Pocket Guide to

Maternal and Neonatal Nursing

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J.B. Lippincott Company
Philadelphia

Library of Congress Cataloging-in-Publication Data

May, Katharyn A.
Pocket guide to maternal and neonatal nursing / Katharyn A. May, Laura R. Mahlmeister.
p. cm.
ISBN 0-397-55125-8
1. Maternity nursing—Handbooks, manuals, etc. I. Mahlmeister, Laura Rose. II. Title. III. Title: Maternal and neonatal nursing.
[DNLM: 1. Maternal-Child Nursing—methods—handbooks. 2. Neonatal Nursing—methods—handbooks. WY 39 M466p 1994]
RG951.M345 1994
610.73'678—dc20
DNLM/DLC
for Library of Congress 93-30921
CIP

6 5 4 3 2

ISBN 0-397-55125-8

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PART I

Prenatal Care

Pregnancy History

Summarizing Obstetrical History: GTPALM

- **G** Gravida
- **T** Term pregnancies
- **P** Preterm births
- **A** Abortions
- **L** Living children
- **M** Multiple gestations

Other Factors to Assess

- Length of previous gestations
- Length of previous labors
- Type of deliveries
- Fetal presentations
- Neonatal outcomes (including child's current health and development)
- Birth weights
- Complications of labor, delivery, and postpartum

Naegele's Rule: Estimating Date of Delivery

The average length of pregnancy is 280 days from the first day of the last menstrual period: 40 weeks or 9 calendar months. The EDD is calculated as follows: 1st day of LMP + 7 days – 3 months = EDD.

Schedule for Prenatal Visits

The following schedule has been proposed by the Expert Panel on the Content of Prenatal Care* as safe and effective for healthy pregnant women. This schedule recommends visits at the following intervals:

- 4–6 weeks of gestation
- Within 4 weeks of first contact (nulliparous women only; telephone contact is sufficient for parous women)
- 14–16 weeks of gestation
- 24–28 weeks of gestation
- 32 weeks of gestation
- 36 weeks of gestation
- 38–39 weeks of gestation (38 weeks for nulliparous women, 39 weeks for parous women)
- 40 weeks of gestation
- 41 weeks of gestation

* U.S. Department of Health and Human Services (1989). *Caring for our future: The content of prenatal care*, Washington D.C.

Teaching Considerations: Self-Care for Common Discomforts of Pregnancy

The nurse can use the following points in teaching.

Nausea and Vomiting

- Eat a high-protein snack at bedtime.
- Eat dry crackers before arising.
- Avoid sudden position change.
- Avoid food odors.
- Eat smaller, more frequent meals.
- Get plenty of fresh air.

Urinary Frequency

- Limit caffeine.
- Void when urge occurs.
- Try Kegel exercises.

Breast Tenderness

- Use a comfortable support bra.
- Avoid soap on nipples.

Round Ligament Pain

- Apply local heat.
- Avoid twisting or jerking.
- Change position slowly.
- Lie on your side in a knee-to-chest position.

Vaginal Discharge

- Avoid panty hose.
- Wear loose cotton underwear.
- Avoid tight pants.
- Keep perineum clean and dry.

Fatigue

- Exercise regularly.
- Take frequent rest breaks.

Headaches

- Practice relaxation exercises.
- Take regular meals and adequate fluid intake

Constipation

- Exercise regularly.
- Increase fiber in diet.

Leg Cramps

- Keep legs warm.
- Apply local heat.
- Use adequate dairy products in diet.

Backache

- Wear low-heeled shoes.
- Exercise regularly.
- Do no heavy lifting.
- Apply local heat.
- Use pelvic tilt exercises.

Varicosities

- Wear support stockings.
- Elevate lower extremities.
- Avoid constrictive clothing.
- Avoid crossing legs.
- Ambulate frequently.
- Wear low-heeled shoes.
- Exercise regularly.

Hemorrhoids

- Prevent constipation.
- Use Sitz baths.

Edema

- Rest in lateral position.
- Elevate feet.
- Provide for adequate protein intake.
- Consume ample fluids.
- Use normal salt intake.

Teaching Considerations: Signs and Symptoms of Pregnancy Complications

The nurse can use the following points in teaching.

- Vaginal bleeding—any sudden onset of profuse vaginal bleeding
- Dizziness—sudden extreme dizziness associated with pelvic pain
- Decrease in fetal movements—any abrupt decrease in fetal activity or absence of fetal activity for 8 h.
- Preterm labor symptoms (before 36 weeks of gestation):
  Tightening of uterus
  Constant low-abdominal pressure or cramping
  Intermittent or constant low backache
  Leakage of fluid from vagina
- Pregnancy-induced hypertension symptoms:
  Generalized edema, especially in face and hands
  Rapid weight gain over several days or weeks
  Headaches
  Visual disturbances (flashing lights, double vision), dizziness
  Nervousness, irritability
  Vomiting
  Epigastric pain (a late and ominous sign)
- True labor symptoms (after 36 weeks of gestation):
  Rupture of membranes (leaking or gushing of fluid from vagina)
  Expulsion of pink mucus (mucous plug) from vagina
  Regular pattern of uterine contractions
- Cardiac disease (around 26–28 weeks)
  Chest pain
  Severe dyspnea
  Resting tachycardia

Distinguishing True Labor from Braxton Hicks Contractions

Parameter	True Labor Contractions	Braxton Hicks Contractions
Intervals	Regular	Irregular
Frequency	Gradually increasing	Inconsistent
Intensity	Gradually increasing	Variable
Location	Primarily in the back	Over abdomen
Aggravating or alleviating factors	Intensified by walking	Sometimes relieved by walking
Bloody show	Usually present	Not present
Rupture of membranes	Sometimes present	Not present

PART II

Prenatal Complications

Signs and Symptoms of Hypoglycemia

- Nervousness
- Tremulousness
- Weakness
- Fatigue
- Disorientation
- Pallor
- Irritability
- Hunger
- Nausea
- Diaphoresis
- Cool, clammy skin
- Sweating
- Headaches
- Blurred or tunnel vision
- Numbness around lips and tongue
- Stupor
- Loss of consciousness
- Coma
- Seizures

Recommended Plasma Glucose Levels for a Pregnancy Complicated by Diabetes Mellitus

Before meals and snacks	50 to 80 mg/dl.*
One hour postprandial	<120 mg/dL
Between 2 AM and 6 AM	50–80 mg/dL

*Glucose levels to 50 mg/dL are usually well tolerated and safe in the well-controlled diabetic.

Supporting the Woman with Maternal Hypoglycemia

Purpose: To raise plasma glucose levels and prevent neurologic injury secondary to profound hypoglycemia.

