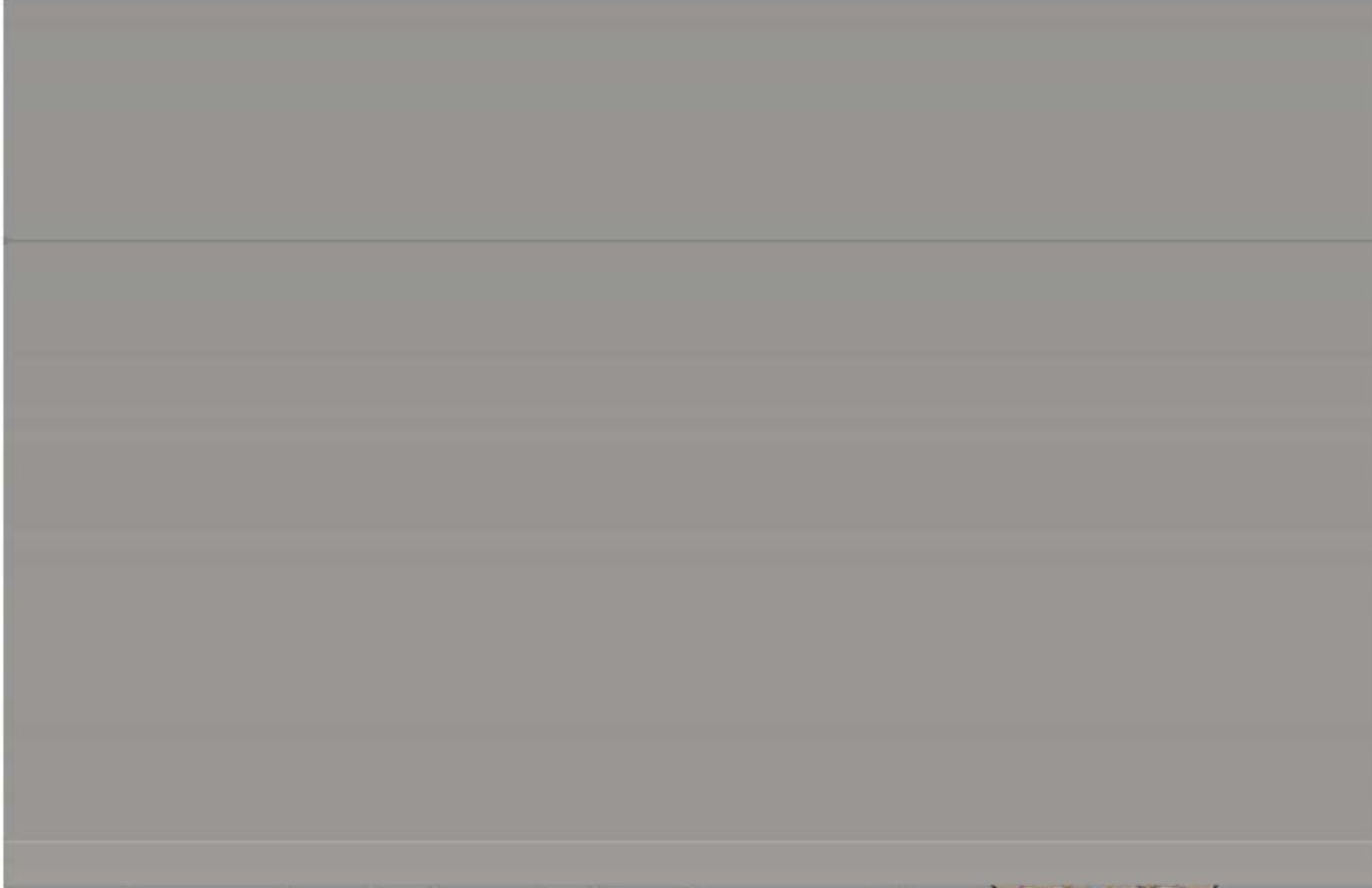
WR / S
WR / S

17. new birth (an infant from birth to 4 weeks of age)

P / WR / S
P / WR / S

- 18. study of the newborn
- 19. no births
- 20. birth
- 21. first pregnancy
- 22. after childbirth (reference to the mother)
- 23. first birth
- 24. many pregnancies
- 25. pertaining to (immediately after) childbirth
- 26. no pregnancies
- 27. any agent producing malformations
- 28. childbirth
- 29. within (during) labor and childbirth
- 30. producing malformations
- 31. physician who studies and treats disorders of the newborn
- 32. pertaining to after birth (reference to the newborn)
- 33. study of malformations





