

The Postpartum Period and the Healthy Newborn

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Purpose and Objectives

This course outlines nursing interventions that will facilitate the recovery of the new mother and guidelines for assessing the newborn's transition to extrauterine life.

After successful completion of this course, you will be able to:

1. Name several physical and psychological changes of the postpartum period
2. Identify potential postpartum complications, nursing assessments and interventions for each
3. List several factors that may contribute to postpartum depression and how to treat symptoms
4. Identify components of discharge teaching for the new mother
5. Describe components of newborn transition to extrauterine life
6. Identify components of newborn head to toe assessment
7. List two mechanisms for heat loss in the newborn
8. Name three normal newborn reflexes
9. Review components of newborn care and discharge teaching

Introduction

Nurses who choose to work in the specialty of Maternal-Child Health have the unique opportunity to witness the birth of a child, the transformation of a woman into a mother, and a couple into a family. Families with children often describe the event of childbirth as one of the most powerful, life altering and memorable experiences of their lives. Parents will share stories of their experiences during labor and delivery and the postpartum period; with friends and family for years to come.

As nurses, it is our responsibility to safeguard the health and well-being of these families and assist new mothers in recovering their pre-pregnant state of wellness.

This course outlines nursing interventions that facilitate the recovery of the new mother and provide guidelines for assessing the newborn's transition to extrauterine life.

The Postpartum Period

The postpartum period begins with the birth of the baby, comprises both physiological and psychological components, and lasts for approximately six weeks.

During this period, the reproductive organs recover from the pregnancy and delivery. In general, this time period is the physiologic stabilization of the mother's body to the pre-pregnant state.

Psychological adjustment to the birth of a new baby may take longer than six weeks. During this time, the maternal bonding with the infant begins to occur and maternal depression may emerge. It is this

time period where the mother and infant need the assistance from healthcare workers and family to ensure successful transition.

Physiological Changes

Uterine Changes

Uterine Involution

The uterus contracts after expulsion of the placenta to prevent hemorrhage from the placental site. The uterus is transformed from a womb weighing over two pounds to a two ounce structure once involution is complete. This process takes about six weeks.

Endometrial Regeneration

The lining of the uterus or endometrium is shed in preparation for regeneration and restoration. The area where the placenta was attached takes the longest time to heal. A discharge known as lochia results as the surface of the inner uterus heals.

Lochia

Initially the lochia discharge is lochia rubra (red), becomes lochia serosa, (serosanguinous/brown), and finally lochia alba (pale or brownish). The discharge generally subsides by six weeks after delivery.

Test Your Knowledge

A discharge known as lochia results as the surface of the inner uterus heals. This discharge changes color and lasts for _____ after the birth of the baby.

- A. 1 week
- B. 6 weeks
- C. 4 weeks
- D. 2 weeks

Rationale: Initially the lochia discharge is lochia rubra (red), becomes lochia serosa, (serosanguinous/brown), and finally lochia alba (pale or brownish). The discharge generally subsides by six weeks after delivery.

Perineal and Breast

Perineum

Swelling, engorgement and edema are common in the first few weeks after delivery. There may be an episiotomy, lacerations or bruising. Vaginal dryness may cause discomfort with intercourse until hormonal actions enhance natural lubrication—this usually occurs once ovulation resumes.

Breasts

Throughout pregnancy the breasts have been preparing for the newborn. The areolas become darkened and colostrum, the precursor to breast milk, begins to be excreted. Engorgement of the breasts occurs on or about the third day after delivery and colostrum becomes milk on the third to fifth day.

Milk production is stimulated by the change in hormones brought on by the delivery of the placenta and the physical emptying of the breasts. Therefore it is extremely important to ensure that the baby is put to the breast *frequently* in the early postpartum period to establish a good milk supply.

Did You Know?

Colostrum is low in fat and high in carbohydrates, protein, and antibodies. It is extremely easy to digest, low in volume, and highly concentrated nutrition. Colostrum has a laxative effect on the baby, helping pass early stools, which aids in the excretion of excess bilirubin and helps prevent jaundice (American Academy of Pediatrics, 2015).

Cardiovascular

During pregnancy, blood volume increases; drops during delivery and stabilizes within 2 weeks after delivery.

Approximately 500mL of blood is lost during a vaginal delivery and 800-1000mL during a cesarean section.

Normal diuresis, following delivery, adds to the decreased volume.

Vital signs remain stable during this time, unless blood loss is extreme.

Gastrointestinal (GI)

Bowel change complaints are common after delivery. Constipation often results due to decreased activity, pain medication, decreased GI motility, and perineal, hemorrhoidal or incisional pain.

You can relieve constipation in your patient by:

- Encouraging a high fiber diet
- Encouraging fluids
- Ambulating early and frequently
- Teaching Kegel exercises and relaxation techniques
- Obtaining orders for stool softener or laxative

Urinary Tract

Birth can damage the urethra and cause swelling of the perineum; which can make urinating difficult.

Assessment of bladder emptying is essential during the postpartum period as urinary retention can interfere with uterine involution, and ultimately to postpartum hemorrhage.

Use of a bladder scanner can help assess the status of the bladder. If the patient cannot void spontaneously or does not completely empty the bladder, intermittent catheterization may be necessary.

Menstrual Cycle

Huge hormonal changes begin with the expulsion of the placenta. With a dramatic fall in the levels of estrogen and progesterone, the uterus begins to contract (involute), so that by six weeks postpartum, it will have returned to its position behind the pubic bone. This involution may cause some discomfort and is referred to as "after birth pains." Walking, emptying the bladder often, pain medication, breathing and relaxation techniques help lessen the pain.

Ovulation and menstruation may be suppressed in women who are breastfeeding. Once weaning is achieved, menstruation generally reoccurs within six weeks.. Non-breastfeeding mothers will generally begin to menstruate again six to ten weeks after delivery.

Test Your Knowledge

Non-breastfeeding mothers will generally begin to menstruate:

- A. 1-4
- B. 4-6
- C. 6-10
- D. 10-14

Rationale: Ovulation and menstruation may be suppressed in women who are breastfeeding. Once weaning is achieved, menstruation generally reoccurs within six weeks thereafter. Non-breastfeeding mothers will generally begin to menstruate again six to ten weeks after delivery.

Postpartum Hemorrhage

Postpartum Hemorrhage (PPH) is excessive bleeding in the early postpartum period and is responsible for 25% of the 515,000 maternal pregnancy related deaths reported by the World Health Organization (Smith & Brennan, 2014).

Postpartum Hemorrhage is defined as blood loss greater than 1,000 mL and/or the need for red cell transfusion. There are two classifications of PPH; *early* - developing in the first 24 hours and *late* - developing after the first 24 hours after childbirth. Retained placental fragments are the most common cause of late hemorrhages.