Be particularly alert for signs and symptoms during peak action of insulin:

- 2–4 h after Regular Humulin
- 2–15 h after NPH or Humulin N

If the woman is conscious and exhibits mild symptoms of hypoglycemia (40–60 mg/dL):

1. Give 20 g carbohydrate (14 oz whole milk or 12 oz apple or orange juice).
2. Perform a fingerstick glucose test as quickly as possible, while the woman is drinking the milk or juice.
3. Draw a venous sample.

If the woman remains stable and conscious:

1. Wait 20 min and repeat fingerstick glucose test.

If the woman is vomiting, disoriented, or unconscious—indicators of severe hypoglycemia (less than 40 mg/dL):

1. Call for help.
2. Give glucagon 0.5–1 unit (0.5–1 mg) IV, IM, or SC.
3. If glucagon is given, turn woman's head to side and have suction available.
4. If woman does not respond to administration of glucagon, give second dose in 5–20 min.
5. If glucagon not available, may give 50 ml of 50% glucose IV as ordered or by protocol.

Teaching Considerations: The Pregnant Diabetic Patient

The nurse can use the following points in teaching.

Preconceptual Counseling

- Importance of low glycosylated hemoglobin level
- Risk of congenital anomalies
- Risk of accelerating retinopathy, neuropathy, or kidney disease
- Complications associated with diabetes in pregnancy (i.e., PIH)
- Anticipated changes in self-care and life-style

Prenatal Counseling

Diet

- Need for regular intake at established times
- Specific dietary requirements (calories and percentage of carbohydrates, protein, and fats)
- Use of American Diabetes Association exchange list in meal planning
- Desired weight gain during pregnancy
- Contraindication to sugar substitutes and diet beverages during pregnancy

Insulin

- Dose, route, timing
- Storage of drug
- Physiologic effects of drug
- Technique for drawing up and self-administering drug
- Recommendations regarding rotating injections within a chosen area
- Differences in absorption of insulin by area of injection
- Relationship between intake, activity, and insulin dose
- Use and maintenance of insulin pump (if ordered)
- Use of "sliding scale" insulin administration

Activity

- Importance of consistency in exercise
- Type of exercise recommended during pregnancy
- Timing of exercise in relation to insulin injections
- Selection of site for insulin injection that will not be exercised
- Importance of checking insulin before and after exercise
- Need to carry carbohydrate snack during exercise

Self-Glucose Monitoring

- Importance of glucose monitoring
- Timing of glucose monitoring
- Use of home glucose monitoring system
- Correct technique for obtaining capillary blood sample by fingerstick
- Recording glucose values
- Reporting abnormal values
- Signs and symptoms of hypoglycemia
- Treating hypoglycemia
- Testing for urine ketone levels

Complications

- Recognizing early signs of diabetic ketoacidosis
- Recognizing and treating hypoglycemia
- Recognizing and reporting symptoms of urinary tract infections
- Recognizing and reporting signs of PIH
- Reporting illness (i.e., flu or colds)
- Reporting decreased fetal movement

Plan for Fetal Assessments

- Purpose and timing of ultrasonography, amniocentesis, non-stress test, and oxytocin challenge test

Intrapartum Counseling

Plan for Delivery

- Mode and timing
- Anticipated medical and nursing care in labor
- Analgesia and anesthesia
- *Glucose monitoring*
- Insulin administration

Postpartum Counseling

- Need for ongoing glucose monitoring
- Insulin requirements (if any)
- Breastfeeding
- Contraception

Signs and Symptoms of Pregnancy-Induced Hypertension

Signs Characterizing Preeclampsia

- Edema
- Proteinuria
- Hypertension

Symptoms of Impending Eclampsia

- Severe headache
- Visual disturbances
- Epigastric pain
- Vomiting
- Increasing hyperreflexia
- Increasing clonus

Signs Characterizing Eclampsia

- Seizures*
- Worsening hypertension (>160/110)
- Proteinuria: 5 g/24 h
- Oliguria: 500 ml/24 h or less
- Hyperreflexia (4+ or sustained clonus)
- Pulmonary edema
- Congestive heart failure

*Eclampsia is defined as the extension of preeclampsia with *seizure activity*.

Laboratory Findings with Pregnancy-Induced Hypertension

Laboratory Test	Significance
Complete Blood Count	
Hematocrit	Hemoconcentration with subsequent rise in hematocrit is common Hematocrit >40% is significant
Blood smear Red blood cell count	To detect schistocytes, fragmented erythrocytes, which occur with hemolysis in HELLP syndrome
Renal Function Tests	
Serum uric acid	Levels ≥5.5 mg/100 mL is a strong biochemical indicator Levels >6.0 mg/100 mL indicate severe PIH
Creatinine	≥1.0 mg/dL Because of the physiologic changes in renal function during normal pregnancy, an elevated creatinine level in preeclampsia is often in a range that would be considered normal for nonpregnant women 2.0–3.0 mg/dL indicates severe PIH
Blood urea nitrogen	8–10 mg/100 mL indicates PIH 10–16 mg/100 mL indicates severe PIH
Creatinine clearance	<150 mL/min

(table continued)

Laboratory Findings with Pregnancy-Induced Hypertension (cont'd)

Laboratory Test	Significance
Coagulation Tests	
Platelets	Usually within normal limits (140,000–340,000 μL) <100,000 μL indicates severe PIH or HELLP syndrome
Prothrombin time (PT)	Usually normal levels May increase (>16 s) with severe PIH complicated by abruptio placentae or DIC
Partial thromboplastin time (PTT)	Usually normal levels May increase (>38 s) with severe PIH complicated by abruptio placentae of disseminated intravascular coagulopathy
Fibrinogen	Usually normal levels <285 mg/dL is significant for coagulopathy
Fibrin degradation products	8–10 mg/mL is abnormal ≥16 mg/mL has been observed with severe PIH Frequently elevated due to localized coagulopathy at site of endothelial cell damage
Liver Function Tests	
Serum alanine aminotransferase (ALT)	Usually normal levels, but may be elevated with liver damage secondary to severe PIH Reference value (0–35 μL)
Serum aspartate aminotransferase (AST)	Usually normal levels, but may be elevated with liver damage secondary to liver damage Reference value (0–35 μL)

Drugs That May Be Indicated to Control Severe Pregnancy-Induced Hypertension

Magnesium Sulfate

Dosage

Loading Dose: 4–6 g of a 10% solution IV
Maintenance dose: 1–2 g/h

Indication

Prevention of seizures

Implications

- Infuse slowly via infusion pump over 15–30 min diluted in 50–100 mL of 0.9 NS or 5% D/W.
- Add 40 g $MgSO_4$ to 1000 mL 5% dextrose in Ringer's lactate.
- Piggyback to mainline and administer via infusion pump.
- Assess urine output, deep tendon reflexes, and respiration q 1 h.
- Stop infusion if urine output is <20–30 mL/h, respirations <12/min, DTRs disappear, or serum magnesium level is 7 mEq/L, and notify physician immediately.
- Have antidote (calcium gluconate) at bedside.