- | | |
|-----|-------|
| 12. | _____ |
| 11. | _____ |
| 10. | _____ |
| 9. | _____ |
| 8. | _____ |
| 7. | _____ |
| 6. | _____ |
| 5. | _____ |
| 4. | _____ |
| 3. | _____ |
| 2. | _____ |
| 1. | _____ |
-
- | | |
|-----|-------|
| 29. | _____ |
| 28. | _____ |
| 27. | _____ |
| 26. | _____ |
| 25. | _____ |
| 24. | _____ |
| 23. | _____ |
| 22. | _____ |
| 21. | _____ |
| 20. | _____ |
| 19. | _____ |
| 18. | _____ |



Term	Definition
colostomium (k-LOS-tem)	thin, milky fluid secreted by the breast during pregnancy and during the first days after birth before lactation begins
congenital anomaly (kon-JEN-i-tal) (a-NOM-a-le)	abnormality present at birth; often discovered before birth by ultrasonography and/or amniocentesis
in vitro fertilization (IVF) (in VE-tro) (fer-ti-li-ZA-shun)	a method of fertilizing human ova outside the body and placing the zygote into the uterus; used when infertility is present (Figure 9-15)
lactation (lak-TA-shun)	the secretion of milk
lochia (LO-ke-a)	vaginal discharge after childbirth
meconium (me-KO-ne-um)	first stool of the newborn (greenish-black)
midwife (MID-wif)	an individual who practices midwifery
midwifery (MID-wif-ree)	the practice of assisting in childbirth
obstetrician (ob-ste-TRISH-an)	physician who specializes in obstetrics
obstetrics (OB) (ob-STET-riks)	medical specialty dealing with pregnancy, childbirth, and puerperium
parturition (par-tu-RISH-un)	act of giving birth
premature infant (PRE-ma-tur) (IN-fent)	infant born before completing 37 weeks of gestation (also called preterm infant)
puerperium (pu-er-PE-re-um)	period from delivery until the reproductive organs return to normal (approximately 6 weeks)
quickening (KWIK-en-ing)	the first feeling of movement of the fetus in utero by the pregnant woman. It usually occurs between 16 and 20 weeks of gestation.
stillborn (STIL-born)	born dead

Refer to **Appendix D** for pharmacology terms related to obstetrics and neonatology.



CEASAREAN SECTION (C-SECTION)

The origin of this term has no relation to the birth of Julius Caesar, as is commonly believed. One suggested etymology is that from 715 to 672 BC it was Roman law that the operation be performed on dying women in the last few months of pregnancy in the hope of saving the child. At that time the operation was called a *caso matris utero*, which means *the cutting of the mother's uterus*.

INFERTILITY

Managing infertility, a condition estimated by the CDC to affect approximately 12% of the U.S. reproductive-age population, has many options. They include medications to stimulate ova production and procedures to provide artificial insemination. Techniques that artificially combine *both* ova and sperm are referred to as *assisted reproductive technology (ART)*.

MIDWIFERY

Midwives who practice midwifery supervise pregnancy, labor, delivery, and delivery independently, care for the newborn, and obtain medical assistance as necessary. A midwife may or may not be a registered nurse. Education, certification, and licensure vary by state and country.

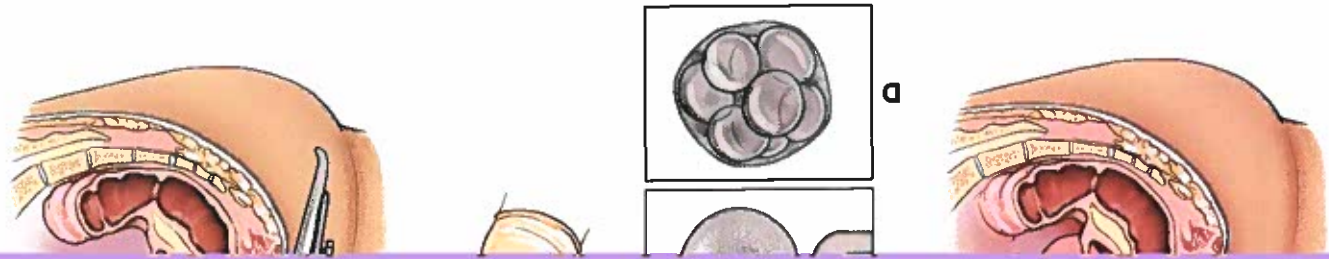


FIGURE 9-15

In vitro fertilization (IVF). After ovarian stimulation, ova are retrieved from the ovary by ultrasound-guided transvaginal needle aspiration (A). The ova are fertilized outside the body in a dish with spermatozoa obtained from semen (B). A technique using a single sperm called intracytoplasmic sperm injection may also be used (C). After 48 hours the fertilized ova (zygotes) (D) are injected into the uterus for implantation (E). The first pregnancy after in vitro fertilization was reported more than 3 decades ago. Since then assisted reproductive technology (ART) has achieved hundreds of thousands of pregnancies worldwide.