The major cause of PPH is uterine atony (90%). Uterine atony is defined as failure of the uterine muscles to contract normally after the baby and placenta are delivered. Uterine contractions facilitate vessel compression which in turn stops bleeding. When the uterus does not contract enough, bleeding continues. A floppy, uncontracted uterus results in significant blood loss.

Factors that may prevent the muscles of the uterus from contracting include:

- Prolonged labor
- The use of oxytocin during labor
- General anesthesia
- Twin or multiple births
- Polyhydramnios (increased amounts of amniotic fluid)
- Delivery of a large baby
- History of more than five pregnancies
- Dystocia (abnormal labor)
- Chorioamnionitis (infection)
- Placental fragments remaining in the uterus
- Fibroids

(Levine, 2012)

Test Your Knowledge

Postpartum hemorrhage is defined as:

- A. Blood loss greater than 500 mL
- B. The need for fresh frozen plasma during the early stage

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C. Blood loss greater than 1000 mL

D. The need for red cell transfusion within the late phase

Rationale: Postpartum Hemorrhage is defined as blood loss greater than 1,000 mL and/or the need for red cell transfusion. There are two classifications of PPH; *early* - developing in the first 24 hours and *late* - developing after the first 24 hours after childbirth.

Postpartum Hemorrhage Risk Factors

- Asian race
- Maternal blood disorders
- Prior postpartum
- Macrosomia
- Retained placental fragments
- Multiple pregnancy
- Genital tract lacerations
- Antepartum or intrapartum hemorrhage
- Labor induction
- Chorioamnionitis
- Episiotomy
- Still birth
- Compound fetal presentation
- Epidural anesthesia
- Prolonged labor
- Forceps delivery after a failed vacuum

(Smith & Brennan, 2014)

Management of Postpartum Hemorrhage

The first treatment for postpartum hemorrhage is fundal massage. Fundal massage should be performed until the uterus firmly contracts.

When fundal massage is not effective or bleeding is excessive, IV oxytocin or other uterine stimulants may be necessary to manage uterine atony.

Blood product administration is based on hemoglobin/hematocrit results and patient stability.

Other causes of postpartum hemorrhage include:

- Genital tract lacerations
- Vulvar
- Vaginal and pelvic hematomas
- Uterine inversion
- Uterine rupture
- Abnormal placental implantation
- Coagulopathies

Uterine Stimulants for the Treatment of Uterine Atony

Drug	Dosing	Expected Effects	Contraindications/Side Effects
Oxytocin (Pitocin, Syntocinon)	IV infusion, 10-40 Units in 1000mL D5W or physiologic electrolyte solution, IM injection, 10 units	Stimulates uterine muscle contraction, promotes milk ejection reflex	Hypersensitivity; return of atony when effect wears off, can cause hypertension if pt is also receiving ephedrine, methoxamine, or other vasopressors
Ergotrate maleate (Ergonovine)	Oral: 0.2 to 0.4 mg every 6 to 12 hours for 48 hrs, IM injection: 0.2mg	Stimulates prolonged, nonphasic uterine contractions	Can cause severe hypertension if given to hypertensive patients or those receiving vasoconstrictors; hypersensitivity, nausea and vomiting, sudden change in BP and pulse; rare cases of myocardial infarction associated with postpartum use.
Drug	Dosing	Expected Effects	Contraindications/Side Effects
Methylergonovine (Methergine)	Oral: 0.2mg tab every 6-8 hrs for up to one wk. IM injection 0.2mg every 2-4 hrs for no more than 5 doses total	Stimulates rapid, sustained <u>tetanic</u> uterine contractions; used in treatment of subinvolution	Nausea, vomiting; transient hypertension; dizziness, headache; tinnitus; diaphoresis; palpitations; temporary chest pains
Prostaglandin (Prostin/15M)	IM use: 0.25 mg repeated up to 5 maximum doses; may be repeated Q15-90 min. Physician may elect to administer by direct intramyometrial injection	Control of refractory cases of postpartum hemorrhage caused by uterine atony; generally used after failed attempts at control of hemorrhage with oxytocic agents.	Contraindicated in women with active cardiovascular, renal, liver disease or asthma or with known sensitivity to the drug. Nausea, vomiting, diarrhea, flushing, bradycardia, bronchospasm, wheezing, cough, chills, fever.

Adapted from Lexicomp: Drug Information Handbook w/International Trade Names Index 24th Edition

Psychological Adaptations

The nurse plays a significant role in promoting mother and infant bonding and can positively impact new mothers' self-confidence by praising and reassuring them of their competence and ability to care for a newborn.

Bonding with the infant after delivery is critical to the parent-child relationship. Behaviors such as eye contact, holding/touching, smiling, and talking to the infant are all part of the attachment process.

It is important to remember that this important bonding process is interrupted when the newly born infant must be whisked off to the newborn intensive care unit or even to the nursery for care immediately after birth.

Postpartum Baby Blues

The incredible changes in hormonal balance along with the alterations in maternal physiology can leave postpartum women feeling anxious, teary-eyed, overwhelmed, depressed and emotional. These feelings are commonly referred to as postpartum blues (PPB). These feelings usually emerge on the second or third postpartum day, but resolve spontaneously within a few days to no longer than two weeks.

Postpartum blues affect 50-80% of new mothers (All About Depression.com, 2010). A new mother can have sudden mood swings, sadness, crying spells, loss of appetite, sleeping problems, and feel irritable, restless, anxious, and lonely. Symptoms are not severe and treatment is not necessary. The “blues” do not interfere with the mother’s ability to care for herself and the baby.

PPB is considered a common and expected reaction to the delivery of the baby. It is not considered an illness nor is it related to any previous mental illness and it is not caused by stress.

Postpartum Depression

Postpartum depression (PPD), also called non-psychotic depression, is one of the categories of postpartum mood disorders affecting 10-20% of new mothers (Postpartum depression Fact Sheet, 2011). It is a major health issue with well-documented negative health consequences for the mother, child, and family. Postpartum depression may not be easily identified and therefore often goes untreated.

Postpartum depression can happen anytime within the first year after childbirth. A woman may have a number of symptoms such as sadness, lack of energy, trouble concentrating, anxiety, and feelings of guilt and worthlessness. Postpartum depression affects a woman’s well-being and keeps her from functioning well for long periods of time, and requires treatment by a doctor. Early recognition, counseling, support groups, and medication can help.