Hydralazine (Apresoline)

Dosage

5–10 mg IV

Indication

Diastolic BP ≥110 mm Hg

Implications

- Inject at 15–20-min intervals.
- Administer slowly at a rate of 10 mg over 1 min.
- Administer until diastolic BP stable between 90 and 100 mm Hg.
- Check BP q 5 min until stabilized.

Diazepam (Valium)

Dosage

5–10 mg IV

Indication

Control of seizures

Implications

- Inject undiluted.
- Administer slowly at a rate of 5 mg over 1 min.
- May be repeated at intervals of 5–10 min up to a dose of 30 mg.
- Observe for respiratory depression or apnea.

Diazoxide (Hyperstat)

Dosage

30 mg IV

Indication

Hypertensive crisis

Implications

- Reserved for hypertension resistant to hydralazine.
- Must be given in smaller dose than recommended for nonpregnant patients.
- May cause precipitous drop in BP.
- Must monitor BP q 1–2 min until stable; q 5 min for 30 min, and q 15 min thereafter.

Furosemide (Lasix)

Dosage

20–40 mg IV

Indication

Pulmonary edema

Implications

- Inject 2 mg over 1 min.
- Monitor urine output.
- Indwelling catheter may be ordered for precise measurement of urine output.

Assessing Deep Tendon Reflexes (DTRs) and Clonus

Purpose: To identify signs of increased CNS irritability or CNS depression secondary to administration of magnesium sulfate.

1. Place the limb to be tested in a relaxed, semi-flexed position.
2. Palpate for the tendon to be stretched and place your thumb on the skin directly over the tendon.
3. Tap your thumb briskly with the pointed end of the reflex hammer and note the reflex contraction of the muscle and flexion of the limb.
4. Estimate the strength of the reflex contraction of the muscle.*
5. Compare reflex responses on left and right sides. Note and record any asymmetry.

*The strength of the DTR is measured using a numerical scale of 0 to 4+:

0 No response
+1 Low normal or somewhat diminished reflex response
+2 Normal or average reflex response
+3 Above average briskness in reflex response
+4 Very brisk, hyperactive reflex response; often associated with clonus, a series of convulsive ankle movements that occur when the foot is dorsiflexed

PART III

Intrapartum Care

Standards of Care for Assessment of Maternal Vital Signs and Maternal Progress During the First Stage of Labor

	Latent Phase (0–4 cm)	Active Phase (5–7 cm)	Transition Phase (8–10 cm)
Blood pressure	60 min	60 min	60 min
Pulse and respirations*	60 min	60 min	60 min
Temperature‡	4 h	4 h	4 h
Contraction pattern	*30–60 min*	*30 min*	*15 min+*
Bloody show	60 min	30 min	15 min+
Amniotic fluid	60 min	30 min	15 min+
Behavior pattern	60 min	30 min	15 min+

*An increase in pulse or respiratory rate may be the first indication of maternal infection.

‡When membranes rupture, the temperature is assessed every 2 hours.

+Although the women should be evaluated at least every 15 minutes, the nurse's continuous presence at the bedside may be indicated because rapid alterations in maternal status occur in the transition period.

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Using HIV Precautions in Labor and Delivery

Purpose: To prevent exposure to HIV while caring for the woman during childbirth.

1. Wear clear glass or prescription lens eye wear at all times in labor and delivery.
2. Carry a pair of unsterile gloves in a pocket at all times.
3. Wear unsterile gloves whenever assisting birth attendants with vaginal exams, insertion of internal fetal monitor probes, or amniotomies.
4. Place impermeable barrier gowns in each labor room.
5. Stock knee-high boots for birth attendants and scrub nurses to wear.
6. Stock face shields in areas where birth occurs.
7. Institute a policy for placing all used sharps (i.e., suture needles and local anesthesia infusion needles) in one specified location on the delivery table.
8. Place sharps containers at every bedside.
9. Do not recap needles.

Catheterizing the Woman's Bladder During Labor

Purpose: To empty the bladder when the woman is unable to void as a result of direct pressure of the fetal presenting part on the bladder neck or urinary meatus.

1. Perform a pelvic examination.
2. Have a second nurse or physician stand by if the presenting part is low.
3. After explaining the procedure, place the patient in a supine position, with a pillow or pad under the right hip.
4. Cleanse the vulva.
5. Apply sterile gloves.
6. Lubricate the catheter (usually a 14 French).
7. Prep the labia minora and meatal opening with a bacteriocidal agent.
8. Insert the catheter between contractions.
9. Do not use force if unable to advance the catheter. Have the assistant place a hand above the symphysis pubis and apply gentle upward pressure on the presenting part while the catheter is advanced.
10. If the catheter still advances with difficulty, attempt to direct it slightly downward toward the sacrum.
11. In rare circumstances the assistant may need to put on a sterile glove, place the hand in the vagina, and apply direct upward pressure to the presenting part.

Correcting Nonreassuring Electronic Fetal Monitoring Patterns When Oxytocin Infusion Is Used

1. Stop the oxytocin infusion if present.
2. Call for immediate assistance.
3. Turn the woman to the left side-lying position.
4. Increase the mainline infusion rate.
5. Administer 100% oxygen at 8–12 L/min by tight face mask.
6. Perform a vaginal examination.
7. Be prepared to administer a tocolytic (terbutaline 0.125–0.25 mg) subcutaneously or intravenously by physician or midwife order.
8. Provide the woman with a brief explanation of the problem and the reasons for corrective actions.
9. Notify the midwife or physician in a timely manner.

