Learning Activities
1. f, g, d, a, h, b, c, e
2. a. Prolapsed cord: record the fetal heart rate for at least 1 minute after amniotomy to observe for rates outside the normal range of 110–160 BPM at term.
   b. Infection: Observe fluid for cloudiness or foul odor; take temperature every 2–4 hours (or according to facility policy and patient assessment) and observe for a temperature of 38°C (100.4°F) or higher or for fluid that is cloudy, yellow, or foul-odored.
   c. Abruptio placentae (see details in Chapter 5): bleeding with abdominal or low back pain; tender, boardlike uterus; cramping contractions (uterine irritability)
3. Induction of labor is the artificial initiation of labor before spontaneous labor has begun.
   Augmentation of labor is stimulation of labor that has already begun.
   a. Prostaglandins
   b. Oxytocin (Pitocin) (prostaglandins, including misoprostol, also may be used)
   c. Tocolytics or drugs used as tocolytics, such as terbutaline (beta-adrenergic agent), magnesium sulfate (relaxes smooth muscle as well as reducing CNS irritability in pre-eclampsia), indomethacin (prostaglandin synthesis inhibitor), or nifedipine (calcium channel blocker)
   d. Steroids such as dexamethasone or beta-methasone; thyroid-releasing hormone
5. a. Cold applications for at least 12 hours
   b. Warm applications after 12–24 hours
   c. Oral analgesics
6. Skin incision and uterine incision. The uterine incision is more important in terms of its likelihood of rupture during a subsequent pregnancy.
   a. Check every 15 minutes or according to facility protocol to identify hemorrhage, shock, poor respiratory function.
   b. Check site for patency and rate of flow.
   c. Check fundus for firmness, location, deviation from the midline.
   d. Check dressing for drainage; outline evidence of wound drainage on dressing to determine if it stabilizes or continues.
   e. Check lochia for amount, color, presence of clots, odor; look on woman’s back side.
   f. Check catheter bag for output and color.
8. Complete with contents of Box 8-1.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Hypertonic Labor</th>
<th>Hypotonic Labor (most common)</th>
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| a. Contraction         | Frequent, cramping, poorly coordinated  
Inadequate relaxation between contractions  
Painful, but do not result in progress | Too weak to be effective                                          |
| b. Time of occurrence during labor | Usually occurs during latent phase or before 4 cm dilation | Labor begins normally; progress decreases or stops during active phase |
| c. Medical management  | Mild sedation to allow rest  
 Possibly tocolytics | Amniotomy  
 Augmentation (oxytocin, nipple stimulation)  
 Hydration |
| d. Nursing care        | Emotional support, as in hypotonic labor  
 Avoid making judgments about how much pain she should have  
 Promote rest | Emotional support for frustration; tell her if she makes progress  
 Position changes, especially upright or side-lying  
 Walking; nipple stimulation  
 Watch for problems related to augmentation (i.e., abnormal FHR or contractions) |

9. a. The woman may push too briefly or not hard enough to cause fetal descent, she may be unable to feel the urge to push, or her pushing efforts may be directed incorrectly. The nurse can coach her on when to push and on the most effective techniques. Some women benefit from pushing only when the urge is felt or from explanations about the sensations they feel.

b. The fetal head must rotate in a wider arc to come into one of the occiput anterior positions that best allow fetal descent. The woman can be taught different positions to use to encourage rotation. Observe mother and infant for signs of trauma related to the abnormal position (such as vaginal wall hematoma, excessive fetal molding, forceps or vacuum extractor injuries).

10. a. Consumes glucose needed for the work of labor  
b. Causes secretion of hormones that inhibit uterine contractions  
c. Diverts blood from the uterus  
d. Increases tension of pelvic muscles  
e. Increases perception of pain

11. a. Maternal infection  
b. Newborn infection  
c. Maternal exhaustion  
d. Postpartum hemorrhage  
e. Greater anxiety in a later pregnancy

12. a. Maternal trauma (such as uterine rupture, cervical lacerations, or hematomas)  
b. Compromised fetal oxygenation  
c. Infant birth injuries

13. a. PROM (premature rupture of the membranes) is rupture of the membranes at term, but ≥ 1 hour before labor begins. PPROM, sometimes abbreviated pPROM, is rupture of the membranes before term, with or without uterine contractions.

b. c. d. Answers will vary.