EXERCISE 35

Match the definitions in the first column with the correct terms in the second column.

- | | | |
|---|-------|------------------------|
| 1. vaginal discharge | _____ | a. lochia |
| 2. medical specialty | _____ | b. obstetrician |
| 3. abnormality present at birth | _____ | c. premature infant |
| 4. period after delivery | _____ | d. meconium |
| 5. giving birth | _____ | e. obstetrics |
| 6. physician specializing in obstetrics | _____ | f. partition |
| 7. buttocks, feet, or knees first | _____ | g. puerperium |
| 8. first stool | _____ | h. cesarean section |
| 9. born before completing 37 weeks of gestation | _____ | i. congenital anomaly |
| 10. birth through an abdominal and uterine incision | _____ | j. breech presentation |

EXERCISE 36

Match the definitions in the first column with the correct terms in the second column.

- | | | |
|---|-------|---------------------------|
| 1. assisting in childbirth | _____ | a. quickening |
| 2. one who assists in childbirth | _____ | b. lactation |
| 3. secretion of milk | _____ | c. cephalic presentation |
| 4. head first | _____ | d. colostrum |
| 5. born dead | _____ | e. midwife |
| 6. movement of the fetus | _____ | f. stillborn |
| 7. secreted before lactation | _____ | g. in vitro fertilization |
| 8. method of fertilizing ova outside the body | _____ | h. midwifery |

EXERCISE 37

Write the definitions of the following terms.

1. meconium _____
2. obstetrics _____
3. premature infant _____
4. lochia _____
5. puerperium _____
6. partition _____

EXERCISE 38

Spell each of the complementary terms not built from word parts on pp. 390-391 by having someone dictate them to you.

- 13. cephalic presentation _____
- 14. colostrium _____
- 15. midwife _____
- 16. stillborn _____
- 17. midwifery _____
- 18. in vitro fertilization _____

Abbreviations

CS, C-section	cesarean section
DOB	date of birth
EDD	expected (estimated) date of delivery
FAS	fetal alcohol syndrome
IVF	in vitro fertilization
LMP	last menstrual period
multipara	multipara
NB	newborn
OB	obstetrics
primipara	primipara
RDS	respiratory distress syndrome
VBAC	vaginal birth after cesarean section

Refer to **Appendix C** for a complete list of abbreviations.



EXERCISE 39

Write the definition of the following abbreviations.

1. OB _____
2. EDD _____ of _____
3. LMP _____
4. DOB _____
5. NB _____
6. multip _____
7. CS, C-section _____
8. VBAC _____
9. RDS _____
10. primip _____
11. FAS _____
12. IVF _____

University Hospital and Medical Center

4700 North Main Street • Wellness, Arizona 54321 • (987) 555-3210

PATIENT NAME: Gloria Cisneros **CASE NUMBER:** 17432-08N

DATE OF BIRTH: 08/26/19XX

DATE: 09/23/20XX

PROGRESS NOTE

HISTORY: Gloria Cisneros is a 24-year-old married Latina 1. _____, 2 who is here today with her husband. Her 3. _____ is 1 week from today. She has received 4 _____ care here at the Medical Center Obstetrics Clinic since her second month of pregnancy. This 5. _____ has been uncomplicated with no spotting, albuminuria, hypertension, edema, or glycosuria. Patient has attended Lamaze classes with her husband.

PHYSICAL EXAM: Her breasts are enlarged. She has gained 2 pounds since her last visit and she has gained 25 pounds throughout her pregnancy. Her current weight is 164 pounds. Her cervix is 1 cm dilated. Routine 6.

EXERCISE 40

Interact with Medical Documents—cont'd

B. Read the following radiology report and answer the questions following it.

053447 SMITH, EMMA

File Patient Navigate Custom Fields Help

MR#: 053447 Sex: F

Name: SMITH, EMMA

DOB: 04/17/20XX

PATIENT NAME: Emma Smith

NUMBER: 053447

REFERRING PHYSICIAN: Joseph Plains, MD

INDICATIONS: Lower abdominal pain

EXAMINATION: Pelvic sonography

HISTORY: Thirty-two-year-old primip with menstrual irregularity and abdominal pain. History of pelvic inflammatory disease and spontaneous abortion x1.