Fetal Heart Rate Patterns

Reassuring Patterns

Reassuring patterns are those with normal baseline FHR and average variability with:

- Mild variable decelerations (less than 30 sec in duration, with rapid return to baseline)
- Early decelerations (concurrent "mirror image" decrease with contraction)
- Accelerations without other changes

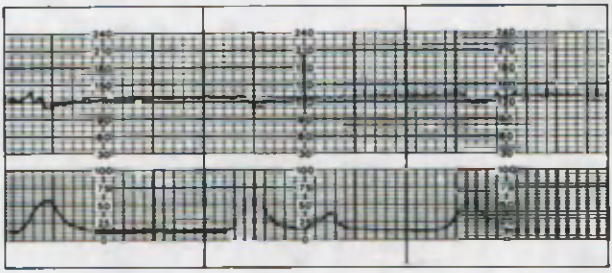
Nonreassuring Patterns (Warning Signs)

- Moderate tachycardia (more than 160 bpm)
- Decrease in baseline variability
- Progressive increase or decrease in baseline FHR
- Intermittent late decelerations with good variability

Ominous Patterns

- Persistent late decelerations, especially with decreasing variability
- Variable decelerations with loss of variability, tachycardia, or late return to baseline
- Rebound accelerations "overshoot" baseline FHR following each variable deceleration and absent variability
- True sinusoidal pattern with absent variability
- Absence of variability
- Severe bradycardia

Early Deceleration



Cause

- Vagal stimulation from head compression

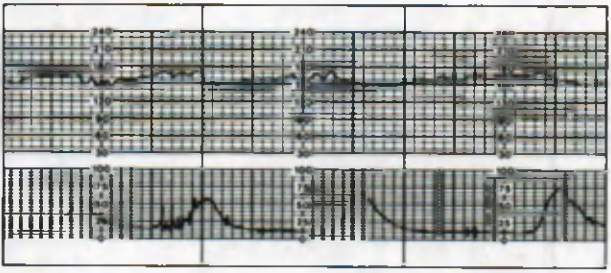
Implications

- Usually innocuous, reassuring pattern
- May be prevented by avoiding early rupture of membranes

Nursing Action

- Observe FHR closely to distinguish this from other ominous patterns.

Late Deceleration



Cause

- Uteroplacental insufficiency due to decreased blood flow during uterine contraction

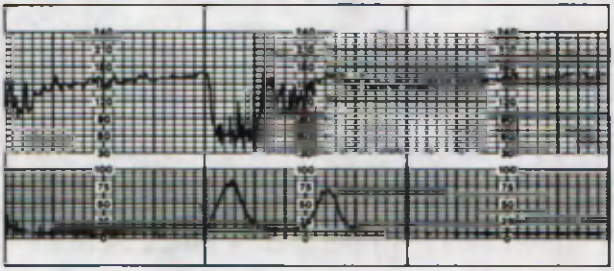
Implications

- Ominous sign indicating fetal distress

Nursing Actions

- Change the woman's position to left side, right side, or Trendelenburg to alleviate pattern.
- Administer O_2 by mask at 8–12 L/min.
- Discontinue oxytocin.
- Increase intravenous fluids if hypotension is due to regional anesthesia.
- Notify physician.
- Prepare to give tocolytic to reduce uterine activity.
- Prepare for prompt delivery.

Variable Deceleration



Cause

- Umbilical cord compression against fetal bony part, short or knotted cord, possible prolapse

Implications

- Possible severe fetal compromise if decelerations worsen, are prolonged, or are repetitive
- Possible need for fetal scalp pH
- Possible diminishing fetal reserve if bradycardia is prolonged following deceleration

Nursing Actions

- Change woman to side-lying position.
- Initiate external manipulation of fetus.
- Place woman in knee-chest position if deceleration is uncorrected by change to side-lying position.
- Administer O_2 by face mask at 8–12 L/min.
- Perform vaginal exam to rule out cord prolapse.

Nursing Responsibilities During Administration of Epidural Anesthesia

The nurse has primary responsibility for assessing and maintaining maternal and fetal physiologic stability during and after initiation of epidural anesthesia. Major complications can result in rapid, life-threatening decompensation. Before the anesthesiologist begins the procedure the nurse must:

- Administer 1,000 mL prehydration bolus of IV fluid; have additional IV fluids at bedside (2 L Ringer's lactate).
- Ascertain that bedside oxygen and suction equipment is functioning.
- Ensure that emergency drugs including epinephrine, ephedrine, and Benadryl are readily available.
- Attach an electronic blood pressure monitor or blood pressure cuff.
- Obtain portable FHR Doppler in case EFM is not possible during the procedure.

During the procedure, the nurse must maintain continuous FHR monitoring or frequent Doppler monitoring (q 5 min or more frequently) until EFM can be reinstituted. If IV oxytocin is being administered and the nurse is unable to monitor uterine activity during the procedure, the infusion should be stopped until the tokodynamometer can be reapplied. After the anesthetic is administered, the nurse remains continuously with the woman until vital signs are stable, assessing for evidence of:

- Hypotension
- Allergy or anaphylaxis
- Toxic reactions
- Total spinal block

The nurse must be skilled in resuscitation should adverse reactions occur. Ongoing nursing assessments of maternal vital signs and FHR must be conducted at least every 10–15 min. In most settings the nurse is also responsible for periodic evaluation of anesthetic levels and should be skilled in this procedure.

Drugs Used for Analgesia in Labor

Morphine Sulfate

Dosage

8–15 mg IM or 1–2 mg IV; peak effect in 30–60 min after IM and 15–20 min after IV administration; duration 4–6 h

Implications

- More commonly used to induce sleep in prodromal labor.
- Not commonly used in labor.
- Do *not* administer if maternal respiratory rate is below 12/min or other signs of CNS depression are present.
- Avoid administration 1–3 h (depending on route) before delivery.
- Administer IV drug slowly over 3–5 min.
- Prepare to administer narcotic antagonist (Narcan, 0.01 mg/kg) to neonate if depression is evident.

Meperidine Hydrochloride (Demerol)

Dosage

50–100 mg IM or 25–50 mg IV; peak effect in 40–60 min after IM and 5–10 min after IV administration; duration 3–4 h

Implications

- Most commonly used narcotic drug for labor.
- Administered in active phase of labor, preferably at least 2 h before delivery to minimize CNS depression in newborn.
- Administer IV drug slowly over 3–5 min.
- Prepare to administer, narcotic antagonist to neonate if depression evident (Narcan, 0.01 mg/kg).

Fentanyl (Sublimaze)

Dosage

50–100 µg IM or 25–50 mcg IV; peak effect in 20–30 min after IM and 3–5 min after IV administration; duration 30 min to 1 h IV and 1–2 h IM

Implications

- Short-acting drug appropriate for late active phase of labor in primigravidas.
- Have oxygen and suction equipment available, as respiratory depression effects last longer than analgesic effects.
- Administer IV drug slowly over 3–5 min to reduce muscle rigidity.
- Prepare to administer narcotic antagonist to woman or neonate if depression evident.

Nalbuphine (Nubain)

Dosage

0.2 mg/kg IM or 0.1–0.2 mg/kg IV; peak effect in 30 min after IV and 1 h after IM administration; duration 3–6 h

Implications

- Do not administer to narcotic-dependent woman.
- Prepare to give Narcan (0.1 mg/kg) to neonate if signs of CNS depression evident.
- Administer IV drug slowly over 3–5 min.