14. a. Transvaginal ultrasound may identify an abnormally short cervix, indicating greater risk for preterm labor.  
b. The benefits of activity restrictions are unclear, although it continues to be prescribed for preterm labor. Moderate activity restrictions are more often prescribed to reduce uterine activity.

c. Fetal fibronectin may result from uterine activity, infection, or cervical effacement. Its presence at an abnormal time (22–24 weeks) during pregnancy is correlated with greater risk for preterm labor.

15. Contractions (with or without discomfort); feeling that baby is frequently “balling up”; menstrual-like cramps; constant low backache; pelvic pressure, feeling that baby is pushing down; change in vaginal discharge; abdominal cramps (with or without diarrhea); pain
or discomfort in the vulva or thighs; feeling of “just feeling bad” or “coming down with something”

16. a. Hypoxia with poor placental blood flow (suggested by nonreassuring fetal monitoring signs such as late decelerations), or continued growth with good placental supply (which can result in large size and therefore trauma with vaginal birth or a need for cesarean birth). Amniotic fluid may be less than normal for gestation when observed on ultrasound.
   b. Neonatal respiratory distress related to meconium passage in utero
   c. Neonatal hypoglycemia due to consumption of reserves before birth

17. a. Fetus high in the pelvis when the membranes rupture
   b. Very small fetus
   c. Abnormal fetal presentation
   d. Hydramnios

18. a. Complete: there is a hole through the full thickness of the uterine wall, into the abdominal cavity
   b. Incomplete: uterus tears into a nearby structure, such as a ligament
   c. Dehiscence: separation of an old uterine scar, often without bleeding

Review Questions

1. Answer: 3
   Rationale: The FHR of 95 BPM is lower than the expected range at term of 110–160, suggesting umbilical cord compression. The other findings are normal after membrane rupture.

2. Answer: 2
   Rationale: Women in hypertonic labor have frequent, cramp-like contractions that exhaust them. Measures to promote their rest and comfort make them feel better and can improve labor by decreasing anxiety. Walking is more appropriate for hypotonic labor. A favorable outcome cannot be ensured and does not take care of her immediate problem. Oral (such as ice chips orally) and intravenous fluids will often be needed in greater quantities because of her exhaustion.

3. Answer: 1
   Rationale: Hypotonic labor typically occurs during the active phase. The woman is usually comfortable, although often frustrated by the lack of progress. Hypertonic is characterized by frequent, painful, cramping contractions and usually occurs during the latent phase. Occiput posterior positions are characterized by back pain. Shoulder dystocia occurs at the time of birth, resulting from fetal shoulders that are large relative to mother’s pelvis.

4. Answer: 3
   Rationale: Clavicle fracture is more likely when the shoulders were difficult to deliver. It is manifested by deformity or crepitus over the area. The infant may not move the arm normally on the affected side. Abnormal temperature suggests infection or hypoglycemia.

5. Answer: 4
   Rationale: Elevated maternal temperature and pulse suggest infection despite clear amniotic fluid. Fetal tachycardia is common if the mother’s temperature is elevated.

6. Answer: 2
   Rationale: Intense, poorly relieved back pain (“back labor”) is characteristic of an occiput posterior position. The other options describe precipitate labor, Braxton-Hicks contractions, and early—or perhaps preterm—labor.

7. Answer: 1
   Rationale: The woman’s symptoms include two of the most common that are associated with preterm labor. Although similar symptoms occur in uncomplicated pregnancies, it is impossible to evaluate her by phone. Symptoms could be benign, but cannot tell without examining the woman.

8. Answer: 4
   Rationale: External version is usually done very near term, but before labor’s onset so there is room to turn the fetus. It is not done if vaginal birth is not anticipated, such as with placenta previa. Version may rarely be done after onset of labor. It is difficult to perform once labor has started because of uterine irritability. Placenta previa will likely require a cesarean birth. Multifetal gestations limit the room to turn a fetus during late pregnancy.

9. Answer: 4
   Rationale: Measures to restore circulation through the cord precede all other emergency measures. The medical provider should be called as soon as possible (usually by another nurse) because a cesarean birth almost always be needed, but cord circulation is most vital. If the cord can already be seen, palpation for a pulse wastes time. Application of an internal monitor wastes valuable time.