FINDINGS: Sagittal and transverse images reveal an extrauterine sac containing a fetus in the left uterine tube. Cystic mass (hematoma) is evident in the rectouterine pouch. No fetal heart activity is noted.

OPINION: Ectopic pregnancy, left uterine tube.

A.W. Tyat, MD

AWT/ogo

Start Log On/Off Print Edit

1. The patient has:
 - a. been pregnant two or more times
 - b. given birth to two or more viable offspring
 - c. borne one viable offspring
 - d. never been pregnant
2. T F The patient has experienced one abortion
3. T F Radiographic images were used to determine the findings.

EXERCISE 41

Interpret Medical Terms

To test your understanding of the terms introduced in this chapter, circle the words that correctly complete the sentences. The italicized words refer to the correct answer.

1. The premature infant was diagnosed as having *respiratory distress syndrome*, a disease of the (umbilicus, erythrocytes, lungs).
2. Because of inadequate uterine contractions, the patient was experiencing *difficult labor*, or (dysphasia, dystocia, dysuria).
3. Down syndrome was diagnosed prenatally by laboratory analysis of *amniotic fluid aspirated by surgical puncture*, or (amniocentesis, amniocopy, amnioscope).

Obstetrics, visit the American College of Obstetricians and Gynecologists at <http://www.acog.org/>. Additional information regarding assisted reproductive technology (ART) can be found at the Centers for Disease Control and Prevention website at <http://www.cdc.gov/ART/>.

8. The word that means the *act of giving birth* is (parturition, puerperium, gravidopuerperal).
9. *Rupture of the uterus* is called (hysterorrhaphy, hysterorhexis, hysteroposis).
10. Excessive alcohol intake during pregnancy may result in *its producing malformations* or (quickening, colostrum, teratogenic) changes to the fetus.

EXERCISE 42 Read Medical Terms in Use

Practice pronunciation of the terms by reading the following medical document. Use the pronunciation key following the medical term to assist you in saying the words.

To hear these terms, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 9, Chapter Exercises, Read Medical Terms in Use.





To access the Evolve website, go to <http://evolve.elsevier.com>. Refer to p. 18 for your Evolve Access Information. Select Exercises & Review, Chapter 3, then select Chapter Exercises, Practice Activities, Animations, or Games. Place a check mark in the box when you have completed an exercise or activity, watched an animation, or played a game. Have fun!

Chapter Exercises

- Exercises in this section of your Evolve resources correlate to exercises in your textbook. You may have completed them as you worked through the chapter.
- Pronunciation
- Spelling
- Read Medical Terms in Use

Practice Activities

- Practice in study mode, then test your learning in assessment mode. Keep track of your scores from assessment mode if you wish.
- Picture It
- Define Word Parts
- Build Medical Terms
- Word Shop
- Define Medical Terms
- Use It
- Hear It and Type It: Clinical Vignettes

SCORE _____

Animations

- Abruptio Placentae
- (placental abruption)
- Breech
- Presentation Exam
- Breech Delivery Arms
- Breech Delivery Face
- Dystocia Delivery
- Ectopic Pregnancy
- Placenta Previa

Games

- Name that Word Part
- Term Storm
- Term Explorer
- Termbusters
- Medical Millionaire
- Crossword Puzzle

Combining Forms

- amni/o
- amnion/o
- cephal/o
- chori/o
- embry/o
- esophag/o
- fet/i
- fet/o
- gravid/o

Prefixes

- lacr/o
- ante-
- micro-
- multi-
- nulli-
- post-
- pre-
- lacr/o
- navo
- omphal/o
- par/o
- par/o
- pelv/i
- pelv/o
- prim/i
- pseud/o
- puerper/o
- pylor/o
- terat/o

Suffixes

- amnios
- cyesis
- e
- is
- partum
- rhexis
- tocia
- um
- us

Can you define and spell the following word parts?

REVIEW OF WORD PARTS

chilocarcinoma
dystocia
hysterorrhexis
oligohydramnios
polyhydramnios

omphalocele
pyloric stenosis
tracheoesophageal
fistula

pelvic sonography

anteperitum
embryogenic
embryoid
fetal
gravidida

neonate
neonatologist
neonatology
nulligravida
nullipara
para
postnatal
postpartum
prenatal
primigravida
primipara (primip)
pseudocyesis
puerpera
puerperal

teratogen
teratogenic
teratology