Sodium Secobarbital (Seconal)
Sodium Pentobarbital (Nembutal)
Sodium Phenobarbital (Luminal)

Dosage

100 mg IM or orally; peak effect in 30 min after PO and 10 min after IM administration; duration 1–4 h

Implications

- Barbiturates are used to induce sedation in prolonged latent phase of labor.
- *Note:* There is no available antagonist.
- Avoid use in active labor—will cause marked restlessness if administered to woman in pain.

Promazine (Sparine)

Dosage

25–50 mg IM or IV; peak effect in 30 min after IM or IV administration; duration unknown

Implications

- Monitor closely. Institute standard safety measures for medicated women (side rails, bed rest, frequent checking).

Promethazine (Phenergan)

Dosage

25–50 IM or IV; peak effects are unknown; duration up to 2–8 h

Implications

Administer IM dose deep into well-developed muscle

Hydroxyzine (Vistaril)

Dosage

25–50 mg IM; peak effects in 2–4 h after administration, duration 4–6 h

Implications

- Spasmodic eye or neck movements suggest extrapyramidal effect of phenothiazine; alert care provider.
- Do not use deltoid muscle.
- Administer IM deep into well-developed muscle, preferably with Z-track technique.
- Do *not* administer IV as may cause hemolysis.

Giving Nursing Support During Transition

Common Physiologic Characteristics	Nursing Actions
Shaking, chills	Hold extremities; use warm blankets
Perspiration, feeling hot	Use fan; wipe with cool cloth; give ice chips
Restlessness, irritability, Increased apprehension	Give encouragement; work on relaxation techniques; avoid behaviors irritating to woman; increase verbal cues for relaxation
Inability to focus; confusion	Give firm but kind instruction; repeat instruction and show understanding; breathe with woman; use eye contact
Increased pain, especially sacral	Apply sacral counter pressure
Inability to cope	Give reassurance; maintain physical presence; focus on shortness of phase Give overwhelming support: "baby is almost here"; take one contraction at a time; provide other comfort measures
Exhaustion	Facilitate rest and sleep between contractions; alert woman to beginning of contraction
Hiccuping, burping, flatulence	Woman is often embarrassed; reassure that this is normal
Nausea and vomiting	Reassure that this is normal and will be over soon; use comfort measures, such as cold cloth to mouth or throat; position with head elevated or turn on left side
Urge to push	Check for complete dilation; if not complete, try side-lying position and "blowing contractions away"
Carpopedal spasm	Extend woman's leg and flex foot; check for warmth of extremities; provide blanket as needed

PART IV

Intrapartum Complications

Distinguishing Between Placenta Previa and Abruptio Placentae

	Placenta Previa	Abruptio Placentae
Definition	Abnormal implantation of the placenta in the lower uterine segment; classified according to percentage of placenta covering the cervical os: total, partial, marginal, low-lying.	Premature separation of placenta prior to the birth of the infant.
Signs and Symptoms	Painless, bright-red bleeding. May be accompanied by preterm labor due to pressure of the placenta over cervical os.	Frequent uterine contractions (tachysystole), uterine rigidity or tenderness, vaginal bleeding if present is dark red or port-wine in color. Bleeding may be concealed.
Maternal-Fetal Implications	First episode of bleeding is rarely severe, and may be controlled with bedrest and tocolytics. Hemorrhage and shock may occur with first or subsequent bleeds. Cesarean delivery indicated with complete previa or when significant area of cervix covered by placenta.	May occur slowly over time, and is diagnosed when significant blood loss results in hypovolemia. May occur suddenly with labor, cocaine use, or injury to abdomen (trauma) and can result in rapid maternal hypovolemia, shock, and fetal death. Vaginal birth is possible if progress is rapid, and bleeding does not result in shock or fetal distress. Cesarean delivery often indicated.

Nursing Actions

- Take frequent vital signs (q 15 min or more often) until maternal condition is stabilized.
- Perform continuous electronic fetal monitoring.
- Apply pulse oximeter.
- Initiate IV with large bore angiocath.
- Administer 100% 0_2 at 8–12 L/min.
- Measure blood loss.
- Obtain lab studies (Hgb, Hct, clotting factors as ordered).
- Administer blood as ordered.
- Insert Foley catheter to drainage as ordered.
- Administer tocolytics as ordered.
- Prepare for cesarean birth or rapid delivery.

Managing Third-Trimester Bleeding

1. Call for help. Have another staff person notify the physician or midwife.
2. Initiate an intravenous line with a large-bore angiocath (16- or 18-g angiocath).
3. If bleeding is profuse, insert *two* IV lines.
4. Draw a blood sample and send to the laboratory for type, Rh factor, antibody screen, and cross-matching.
5. Draw additional samples for complete blood count and clothing studies.
6. Administer oxygen at 8–12 L/min.
7. Place woman in Trendelenburg position, preferably on her left side.
8. Initiate continuous external EFM and uterine monitoring.
9. Initiate frequent monitoring of maternal vital signs (q 15 min or more frequently) until the woman's condition stabilizes.
10. Initiate pulse oximetry monitoring of blood oxygen saturation.
11. Notify anesthesiologist, neonatologist (or pediatrician), nursery nurse manager, or charge nurse (of possible cesarean birth of compromised neonate).
12. Measure all blood loss (peripad counts, weighing bed linen or linen protectors).
13. Be prepared to insert Foley catheter.
14. Assemble supplies and equipment for cesarean birth.
15. Initiate preoperative checklist.

Nursing Responsibilities in Preparation for Cesarean Birth

The nurse prepares in advance for the possibility of emergency cesarean birth by doing the following:

- Reinforcing information provided by the physician or midwife
- Providing anticipatory guidance regarding planned or anticipated procedures
- Ensuring IV access for fluid boluses or emergency drugs
- Completing a preoperative checklist before initiation of induction or signs of distress occur
- Limiting intake to clear fluids, or maintaining NPO status
- Alerting surgical personnel and nursery staff to the possibility of operative birth
- Administering oral, nonparticulate antacid as ordered
- Shaving abdomen and suprapubic region

PART V

Postpartum Care

Apgar Scoring

	Score*		
Sign	**0**	**1**	**2**
Heart rate	Absent	Slow (below 100)	Over 100
Respiratory rate	Absent	Slow, irregular	Good, crying
Muscle tone	Flaccid	Some flexion of extremities	Active motion
Reflex irritability‡	No Response	Grimace	Cry
Color	Blue, pale	Body pink, extremities blue	Completely pink

*This method is used for evaluating the immediate postnatal adjustment of the neonate. The total score of the five signs is 8 to 10 when the initial adjustment is good. Newborns with lower scores require special attention. Scores under 4 indicate that the neonate is seriously depressed.