10. Answer: 2
    Rationale: Checking the fetal heart rate is the best way to identify cord compression that may have occurred if the cord slipped downward between the fetal body and mother’s pelvis. Side-lying enhances oxygenation, primarily by maximizing blood delivery to and from the placenta.

11. Answer: 3
    Rationale: An ice pack numbs the area, limits formation of hematomas, and limits edema.
12. **Answer:** 2
   **Rationale:** Minor trauma, including bruises and small abrasions, may occur where forceps were applied because the skin is delicate. There is no urgency to report the findings to the physician. Brain injury would be manifested by far more severe signs. The trauma described is typical of forceps births, not every birth.

13. **Answer:** 2
   **Rationale:** The woman with a cesarean birth can have a relaxed uterus that results in hemorrhage just as the woman with vaginal birth, particularly during the immediate postoperative hours. Checking the fundus (gently) for firmness is the best way to identify uterine relaxation. Improved comfort is essential, but does not have priority over prevention of hemorrhage. The woman will have an indwelling catheter.

14. **Answer:** 2
   **Rationale:** Maternal trauma, with or without uterine rupture, may result in maternal blood loss, reducing available blood (and therefore oxygen) for placental flow. Abruptio placentae may have occurred, especially with abdominal trauma. The fetus cannot be directly assessed at this time. Intrauterine infection is not the main risk—uterine rupture is. Precipitous birth could occur, but loss of oxygenation remains the priority.

15. **Answer:** 4
   **Rationale:** A previous uterine scar of any kind increases the risk for uterine rupture, although this risk is very low with the low transverse incision. Risk for rupture is low in this type of labor dysfunction unless there are other problems. Premature rupture of the membranes primarily may cause infection or preterm birth if the woman is not at least 38 weeks. This fetus is less than 8 pounds (7 pounds, 11 ounces), unlikely to cause rupture unless there are other problems.

16. **Answer:** 2
   **Rationale:** The characteristics listed are typical of a postterm baby, although they may occur in any infant affected by prolonged placental insufficiency during late pregnancy. The preterm fetus has a thin, sometimes gelatinous-appearing skin and abundant vernix. A vigorous cry does not typify respiratory distress. The infant is unlikely to be large for gestational age because the findings describe a postterm infant who is often small for gestational age.

17. **Answer:** 3
   **Rationale:** Prostaglandin gel is give to soften the cervix to promote easier induction of labor. Because most women who receive it are at or past term, it may initiate labor, often accompanied by membrane rupture. The woman must remain in bed for at least 1 hour after insertion of the prostaglandin. Vigorous and frequent contractions may be hypertonic and require a tocolytic to decrease intensity. There is no reason to stay in bed for the hours until oxytocin is started unless other complications exist.

### Case Studies

1. a. **Answers will vary.**
   b. **Green amniotic fluid suggests possible placental insufficiency. Gestation is not stated but green fluid is more common in term fetus. Respiratory problems could occur in newborn but this is less likely because the fluid is light green rather than heavy and thick.**
   c. **Observe fetals monitors for nonreassuring patterns and intervene as indicated. Notify the nursery for possible respiratory problems after birth.**
   d. **Amniotomy complications might include nonreassuring FHR patterns. Observation for infection signs and symptoms and for excessive vaginal bleeding should be continued. No indication of complications other than light green fluid in situation.**
   e. i. **Skin: Possible bruising in area of cheeks. Explain to parents.**
      ii. **Shape of head may be elongated, depending on size of head and size of Cara’s pelvis.**
      iii. **Appearance when crying is usually normal. Facial asymmetry from pressure may be present.**
   f. **Answers will vary.**

2. a. **Answers will vary; the following is an example. First, discuss movement abilities with Jennifer. She may be able to move the leg without the cast to one side enough to see labia. Have one or two other nurses to help support Jennifer’s “good” leg and spread the labia enough to cleanse the area and insert the catheter.**
   b, c, d. **Answers will vary.**
Thinking Critically

1. Very intense, frequent, and perhaps long contractions reduce the ability of the placenta to refill with oxygenated blood and unload waste products from the fetus. This may lead to fetal hypoxia. Avoiding the supine position also avoids supine hypotension, which would further reduce fetal oxygen supply. Giving the woman oxygen may increase levels in her blood, maximizing the amount delivered to the placenta. Both mother and infant should also be examined for trauma after birth because the baby is rapidly pushed through her birth canal.

Applying Knowledge

Answers will vary.