Risk Factors for Postpartum Depression

Women may have a higher chance of postpartum depression if they:

- Have a history of a mood or anxiety disorder prior to pregnancy
- Have had depression with a previous pregnancy
- Have a close family member who has had depression or anxiety
- Have anything particularly stressful happen during the pregnancy, including illness, death or illness of a loved one, a difficult or emergency delivery, premature delivery, or illness or abnormality in the baby
- Are in their teens or over age 30
- Have a pregnancy that is unwanted or unplanned
- Currently abuse alcohol, take illegal substances, or smoke

Test Your Knowledge

Risk factors for postpartum depression include which of the following:

- A. Abuse drugs

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- B. Are in their teens
- C. Have a history of mood disorder
- D. All of the above

Rationale: Women may have a higher chance of postpartum depression if they:

- Have a history of a mood or anxiety disorder prior to pregnancy
- Have had depression with a previous pregnancy
- Have a close family member who has had depression or anxiety
- Have anything particularly stressful happen during the pregnancy, including illness, death or illness of a loved one, a difficult or emergency delivery, premature delivery, or illness or abnormality in the baby
- Are in their teens or over age 30
- Have a pregnancy that is unwanted or unplanned
- Currently abuse alcohol, take illegal substances, or smoke

Management of Postpartum Depression

Postpartum depression can happen to any woman giving birth.

Unfortunately, a stigma is still attached to mental illness; therefore some women don't tell anyone about their symptoms. They feel embarrassed, ashamed, or guilty about feeling depressed when they are supposed to be happy. They worry they will be viewed as unfit parents.

It is very important that nurses encourage new mothers to seek assistance if they are having signs and symptoms of PPD.

Healthcare workers should screen all new mothers for the risk factors for PPD. There are several questionnaires available to assist healthcare providers screen for postpartum depression. If PPD is suspected, there are various treatment modalities that can help. Individual and group "talk therapies" can help a woman with postpartum depression feel better and do better as a mother and as a person.

A crucial component of postpartum discharge teaching is information regarding postpartum depression; signs and symptoms and how to access help should concerns develop.

Untreated Postpartum Depression

Lack of energy, trouble concentrating, irritability, and an inability to meet the child's needs for love and affection are all signs of postpartum depression. The depression can worsen as the mother loses confidence in herself as a mother.

Postpartum depression may cause delays in language development, problems with emotional bonding, behavioral problems, lower activity levels, and sleep problems. These delays may be mitigated with the help of another caregiver.

Test Your Knowledge

Postpartum depression can cause delays in language development.

- A. True
- B. False

Rationale: Postpartum depression may cause delays in language development, problems with

emotional bonding, behavioral problems, lower activity levels, and sleep problems. These delays may be mitigated with the help of another caregiver.

Postpartum Psychosis

Postpartum psychosis is rare. It occurs in one or two out of every 1,000 births and usually begins in the first six weeks postpartum.

Women who have bipolar disorder or another psychiatric disorder have a higher risk for developing postpartum psychosis.

Symptoms may include rapid mood swings, delusions, hallucinations, sleep disturbances, and obsessive thoughts about the baby.

Postpartum Care

Perineal Care

Perineal tears are common during the birth of a baby. In addition, episiotomies are often performed to allow additional space for the baby to be delivered and prevent uncontrolled tearing.

These tears and cuts cause discomfort in the early postpartum period. During this time, the perineum should be kept as clean and dry as possible, to allow for healing to occur without infection.

Postpartum women who are ambulatory should be taught to perform perineal care after using the bathroom and instructed in the importance of frequently changing sanitary towels to maintain a clean and dry perineum. For those patients recovering from a cesarean section, perineal care should be offered frequently.

There are a number of methods used to relieve perineal pain, including cold baths, and ice or cold packs on the area. Follow your organization's protocol for providing perineal pain relief, but several studies show that excessive cooling may possibly delay healing or cause ice burns (East et al., 2012).

Regular sitz baths (warm or cold) can also be effective in reducing perineal pain by increasing blood flow to the perineum and keeping the area clean. Postpartum patients can also be taught to squirt warm water over the perineum during and after urination to ease perineal pain. The perineum should then be gently patted dry.

Postpartum Infections

The most common postpartum infections are urinary tract infections (UTIs), endometritis, and wound infections. Prevention is the key. Effective hand washing can help to prevent many of these infections. Clean hands are the single most important factor in preventing the spread of pathogens and antibiotic resistance in healthcare settings.

- **UTIs:** Occur in the postpartum patient (5%), and are more frequent anytime the patient has been catheterized, either before or after delivery
- **Endometritis:** Occurs when the lining of the uterus becomes infected. Symptoms include fever, chills, abdominal pain, and foul smelling lochia
- **Wounds:** Occur in the genital tract, episiotomy or a cesarean section incision

Management of Postpartum Infections

Utilizing an evidence-based best practice prevention bundle can prevent urinary tract infections. Good hand washing, sterile technique during catheterization, insertion for actual need rather than convenience, and removal at the earliest convenience are all parts of the prevention bundle.

Antibiotics and antipyretics may be ordered for identified wound infections.

Thrombophlebitis/Thromboembolism Prevention

Thrombophlebitis is inflammation of the vein wall and thromboembolism is clot formation. Women are at increased risk for thrombosis after delivery as the result of venous stasis due to uterine pressure and hypercoagulability. Thromboembolic disease is more likely to occur after cesarean birth. The patient may complain of fever and her leg may be swollen, painful and/or discolored. Symptoms often appear on the third or fourth postpartum day, but may not occur for one to two weeks after delivery. Treatment usually consists of anticoagulant therapy and rest.

Prevention involves early and frequent ambulation after delivery. Nursing assessment includes inspection of the extremities each shift. Observe for any complaints of leg pain or discomfort, especially in the calf area.

For more information regarding venous thromboembolism prevention and treatment, review the RN.com module DVT: A Life-Threatening Condition

Over Distention of the Bladder

Over distention of the bladder occurs in the postpartum period due to residual effects of anesthesia and birth trauma with subsequent swelling of the urethra and perineum.

Bladder over-distention can affect uterine involution and increase vaginal bleeding. The bladder must be assessed frequently in the early hours after birth.

A full bladder causes the uterus to be displaced above the umbilicus and well to one side of midline in the abdomen. A displaced uterus, boggy uterus or palpable bladder requires immediate nursing intervention.

Management of Over Distention of the Bladder

The first priority is to assist the new mother to the bathroom or offer a bedpan if she is unable to ambulate. Other options include:

- Running the water in the restroom or squeezing warm water from a peri-bottle over the perineum which may stimulate voiding
- Using a few drops of oil of peppermint in the toilet or bedpan. Some practitioners think the vapors help relax the muscles that control urination and may assist the patient in voiding
- If these measures fail and the patient displays signs of an over-distended bladder, cannot void, or is voiding in small amounts, intermittent catheterization may be required

- Use of a bladder scanner can help determine when intermittent catheterization is needed

Breastfeeding

Exclusive breast milk feeding is recommended for all mothers and babies, as appropriate to their clinical condition. Exclusive breast feeding for the first 6 months of neonatal life has long been recommended by the American Academy of Pediatrics (AAP) and World Health Organization (WHO). Exclusive breast milk feeding is also a Joint Commission Perinatal Core Measure (TJC, 2010).