‡Tested by inserting the tip of a catheter into the nostril.

Courtesy of Virginia Apgar, M.D., and Smith, Kline & French Laboratories, Philadelphia.

Characteristics of Lochia

Name	Approximate Time Since Delivery	Normal Discharge	Abnormal Discharge
Lochia rubra	Days 1–3	Bloody with clots Fleshy odor Increase in flow on standing up, breastfeeding, or increased physical activity	Numerous clots Foul smell Saturated perineal pad
Lochia serosa	Days 4–9	Pink or brown with a sero-sanguineous consistency Fleshy odor	Foul smell Saturated perineal pad
Lochia alba	Day 10	Yellow to white Fleshy odor	Foul smell Saturated perineal pad Persistent lochia Return to pink or red discharge Persistent discharge over 2–3 wk

Estimating Blood Loss

The nurse's accuracy is influenced by the method used to assess blood loss (peripad count, milliliter measurement, visual estimate of fluid volume, weight measurement of linens, sponges, drapes, and clots). Traditional descriptions of blood of lochia flow as "scant," "small," "moderate," or "large" are inadequate and have proven to be unreliable in studies to date. Research findings support the need for objective measurements of blood loss. Nurses should receive a standardized orientation to the measurement and estimation of blood loss. Specific suggestions to assist nurses follow:

- Use a commercial under-the-buttocks drape that incorporates a milliliter collection chamber so that blood flowing from the vagina is caught and can be measured.
- Determine the amount of blood required to saturate the unit-specific peripads used in the facility (i.e., Curity brand pads saturated by 80 mL of blood).
- Weigh blood clots, drapes, sponges, and linens saturated with blood and report in grams. In infants 1 mL of blood = 1 g. Although the correlation in adults is only approximate, it provides an objective measurement for the birth attendant.
- Draw a hemoglobin (Hgb) and/or hemotocrit (Hct). The loss of 500 mL of blood decreases Hgb by 1.0–1.5; Hct by 3–4%.

Reproduced with permission from Luegenbiehl, D., Brophy, G., Artigue, G. Phillips, K., & Flak, R. (1990). Standardized assessment of blood loss. *MCN: American Journal of Maternal Child Nursing, 15* (4), 241.

Monitoring for Complications in the Cesarean Birth Patient

The woman who experiences a cesarean birth is also a postoperative patient, with special needs related to the surgical procedure and anesthetic used during delivery. The woman may develop significant postoperative problems that threaten physiologic integrity. The postpartum nurse must be knowledgeable about complications related to surgery and skilled in the implementation of strategies to prevent their development. The nurse must conduct systematic assessments at least q 4 h to identify early signs of complications. Listed below are major complications of cesarean birth, which the nurse must assess for during the postpartum period.

Cardiovascular System

- Hemorrhage
- Hypovolemic shock
- Deep vein thrombosis

Pulmonary System

- Pulmonary embolus
- Pneumonia

Gastrointestinal System

- Paralytic ileus

Genitourinary System

- Renal failure (secondary to hypovelmic or septic shock)
- Hematuria (secondary to bladder trauma)
- Urinary tract infection

Reproductive System

- Infection (endometritis, septic pelvic emboli)

Integumentary System

- Wound infection
- Wound dehiscence and bowel evisceration

Nursing Responsibilities in Caring for the Postpartum Patient Who Received Epidural Anesthesia

The nurse maintains primary responsibility for monitoring cardiovascular and respiratory status after the administration of epidural morphine. In most facilities, the nurse is guided by preestablished protocols in treatment of both minor and major complications of epidural narcotics. In other hospitals, the nurse must consult with the anesthesiologist before initiating treatment.

In either case, if respiratory depression or cardiovascular compromise is identified, the nurse must be prepared to initiate emergency cardiopulmonary support or resuscitation until the anesthesiologist arrives. The following nursing precautions should be taken:

- Monitor respiratory status with the frequency required by hospital protocol, physician order, and the woman's condition.
- Maintain a patent IV line for the administration of emergency drugs.
- Have a resuscitation bag and face mask at the woman's bedside or readily available, and ascertain that oxygen, bag and mask, and suction are functioning.
- Have naloxone and a 1-mL syringe available at the woman's bedside.
- Label woman's chart and place sign at bedside alerting all staff that a morphine epidural has been administered.
- Obtain order for incentive spirometer and begin deep-breathing exercises on admission to unit if not already begun in recovery room.
- Elevate head of bed at least 30 degrees to facilitate lung expansion.
- Notify anesthesiologist if downward trend in respiratory rate is noted before respiratory rate drops *below* 11–12 breaths/min.
- Apply pulse oximeter when downward trend is noted so that oxygen desaturation can be identified early.
- Be prepared to initiate artificial respiration if respiratory failure occurs.

Providing Care When Postpartum Hemorrhage Occurs

Immediate nursing action is required if any of the following conditions are noted in the first 1–2 h after delivery:

- Two perineal pads are soaked within 30 min (excessive bleeding).
- The woman complains of light-headedness, nausea, or visual disturbances (possible impending hypovolemic shock).
- The woman is anxious, skin color is pale or ashen, and skin is clammy and cool (impending hypovolemic shock).
- Pulse and respirations are elevated, and blood pressure is unchanged or slightly lowered (impending hypovolemic shock).

Purpose: To maintain and support cardiovascular functioning and prevent uncompensated shock.

1. Summon help immediately by emergency call light; have care-provider notified.
2. Check uterine tone, massage fundus gently if not firm, and assess effect on bleeding or passage of clots.
3. Increase IV infusion, if present, or start IV infusion with a large-gauge angiocath (16 or 18 gauge).
4. Start oxygen at 8–12 L/min by mask.
5. Elevate the woman's legs, and lower head of bed.
6. Insert Foley catheter, and attach drainage bag.

PART VI

Neonatal Care

Supporting Neonatal Thermoregulation and Preventing Heat Loss

Support of thermoregulation is a priority nursing responsibility of the neonatal nurse. An understanding of the mechanisms of heat transfer and loss is essential to implement rational strategies to prevent hypothermia in the neonate.

Evaporation

- Dry the neonate's body and head.
- Remove wet blankets and diapers.
- Place dry stockinette cap on head immediately after birth and after bath.
- Wash head last and dry immediately after bath. (When sponge-bathing neonate, wash one body part at a time, dry and cover before bathing another part of the body.)
- Keep humidity in delivery room between 60% and 65% to reduce rate of evaporation at birth.
- Do not bathe infant until temperature is stable at 37.0°C or 98.6°F.