Since it is a proven fact that breast milk is the most superior nutrition for an infant, women should be encouraged to breastfeed, and given the information and support to do so.

More Info

If all babies were fed only breast milk for the first six months of life, the lives of an estimated 1.5 million infants would be saved every year and the health and development of millions of others would be greatly improved.

Breastfeeding Support

There are very few circumstances in which a woman would not be able to produce milk and even in these rare situations, there are still benefits to allowing the infant to suckle at the breast. Nurses should proactively refer such cases to Lactation Consultants, if available. Support and encouragement from the nurse and lactation specialists are vital to ensure early breastfeeding success.

Primarily, nursing mothers should be taught proper breastfeeding technique and latch-on. This will promote effective suckling and emptying of the breast. Good positioning with pillow support to the back, neck and arms will facilitate good latching techniques. The mother should be taught the cradle, cross cradle, football, and supine holds.

- Cradle: The classic breastfeeding position
 - Cradle the baby's head in the crook of your arm
 - Sit in a chair with supportive armrest or on a bed with lots of pillows
 - Rest your feet on a stool or other raised surface to avoid leaning downward toward the infant
 - Hold the infant in your lap or on a pillow with the infant lying on his/her side facing you
 - Tuck the infant's arm under your own
 - Support the infant's neck, spine, and bottom
- Cross cradle:
 - If nursing from right breast use your left hand and arm to hold infant
 - Rotate infant's body to direct face you
 - Guide the infant to the breast with your thumb and fingers behind the head and below ears
- Football hold:
 - Tuck the infant under your arm (on the same side that you're nursing from) like a football
 - Position your baby at your side, under your arm; facing you with her nose level with your nipple and her feet pointing toward your back
- Supine hold:
 - Support your back with several pillows while lying on your side

- One under your head and shoulders and one between your knees
- Support your infant on a pillow if necessary
- Cradle the head with your arm (NA, 2015).

Newborns should be put to the breast as soon after delivery as possible and thereafter on demand, at least every 2-3 hours to establish a good milk supply. Mothers should be taught to recognize early feeding cues in the infant and to nurse on demand.

Pacifiers and bottle feeds should be discouraged as they can cause nipple confusion (Newman, 2012).

Breastfeeding Support (cont)

The mother can be taught to use gentle massage starting at the axilla and working toward the nipple if needed to encourage the let down reflex, which allows milk to be released into the milk ducts. This reflex is controlled by prolactin and oxytocin but also require maternal relaxation to be effective. Pain, stress, and anxiety can interfere with the reflex. This will cause the retention of milk within the milk glands which can cause additional pain and anxiety.

Most complications of breastfeeding can be avoided by good latching technique and frequent feeds that are baby led and not timed. However, sometimes, plugged ducts or mastitis may occur and the nurse should be able to differentiate these conditions:

- Plugged ducts occur when the breast is not drained often enough. It is usually unilateral and is not accompanied by flu-like symptoms. It presents as a tender area in the breast.
- Mastitis is a breast infection that presents with localized pain in one area of the breast, which can be hardened and red. It is usually accompanied by a fever and flu-like symptoms, and usually only involves one breast. It is often seen several weeks after hospital discharge. Poor milk drainage, maternal fatigue/stress and poor hygiene can contribute to the possibility of infection. Treatment includes rest, antibiotics, analgesics, increased fluid intake and frequent feedings or pumping to empty the breast.

Maternal Postpartum Discharge Teaching

Discharge teaching for the new mother should begin as soon after birth as possible and contain the following information:

The healthcare provider should be contacted for:

- Temperature of 100.4 degrees or higher
- Change in the lochia—excessive bleeding, passage of large clots, foul odor, return to bright red bleeding
- Any calf pain, redness or tenderness—signs and symptoms of thromboembolism
- Symptoms of UTI—such as burning on urination, frequency, urgency
- Problems with episiotomy or cesarean incision—redness, swelling, drainage, lack of approximation, increase in pain
- Signs and symptoms of breast infection (mastitis)—red, hot, firm area on breast, fever, flu-like symptoms

Maternal Postpartum Discharge Teaching (cont)

- Avoid strenuous activity for six weeks and no driving for 6 weeks post cesarean section. Too

much activity may cause an increase in vaginal bleeding—especially in the early weeks after delivery.

- Schedule 6 week follow up.
- Perineal care:
 - Shower rather than bathe for the first few weeks
 - Perform perineal hygiene before and after voiding and bowel movements
 - Use topicals (witch hazel pads, foams or hemorrhoid cream) as needed
- No intercourse, tampons or douching for six weeks
- Continue prenatal vitamins with iron while breastfeeding
- Need for extra calories (500 per day) and a nutritious, well-balanced diet
- Wear a snug, well-supportive bra
- Avoid stimulation to the breasts and use ice and analgesics, if needed
- Review discharge medications and check all other medications with her provider
- Review signs and symptoms of postpartum depression, and provide list and contact details of area support groups available

The Healthy Newborn

The newborn period is generally referred to as the first 28 days of the infant's life. Nursing goals during this time are to promote the physical well being and safety of the neonate and to assist in the establishment of a well-functioning family unit.

You can meet these goals by providing comprehensive newborn care, initiating and maintaining safety practices, teaching parents how to care for their new baby, and supporting and encouraging their efforts.

The transition to extrauterine life is a dramatic one for the infant. Numerous physiologic adaptations take place in the newborn's body. The newborn is prepared for these changes by the events of normal labor and vaginal delivery.

Although these tasks are dramatic and complex, most infants transition to extrauterine life smoothly. However, close observation is required to identify any problems that may occur.

More Info

During delivery, contractions cause gradual decreased fetal oxygen and PH and increased carbon dioxide during labor. Movement through the birth canal squeezes the chest and thereby removes excess lung fluid. Delivery into the cooler environment and sudden expansion of the chest help stimulate the first breath.

Physiological Changes in the Newborn

Respiration

Before delivery, the mother's body assumes the role of gas exchange for the fetus via placental/fetal circulation. After birth the newborn must perform this task via breathing. For a smooth transition to occur, the following must happen:

- Respiratory movements are initiated
- Entry of air overcomes opposing forces so that the lungs can expand
- Residual air remains in the lungs at the end of expiration to avoid lung collapse
- Blood flow to the lungs increases and cardiac output is redistributed

It has been well documented that fetuses make movements that simulate breathing in utero. Once delivery occurs, the infant should take his or her first breath within a few seconds. It has been theorized that the first breath is stimulated by the temperature change into the cooler environment of the delivery room, acid base changes that occur through the process of labor and the stimulation of touching and rubbing that occurs at birth.

Test Your Knowledge

Once delivery occurs, the infant should take his or her first breath within a few seconds; this breath is stimulated by:

- A. Warm environment of the delivery room
- B. Touching and rubbing by the healthcare team**
- C. Suctioning
- D. Spanking

Rationale: Once delivery occurs, the infant should take his or her first breath within a few seconds. It has been theorized that the first breath is stimulated by the temperature change into the cooler environment of the delivery room, acid base changes that occur through the process of labor and the stimulation of touching and rubbing that occurs at birth.

Circulation in the Newborn

Once the newborn begins to breathe and the umbilical cord is clamped, fetal circulation is altered and becomes mature circulation. The following five changes must occur to make the switch from fetal to mature circulation:

- Closure of the foramen ovale
- Closure of the ductus arteriosus
- Closure of the ductus venosus
- Decreased pulmonary vascular resistance
- Increased aortic blood pressure

These changes are usually complete by the first day or two of life.

Safety of the Newborn

Safety and security of the infant is of utmost importance.

The most important safety practice is the placing of the baby's identification band on at the time of birth.

This band should contain the mother's unique identifiers.

The identity of the newborn must be checked utilizing two unique identifiers for the mother and baby whenever the infant is removed from and returned to the mother's care.

Many facilities have security monitors or infant security devices that help to prevent infant abduction. Parents and family members should be taught hospital's policy for ensuring infant safety and security.

Test Your Knowledge

Relying on the crib card or infant characteristics is the safest way to ensure that the correct infant is given to the correct parents.

True

False

Rationale: The identity of the newborn must be checked utilizing two unique identifiers

Newborn Assessment – The First Hour

The initial assessment of the newborn is completed within minutes of the birth. The assessment usually occurs under the infant warmer.

The Apgar score is an essential part of the initial assessment and is performed at 1 and 5 minutes post birth. An Apgar score of 10 means a baby is in the best possible condition, while a score of 3 or less often means a baby needs immediate attention and care. Most babies receive a score between 8 and 10.

Sign	Score = 0	Score = 1	Score = 2
Heart rate	Absent	Below 100 per minute	Above 100 per minute
Respiratory effort	Absent	Weak, irregular, or gasping	Good, crying
Muscle tone	Flaccid	Some flexion of arms and legs	Well-flexed, or active movements of extremities
Reflex or irritability	No response	Grimace or weak cry	Good cry
Color	Blue all over, or pale	Body pink, hands and feet blue	Pink all over

(Trevino, H., 2015)

Did You Know?

The Apgar scoring systems was developed by Virginia Apgar, a physician, in 1952 to evaluate the newborn's condition at birth.

Newborn Assessment – The First Hour (cont)

The head to toe physical assessment of the newborn should be completed within an hour of delivery. The nurse is responsible for alerting the physician or nurse practitioner of any findings deviating from normal. A complete physical exam is performed by the physician or nurse practitioner within the first 24 hours of life.

The following medications are given:

- Vitamin K to prevent hemorrhagic disease of the newborn

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- Eye prophylaxis to prevent ophthalmia neonatorum
- Hepatitis B vaccine

Newborn Assessment- The Essentials

During the assessment, the nurse should assess and document the following:

- Vital signs
 - Respirations, rate and quality: 35 breaths/minute
 - Heart rate: 100 - 180 beats/minute
 - Presence or absence of a murmur
 - Capillary refill
 - Temperature: 98 - 99.4 degrees Fahrenheit
 - Blood pressure
- Measurements: length, weight, chest and head circumference
- The infant's posture, muscle tone, and alertness and overall appearance
- The mother's interaction with her baby
- The skin color and the overall size, shape, and proportions of the infant's body
- The infant's cry (normal newborns have strong, lusty cry whereas a high pitched cry can indicate increased intracranial pressure or drug withdrawal)
- Patency of anus
 - Gently insert a thermometer into the anus to check patency

Temperature

The newborn's temperature is greatly affected by changes in the environmental temperature. Shivering as a mechanism of heat production is not developed in the newborn; therefore, the newborn produces heat primarily by non-shivering thermogenesis. The newborn infant relies on thermogenesis by "brown fat" or brown adipose tissue. The heat produced by the metabolic activity in brown fat helps to warm the newborn. Reserves of brown fat are usually present for several weeks after birth but are rapidly depleted if the infant is cold stressed. This process is unique to the newborn.

Maintaining the temperature of the newborn is essential to decreasing the risk of respiratory distress. Normal temperature promotes normal oxygen requirements. The hypothermic, cold-stressed, infant will have an increased oxygen consumption need resulting an increased oxygen need. The cold-stressed infant may present with signs of respiratory distress and cardiac depression.

Heat Loss Mechanisms of the New Born

Mechanisms for Heat Loss	Nursing Actions
<p>Convection: the loss of heat from the body to cooler air currents. Examples: Air conditioned room, removal from incubator for procedures.</p>	<p>Maintain room temperature. Keep infant wrapped in blankets with hat on.</p>
<p>Radiation: when heat is lost from the body surface to a cooler surface that is not in direct contact. Examples: The walls of a room, the incubator placed close to a window.</p>	<p>Keep nursery cribs away from walls of room or windows.</p>
<p>Evaporation: loss of heat that occurs when liquid is converted to a vapor. Examples: immediately after delivery when the wet infant is exposed to the air, after bathing.</p>	<p>Dry the infant thoroughly immediately after delivery. Bathe the infant quickly in a warm environment, dry well and wrap in blankets.</p>
<p>Conduction: the loss of heat to a cooler surface by direct skin contact. Examples: cold examination tables, cold hands.</p>	<p>Warm hands when possible. Place a warm blanket under the infant on the exam table.</p>

Skin

The full term newborn will have a cheesy white substance on the skin called vernix caseosa. This covering helps to protect the fetus' skin in utero.

Premature babies often do not have vernix and post-term infants may only have it in certain areas such as skin folds.

Skin color and turgor should be assessed. Note skin lesions or any discolorations. Assess skin integrity and check for breaks in the skin from scalp electrodes, or abrasions. Skin wrinkling and peeling is common in infants who are post-date. Acrocyanosis or cyanosis of the extremities is a variation of normal during the first 24 hours after birth.

Test Your Knowledge

The newborn's skin should be pink with areas of vernix with or without bruising and abrasions from the birth process. Cyanosis may be normal if it appears:

- A. Around the mouth
- B. On the extremities**

Rationale: Skin color and turgor should be assessed. Note skin lesions or any discolorations. Assess skin integrity and check for breaks in the skin from scalp electrodes, or abrasions. Skin wrinkling and peeling is common in infants who are post-date. Acrocyanosis or cyanosis of the extremities is a variation of normal during the first 24 hours after birth.

Cranium

The newborn's head is large and heavy; it may appear that the head is too big for the rest of the

body.

The bones of the newborn's skull are joined by connective tissues that are called sutures. The areas where the bones have not grown together are called fontanels or "soft spots." In order for the baby's head to move through the birth canal, the skull is malleable due to the two fontanelles. As the head moves through the birth canal, the head will become molded. Additionally, the fontanelles accommodate the rapid growth of the brain during infancy.