Conduction

- Preheat radiant warmer before use.
- Warm blanket and stockinette cap before use.
- Warm hands and stethoscope before use.
- Place neonate in skin-to-skin contact with mother's body.
- Place a warm pad on weight scale before weighing neonate.
- Preheat restraint board or place warm blanket on restraint board before circumcision.

Convection

- Place crib out of direct line of window, fan, or air-conditioning vent.
- Raise the side walls of the radiant warmer to reduce neonate's exposure to air currents.

Radiation

- Use a radiant warmer when neonate's body must be exposed for procedures or during drying after bath.
- Use double-walled incubator or plastic heat shields to prevent heat loss in low-birth-weight neonates.
- Remove neonate from areas with cold surfaces such as outer walls of building or windows.
- Preheat incubator before placing the neonate into it.

Using HIV Precautions in Neonatal Care

Purpose: To prevent transmission of the human immunodeficiency virus.

1. Carry a clean pair of gloves in the pocket of the uniform at all times.
2. Wear gloves and protective skin coverings when handling the neonate before and during procedures.
3. Wear gloves during the following procedures: venipunctures, heel sticks, IV insertion, when applying pressure to accomplish hemostasis after venipuncture, IV removal, and suctioning newborn.
4. Wear gloves when changing diapers and when collecting and testing urine or stool samples.
5. Wear goggles or face masks during procedures that are likely to generate splashing, such as the neonate's first bath and a circumcision procedure.
6. Wash hands, skin surfaces, eyes, and mucous membranes immediately if contaminated with body fluids.
7. Take precautions to prevent injuries caused by needles or other sharp instruments.
   - Needles should not be recapped or purposely bent or broken after use. They should be placed directly into a puncture-resistant container.
   - Heel stick lancets should be disposed of immediately after use in a puncture-resistant container.
8. Place reusable sharp instruments in a puncture-resistant instrument container for transport to the reprocessing area.
9. Place resuscitation bags and infant masks in all infant care areas for quick availability. Manual suction devices, such as the De Lee Mucus Trap, should no longer be used to aspirate mucus, blood, or meconium from the neonate's airway.

10. Have meconium aspirators and mechanical suction equipment available in all infant care areas. (Adaptors are available to connect mucous-trap catheters to wall suction if aspiration is needed.)
11. Ensure that all health care workers who have exudative lesions or weeping dermatitis refrain from all direct patient contact and patient equipment contact until the condition resolves.

Standard of Care for Assessment of the Vital Signs in the Normal Neonate

	Transition Period (Birth to 4 h)	First Postnatal Day (4–24 h)*	Second Postnatal Day (24–48 h)‡
Temperature	q 30–60 min	q 8 h	q 8–12 h
Respirations	q 30–60 min	q 8 h	q 8–12 h
Apical pulse	q 30–60 min	q 8 h	q 8–12 h

*Many low-risk newborns are discharged from the hospital or birthing center by the end of the first postnatal day.
‡In many units, the 24-h day is divided into two 1-h shifts. Vital signs are taken once on each shift by the primary nurse.

Normal Measurements of Vital Signs and Laboratory Values in Term Neonates

	Average Measurement	Range
Weight	3400 g (7 lb 8 oz)	2500–4250 g (5 lb 8 oz–9 lb 6 oz)
Length	49.5 cm (19.5 in)	44–55 cm (17–21.5 in)
Head circumference	35.5 cm (14 in)	32–38 cm (12.5–15 in)
Chest circumference	33 cm (13 in)	30–36 cm (12–14 in)
Temperature	37.0°C (98.6°F)	36.4°C–37.2°C (97.5°F–99°F)
Apical pulse	(no average)	110–160 BPM
Respiratory rate	(no average)	30–60 BPM
Blood pressure	80/46 Birth 65/41 Day 3	(no ranges given)
Plasma glucose	60 mg %	
Hematocrit	57%	45–65%
Bilirubin	<5 mg Day 1	4–12 mg/dL by 72 h

Neonatal Blood Gases

	Birth					
	Umbilical Vein	Umbilical Artery	5–10 Minutes	30 Minutes	60 Minutes	24 Hours
Pa_{O_2} (mm Hg)	27.5	16	50	54	63	73
Pa_{CO_2} (mm Hg)	39	49	46	38	36	33
pH	7.32	7.24	7.20	7.29	7.33	7.36
Base excess	-5.5	-7.2	-9.8	-7.8	-6.5	-5.2

Assessment of Neonatal Reflexes

Rooting and Sucking

Elicited by touching neonate's cheek, lip, or corner of mouth with finger or nipple.

Normal Response

- Neonate turns head in direction of stimulus, opens mouth, and begins to suck.

Abnormal Response

- Weak or absent response seen with prematurity, neurologic deficit or injury, or CNS depression secondary to maternal drug ingestion.

Swallowing

Elicited by placing fluid on back of tongue.

Normal Response

- Neonate swallows in coordination with sucking.

Abnormal Response

- Gagging, coughing, or regurgitation of fluid, possibly associated with cyanosis secondary to prematurity, neurologic deficit, or injury.
- Often seen after laryngoscopy.

Extrusion

Elicited by touching tip of neonate's tongue with finger or nipple.

Normal Response

- Neonate pushes tongue outward.

Abnormal Response

- Continuous extrusion of tongue or repetitive tongue thrusting seen with CNS anomalies and seizures.

Moro

Elicited by changing neonate's position suddenly or placing neonate on his/her back on flat surface.

Normal Response

- Bilateral symmetric extension and abduction of all extremities, with thumb and forefinger forming characteristic **C**, followed by adduction of extremities and return to relaxed flexion.

Abnormal Response

- Asymmetric response seen with CNS or peripheral nerve injury (brachial plexus) or fracture of clavicle or long bone of arm or leg.
- No response with severe CNS injury.

Stepping

Elicited by holding neonate in upright position and touching one of neonate's feet to flat surface.

Normal Response

- Neonate will step with one foot and then with other in walking motion.

Abnormal Response

- Asymmetric response seen with CNS or peripheral nerve injury or fracture of long bone of leg.

Tonic Neck or Fencing

Elicited by turning neonate's head to one side when neonate is resting.

Normal Response

- Extremities on side to which head is turned will extend, and opposite extremities will flex.
- Response may be absent or incomplete immediately after birth.

Abnormal Response

- Persistent response after fourth month.
- May indicate neurologic injury.
- Persistent absence in CNS injury and neuromuscular disorders.

Startle

Elicited by exposing neonate to sudden movement or loud noise.

Normal Response

- Neonate abducts and flexes all extremities and may begin to cry.

Abnormal Response

- Absence of response may indicate neurologic deficit or injury.
- Complete, consistent absence of response to loud noises may indicate deafness.
- Response may be absent or diminished during deep sleep.