Anterior Fontanel

The diamond shaped anterior fontanel is located at the juncture of the frontal and parietal bones. The anterior fontanel usually closes within the first nine months of life.

Assessing the anterior fontanel reveals clues to the infant's condition. The fontanel should be assessed with the infant in a semi-sitting position. When assessed in this position, a bulging fontanel indicates increased intracranial pressure; a sunken fontanelle is indicative of dehydration.

It is normal for the fontanel to bulge slightly with crying or when stooling; you may also be able to palpate the heart rate.

Posterior Fontanel

The posterior fontanel is formed by the parietal bones and occipital bone is triangular in shape and smaller than the anterior fontanel. The posterior fontanel usually closes within the first 1-2 months, but may appear closed at birth due to the small size.

Cephalohematoma and Caput Succedaneum

The newborn's head should be assessed for any signs of bruising or swelling. Two common causes of swelling of the newborn's head are cephalohematoma and caput succedaneum.

Cephalohematoma

Cephalohematoma is a collection of blood between the cranial bones and periosteal membrane. This results when the delivery of the infant was assisted by the use of forceps. The scalp appears swollen. This generalized swelling becomes a more defined hematoma one to two days after delivery. Cephalohematomas do not cross the suture lines. This type of hematoma usually resolves after several weeks to few months. Because of the bleeding and subsequent breakdown of the red blood cells in the hematoma these infants are more likely to show signs and symptoms of physiologic jaundice.

Caput Succedaneum

Caput succedaneum is swelling produced on the presenting part of the fetal head during labor. Caput succedaneum usually results from a long or difficult labor or a vacuum extraction at delivery. The swollen area can be over a small or large portion of the scalp and overrides the suture lines. The caput is present at birth and generally subsides over the first several days of life.



Image provided by Radswiki.net

Test Your Knowledge

Which of the following two bruising defects, occurring at birth, crosses or covers a suture line?

- A. Cephalohematoma
- B. Caput Succedaneum

Rationale: Cephalohematomas do not cross the suture lines. The swollen bruised area of a caput succedaneum can be over a small or large portion of the scalp and overrides the suture lines.

Head and Neck

The infant's face should be observed for structure and symmetric movements.

The eyes, ears, nose and mouth should be assessed for symmetry and any obvious abnormalities.

In the normal newborn, the pinna or top of the ear should parallel to the canthus of the eye. Low set ears may indicate chromosomal abnormalities.

The neck of the newborn is short and straight with skin folds. The newborn is unable to support the weight of his/her head due to lack of muscle tone development.

The clavicles should be assessed for signs of fracture. The normal clavicle is straight and intact. Any evidence of swelling, a "knot" or lump on the clavicle, or crepitus on the neck may indicate fracture; and must be reported to the physician or nurse practitioner.

Did You Know?

The ears and the kidneys form simultaneously in utero; therefore, an infant with abnormal ears should be assessed for renal function.

Chest

The size and general appearance of the chest should be assessed.

- The head circumference should exceed the chest circumference by 2 cm. Within the first 18 months the chest circumference will match the head circumference and then begin to exceed the head size by 5-7 cm by age 4 years
- Both sides of the chest should expand equally with inspiration
- The breasts may become engorged in both male and female infants due to hormonal influences from the mother and may last a few weeks

- The presence of any accessory nipples should be documented. These “extra” nipples do not contain any glandular tissue and are harmless. However, widely spaced nipples may be associated with congenital abnormalities such as Down's Syndrome and need further investigation

Test Your Knowledge

At birth, the head circumference should be _____ than the chest circumference.

- A. Larger
- B. Smaller

Rationale: The head circumference should exceed the chest circumference by 2 cm. Within the first 18 months the chest circumference will match the head circumference and then begin to exceed the head size by 5-7 cm by age 4 years

Respiratory

Lung sounds of the baby's anterior and posterior chest must be auscultated. Normal respirations in the newborn are 30-60 breaths per minute.

Signs and symptoms of respiratory distress in the newborn include:

- Nasal flaring
- Retractions
- Grunting or sighing
- Seesaw respirations
- Tachypnea

Any of the above findings must be reported to the pediatrician or the infant's primary care provider immediately.

Test Yourself

The following are signs of respiratory distress in a newborn, except:

- A. Respirations at 40 per minute
- B. Retractions
- C. Grunting
- D. Nasal flaring

Rationale: Normal respirations in the newborn are 30-60 breaths per minute.

Signs and symptoms of respiratory distress in the newborn include:

- Nasal flaring
- Retractions
- Grunting or sighing
- Seesaw respirations
- Tachypnea

Cardiovascular

The normal heart rate of the newborn is 120-160 BPM. The heart should be auscultated to assess rhythm, rate, intensity, and position in the chest.

Heart murmurs in newborns are fairly common. Many are related to a patent ductus arteriosus which closes by the second day of life. Approximately 90% of murmurs in the newborn are transient and are variations of normal.

Peripheral pulses (central and distal) are evaluated and the blood pressure may be taken.

Abdominal

The infant's abdomen protrudes slightly and moves with respiration.

The umbilical cord stump should be inspected for the presence of two arteries and one vein. A single umbilical artery can be associated with congenital anomalies.

The cord stump should be kept clean and dry and will begin to dry up within several hours of delivery. The umbilical cord stump generally falls off within 7-10 days of birth.

The abdomen is assessed for bowel sounds and gently palpated checking for softness, tenderness and/or the presence of masses.

Genitals

The genitals of the newborn should appear normally formed.

In the male infant, the foreskin will cover the glans with a slight opening at the tip. The penis should be inspected to see that the urinary meatus is in the correct position, at the tip of the penis. The testes should both be descended, and palpable in the scrotum.

In the female infant, the labia majora cover the labia minora at term. The clitoris is normally large in the newborn. A thick, white vaginal discharge may be present and can become blood tinged. This is related to the withdrawal of maternal hormones and is normal. The discharge generally subsides within a week or so. The vernix caseosa (white cheese-like substance) may adhere to the labia. This should not be actively removed as doing so may irritate the tender tissue. This substance will slowly disappear with subsequent diaper changes and baths.

The anal area is visualized to check for patency and evidence of fissure.

Elimination: Urination

Urine should be passed within the first 24 hours of birth. Thereafter, minimum urination should correlate with the number of postpartum days. On day one, 1-2 wet diaper(s) is acceptable, progressing to 7-8 wet diapers by the end of the first week.

The urine should be observed for urate crystals, which may occur in the first few weeks of life, and indicate that the urine is highly concentrated. These crystals are harmless in the early postpartum period and should disappear spontaneously prior to discharge.

Elimination: Bowel Movements

The passage of the first meconium stool should be noted within the first 24 hours.

The normal appearance and frequency of stools should be discussed with new parents, as stool patterns depend on method of feeding.

All newborn stools transition from meconium to transitional stools which are green in color, before taking on the typical yellow color on day 3-4.

Breastfed newborns may have 6-10 small semi-liquid yellow stools by day 4, after milk production is established.

Formula fed infants may have 1-2 bowel movements a day, and the stool is usually more solid and yellow or brown in color.

Jaundice

Jaundice is present to some degree in most newborns. This physiological jaundice usually appears between day 2 and 3, peaks between days 2 and 4, and clears by 2 weeks. Physiological jaundice usually causes no problems.

Breastfeeding jaundice is a type of exaggerated physiological jaundice sometimes seen in breastfed babies in the first week, especially in those who are not nursing often enough. It is different than breast milk jaundice in that it occurs later and is caused by the milk itself.

Rarely, jaundice can be a sign of a serious underlying problem. Higher levels of bilirubin can be due to a condition that increases the number of red blood cells that needs to be processed, or anything that interferes with the body's ability to process and remove bilirubin.

Jaundice is caused by high levels of bilirubin in the neonate and may cause yellow discoloration of the skin and whites of the eyes (sclera). High levels of bilirubin may be caused by blood type incompatibilities, cephalohematoma or other birth injuries, polycythemia, small for gestational age babies and infections.

Did You Know?

Jaundice usually begins on the face and moves down to the chest, belly area, legs, and soles of the feet.

Jaundice (cont)

The main symptom of jaundice is a yellow color of the skin. The yellow color is best seen right after gently pressing a finger onto the skin. Sometimes, infants with significant jaundice have extreme tiredness and poor feeding.

All newborns should be examined for jaundice at least every 8 to 12 hours for the first day of life. Any infant who appears jaundiced in the first 24 hours should have bilirubin levels drawn immediately. Further testing varies on the infant's specific situation and test results.

Tests most likely be done include complete blood count, Coomb's test (if there is an ABO

incompatibility) and a total serum bilirubin (TSB). Serum albumin levels may also be checked, because bilirubin travels in the blood attached to albumin; low albumin levels may increase the risk of jaundice.

Bilirubin levels are usually repeated 12 hourly and results plotted on a Bhutani Curve chart to designate a risk status for the development of severe hyperbilirubinemia.

Phototherapy may not be necessary, if the TSB remains low and the infant is well-hydrated with frequent bowel movements, which eliminates excess bilirubin.

Extremities

The normal newborn's extremities are flexed with full range of motion but are lacking in full extension. On visual inspection, note any deformities such as club foot, extra digits or webbing. Assess muscle tone and look for spontaneous movement of all extremities.

The infant's hips should be evaluated for hip dislocation or hip instability. Two maneuvers for assessing hip stability in the newborn are the Ortolani and Barlow tests:

- The **Ortolani** elicits the sensation of the dislocated hip reducing. The Ortolani is performed with the infant supine. The index and middle fingers of the nurse are placed along the greater trochanter with the thumb on the inner thigh. The hip is flexed 90 degrees and gently abducted while lifting the leg anteriorly. With this maneuver, a "clunk" is felt as the dislocated femoral head reduces into the acetabulum. This is a positive Ortolani sign.
- The **Barlow** test is the most important maneuver in examining the newborn hip. The examiner attempts to push the ball of the hip rearward out of the acetabulum (socket). The Barlow test is performed with the newborn positioned supine and the hip flexed to 90 degrees. The infant's thigh is held by the nurse and adducted with gentle downward pressure placed on the knee. A palpable "clunk" or sensation of movement is felt as the femoral head exits the acetabulum posteriorly. This is a positive Barlow sign.

Extremities (cont)

The newborn is placed prone to examine the back. The infant can raise his/her head momentarily when prone. The back should appear flat, straight and can be easily flexed.

The lower back/base of the spine should be assessed for dimpling.

A pigmented nevus with tuft of hair along the spine can be associated with spina bifida and must be reported to the physician or nurse practitioner.

Neurological

The newborn's neurological assessment should include a general period of observation, noting state of alertness, muscle tone, movements, and any sign of tremor or jitters. Jitters in the newborn may be caused by low blood sugar or drug withdrawal.

The newborn has many primitive reflexes. Because the central nervous system (CNS) of the newborn is immature, these reflexes serve a variety of purposes.

The blink, gag and sneeze reflex are protective in nature and the rooting and sucking reflexes assist in feeding. Click on the table for a comprehensive overview of the most common reflexes found in the

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normal newborn.

Common Reflexes in Newborns

Reflex	Stimulus	Newborn's Response
Moro reflex	Neonate is lifted above the crib and suddenly lowered	Symmetric extension then abduction of the arms; the index finger, and thumb form a "C" shape. This reflex is present until approx. 4-6 months of age.
Startle reflex	Loud noise or sudden motion	Abduction of arms with flexion of elbows; hands remain clenched.
Rooting reflex	Side of newborn's mouth or cheek is touched	Newborn turns toward the side that was touched and opens mouth.
Stepping reflex	Infant supported in upright position with feet touching flat surface	Dancing or stepping movements. Most prominent immediately after birth and lasts 4 months or so.
Grasping reflex	Object touched to palm of newborn's hand	Infant's fingers grasp object.
Tonic Neck reflex	Newborn is supine and head is turned to one side	The extremities on the same side (as head) straighten whereas on the opposite side they flex. Reflex lasts 3-4 months.
Babinski reflex	Stroking upward on the lateral aspect of the sole then across the ball of the foot	Toes hyperextend or fan outward. Normal finding in a child up to one year of age.
Trunk incurvation	Stroking alongside the infant's spine while prone	Pelvis of infant turns toward the stimulated side. Disappears by 4 weeks of age.

Sudden Infant Death Syndrome (SIDS)

Sudden infant death syndrome (SIDS) is the sudden, unexplained death of an infant younger than one year old. SIDS is the leading cause of death in children between one month and one year old, with most cases occurring when babies are between two months and four months old. Although healthcare professionals don't know what causes SIDS, there are ways to reduce the risk.

These include:

- Placing babies on their backs to sleep, even for short naps - "tummy time" is for when babies are awake and someone is watching
- Using a firm sleep surface, such as a crib mattress covered with a fitted sheet
- Keeping soft objects and loose bedding away from sleep area
- Making sure babies don't get too hot - keep the room at a comfortable temperature for an adult (National Institute of Child Health and Human Development)

Test Your Knowledge

To reduce the risk of SIDS, you will advise new parents to:

- A. Rest the baby's head on a soft pillow for neck support
- B. Ensure that all visitors wash their hands before handling the baby
- C. Maintain a warm room temperature and clothe the baby in at least two layers of clothing
- D. Position the infant supine for sleeping

Rationale: Although healthcare professionals don't know what causes SIDS, there are ways to reduce the risk. These include:

- Placing babies on their backs to sleep, even for short naps - "tummy time" is for when babies are awake and someone is watching
- Using a firm sleep surface, such as a crib mattress covered with a fitted sheet
- Keeping soft objects and loose bedding away from sleep area
- Making sure babies don't get too hot - keep the room at a comfortable temperature for an adult (National Institute of Child Health and Human Development)

Monitoring

Once the newborn has been assessed and stabilized, most facilities will promote the infant "rooming-in" with their mother until discharge.