Crossed Extension

Elicited by placing neonate in supine position and extending one leg while stimulating bottom of foot.

Normal Response

- Neonate's opposite leg will flex and then extend rapidly as if trying to deflect stimulus to other foot.

Abnormal Response

- Weak or absent response seen with peripheral nerve injury or fracture of long bone.

Glabellar Blink

Elicited by tapping bridge of neonate's nose when eyes are open.

Normal Response

- Neonate will blink with first four or five taps.

Abnormal Response

- Persistent blinking and failure to habituate is suggestive of neurologic deficit.

Palmar Grasp

Elicited by placing examiner's finger in palm of neonate's hand.

Normal Response

- Neonate's finger will curl around object and hold momentarily.

Abnormal Response

- Diminished response with prematurity.
- Asymmetry with peripheral nerve damage (brachial plexus) or fracture of humerus.
- No response with severe neurologic deficit.

Plantar Grasp

Elicited by placing examiner's finger against base of neonate's toes.

Normal Response

- Neonate's toes will curl downward.

Abnormal Response

- Diminished response with prematurity.
- No response with severe neurologic deficit.

Babinski

Elicited by examiner's stroking one side of foot upward from heel and across ball of foot.

Normal Response

- Neonate's toes will hyperextend and fan apart from dorsiflexion of big toe.

Abnormal Response

- No response with CNS deficit.

Using the Bulb Syringe

Purpose: To quickly and safely clear the neonate's airway when regurgitation of milk or mucus occurs. The nurse teaches the following steps in suctioning the mouth and nares with the bulb syringe.

1. Place the neonate in a football hold.
2. Place the head downward.
3. Compress the bulb syringe quickly before placing into mouth and nares.
4. Insert tip of bulb syringe *first* into mouth in area between cheek and gums.
5. Slowly release compression of bulb.
6. Remove tip of syringe from mouth, compress bulb, and reinsert in mouth to remove remaining liquids.
7. Repeat steps 4, 5, and 6 until mouth is clear.
8. Compress bulb and gently place tip of syringe in nares. Slowly release compression of bulb.
9. Repeat procedure until nares are clear.

Minimizing the Risk of Aspiration and Preventing Aspiration

Purpose: To minimize the risk of aspiration of gastric contents and obstruction of the neonate's airway.

1. Have emergency resuscitation equipment available.
2. Have 8 and 10 French feeding tubes available.
3. At the time of admission place a bulb syringe in the neonate's crib where it is easily visible.
4. Evaluate the sucking and swallowing reflexes of the neonate before the first feeding.
5. Test the patency of the esophagus and rule out esophageal and tracheal anomalies by giving a small amount of sterile water before the first bottle feeding.
6. Avoid overfeeding the formula-fed neonate and carefully burp the newborn after each feeding.
7. Always position the newborn in the side-lying position after feedings or when under the radiant warmer.
8. Demonstrate proper feeding and burping techniques to the mother and other care providers.
9. Demonstrate proper use of the bulb syringe.

If the neonate begins to gag or choke or becomes suddenly cyanotic:

10. Turn the neonate on side or abdomen with the head slightly lower than the feet (10–15-degree angle).
11. Pat the neonate firmly on the back.
12. Insert a bulb syringe or suction catheter into the mouth and remove all secretions.

If the neonate is apneic or remains cyanotic after secretions are removed form the mouth and nose:

13. Apply 100% oxygen by resuscitation bag and mask apparatus and begin ventilation at 40 breaths/min until color improves and breathing is resumed.

Performing a Heel Stick

Purpose: To obtain a capillary blood sample. This permits avoidance of the more invasive venipuncture procedure, which increases the risk of infection.

1. Warm neonate's heel for about 10 min, using a warm, moist wrap or a specially designed chemical heat pad.*
2. Stabilize the neonate's foot by placing your thumb behind the heel and dorsiflexing the foot against the shin.
3. Circle the heel stick site firmly with hand but do not squeeze.
4. Cleanse selected heal stick site with alcohol and blot dry with sterile gauze. The best site is the lateral aspect of the heel, but the medial aspect of the heel is also acceptable.
5. Puncture skin with one quick downward movement toward the heel using microlancet (pediatric size).
6. Allow small drops of blood to form and then wipe away with sterile gauze.
7. Allow second large drop to form (avoid squeezing) and fall onto the glucose-sensitive strip.
8. Follow manufacturer's direction for timing of test and interpretation of results.

*Severe burns have occurred when plastic diapers have been saturated with water and heated in a microwave oven before application to the heel. If a chemical heat pad is not available, do not microwave moist compresses. Use warm tap water only when applying moist compresses to the neonate's foot.

Using the Infant Radiant Warmer

Purpose: To support thermoregulation and prevent hypothermia in the neonate. To prevent hyperthermia or thermal burns during use of the radiant warmer.

1. Remove neonate's clothes and stockinette cap.
2. Remove plastic diaper.
3. Place neonate in center of mattress.
4. Attach skin probe and turn the control to servo control or automatic if neonate is to remain under the radiant warmer for more than 10 min.
5. Attach skin probe with a foam-backed, self-adhesive, reflective shield.
6. Place probe flush on the skin surface.
7. Place probe on the upper surface of neonate's skin—facing the radiant heater infrared element. (Use only probe designed by manufacturer.)
8. Set temperature control point between 36°C and 37°C (96.8°F–98.6°F).
9. Keep side walls of radiant warmer up.
10. Inspect infant's skin every 30 min for:
    - Evidence of redness
    - Probe adherence and attachment to skin.
11. Measure axillary skin temperature every 30–60 min.
12. Document:
    - Temperature control set point
    - Power output
    - Setting and operation of alarm system
    - Neonate temperature.

Nursing Responsibilities When Caring for the Neonate Who Requires Phototherapy

When the neonate requires phototherapy, the nurse is responsible for maintaining a *safe environment* during the course of the treatment. In addition, the nurse monitors the neonate for complications of therapy and must intervene in a timely manner to *prevent injury.*

Major nursing actions include:

- Monitor incubator and neonate's temp at least q 3–4 h to prevent hyperthermia.
- Ensure that eye patches are secure and properly positioned to prevent eye damage or obstruction of the nose.
- Remove eye patches for each feeding and assess eyes to identify early signs of infection.
- Monitor intake and output carefully to identify negative fluid balance and prevent dehydration.
- Shield genitalia by placing face mask or small diaper over genitalia to prevent exposure of skin over gonads and genitalia to beam of light.
- Observe skin color in natural light to identify early signs of skin bronzing so that therapy can be discontinued in a timely manner.
- Ensure that locks of incubator door are engaged, so that neonate cannot accidentally push door open.

These nursing actions should be documented periodically in the nurse's notes.

Notes

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