During this time period the nurse continues to monitor:

- Axillary temperature
- Respiratory status - rate, rhythm and effort
- Lung sounds
- Heart rate and rhythm
- Presence of murmur
- Skin color, activity and muscle tone
- Nutrition, weight and elimination
- Safety - always place baby to sleep on his/her back

Discharge Planning

The process of delivering the tremendous amount of discharge information to the family begins immediately after delivery to allow time for practice and questions. Given that 48 hours is the average length of hospital stay for a vaginal delivery, and 72 hours for a cesarean section, discharge teaching of the new family should begin at the moment of birth.

The new parents are often overwhelmed with the vast amount of information that is delivered to them so it is important to review newborn care instructions several times during their stay. In this way, when it comes time for the actual discharge the parents will have a good general knowledge base.

Discharge Teaching (cont)

Discharge teaching should include instructions on how to:

- Hold, wrap (swaddle), and diaper the baby
- Provide diaper area skin care
- Provide umbilical cord stump care
- Provide circumcision care
- Position for sleep—always place infant on back to sleep
- Bathe the baby—sponge baths until cord stump falls off, then tub baths

The postpartum nurse also needs to stress the importance of follow-up visits with the healthcare provider and age appropriate follow up visits or "well baby visits."

Parents should be advised to call the pediatrician or healthcare provider if they have any concerns about their child.

Most infants are seen in the physician/nurse practitioner's office within the first week of birth for an examination and weight check. Ensure the parents have the pediatrician's contact details, or that an appointment is scheduled prior to discharge of the infant. Check the policy and procedure for your particular organization.

Additional Discharge Teaching Topics

Discharge teaching should include the following topics:

- Normal newborn temperature ranges, how to perform an axillary temperature, and when to report concerns to the pediatrician.
- How and when to use a bulb suction syringe. Advise to keep the device in the baby's crib or in close proximity.
- A discussion of signs and symptoms of newborn jaundice. Parents are advised to call the pediatrician if the infant is yellow in color, appears lethargic, irritable or has decreased muscle tone; or is not feeding well.
- Skin care and rashes (normal newborn rash—erythema toxicum).
- Average number of wet and dirty diapers per day and characteristics of newborn's stool cycle (meconium, transitional, fecal).
- Normal newborn reflexes.

Discharge Teaching: Safety Issues

Parents should be instructed in ways to keep their infant safe. Safety instructions should discuss the following topics:

- Proper usage of car seat
- Never shake a baby
- How to prevent falls—don't leave infant unattended on changing table
- Use a firm crib mattress—with no pillows, blankets or other objects in crib
- Immunizations

- Bathing the baby—sponge baths until cord stump falls off, then tub baths
- Always place baby to sleep on his/her back

Discharge Teaching: Breastfeeding

An in-depth discussion of breastfeeding should be presented, including the following topics:

- How to recognize infant feeding cues
- Positioning, latch, frequency of feedings and burping techniques
- Tips for waking a sleepy baby, and keeping baby awake at the breast
- Length of feedings and how to remove infant from the breast
- How to recognize swallows
- Expressing and storing milk
- Resources to utilize should concerns or problems arise

Parents are advised that a weight loss of 7-10% is considered within normal limits during the first week of life for a breastfeeding infant (Newman, 2012).

If a mother decides against breastfeeding, she should be instructed to wear a firm support bra and minimize handling of her breasts for the first postpartum week. She should receive instructions for bottle feeding and formula preparation.

Parent Newborn Attachment

One of the most consistent findings of early childhood development research has been that stable, loving relationships are essential to the healthy development of children (National Research Council and Institute of Medicines 2000).

Nurses have the unique opportunity of promoting and encouraging these loving relationships. New parents are generally sleep deprived and overwhelmed. Often, simply pointing out to the parent how the newborn has a grounded preference for them can make a huge impact in the bonding process. Comments such as: “Look how your baby turned to look at you when he heard your voice,” “See how your baby gazes at you?” “Isn’t it amazing how your baby quieted down as soon as she was in your arms?” can help parents with defining their new roles.

Encourage parents to touch, talk to and smile at their baby. Affirm and praise parents in their efforts to learn their new roles. Positive reinforcement and affirmation goes a long way in developing newly acquired parenting skills.

Case Study:

A 35 year-old presents at your labor and delivery unit ready to deliver. Her history includes the birth of twins and two single births. She states she has been in labor for 48 hours and her water broke about 2 hours ago.

As you prepare your patient for delivery, you anticipate that she may have what postpartum adverse events?

Did you think about postpartum hemorrhage? What are her risk factors?

Age (35 years)

Multiple deliveries (3 prior deliveries)

Multiple births (twins)

Prolonged labor (48 hours of labor at home prior to arriving at the hospital)

Chorioamnionitis (“water” broke 2 hours prior to coming to the hospital, possible source of infection)

She delivers a healthy, 7 pound, 22 inch boy. Her delivery was uncomplicated except for the use of vacuum extraction.

Immediately after delivery the baby is placed on the breast and the placenta is delivered intact.

In the recovery room the nurse begins to massage the uterus. Massaging the uterus, putting the infant to breast and full removal of the placenta are all processes to prevent what postpartum complication?

Did you answer “postpartum hemorrhage”? You are correct! Any process that will help the uterus contract to the original shape and size will help prevent hemorrhage.

During your assessment, you note that the new mom is passing lochia rubra. Are you concerned?

If you answered –no, this is the normal expectations and as long as the amount of lochia remains less than 1000 mLs and begins to change color you are not worried; then you are on the right track.

The baby is assessed and noted to have a large swollen, boggy area on the top of his head. As you assess the area you note it does not cross over the suture lines. Based on this information, you decide that the infant has a cephalohematoma from the vacuum extraction.

As you move through the infant’s assessment, he begins to cry and you note that his anterior fontanel bulges and you can palpate his heart rate. You also assess the posterior fontanel and find it is very small, about the size of your finger tip. Are you concerned?

If you answered no, these are normal findings, you would be correct.

The mom is an experienced at breast feeding, should you offer breast feeding instructions in your discharge teaching?

Each infant is different and experienced moms may have questions, so it is important that breast feeding and a lactation consult remain on your list of discharge teaching and discharge tools.

Conclusion

The transition from pregnancy to postpartum is a complex process for the new mother. Additionally, the infant’s progress from a developing fetus in utero to functioning as an infant outside the uterus is a precarious journey at best.

The knowledge that you acquired in this module will ensure that you can safely and effectively assist the mother and infant transition.

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