

# ESSENTIALS of Maternity, Newborn, & Women's Health Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

## 15: Postpartum Adaptations

### Learning Objectives

*Upon completion of the chapter, you will be able to:*

- **1.** Define the key terms used in this chapter.
- **2.** Examine the systemic physiologic changes occurring in the woman after childbirth.
- **3.** Assess the phases of maternal role adjustment and accompanying behaviors.
- **4.** Analyze the psychological adaptations occurring in the mother's partner after childbirth.

### KEY TERMS

**attachment**

**engorgement**

**engrossment**

**involution**

**lactation**

**letting-go phase**

**lochia**

**puerperium**

**taking-hold phase**

**taking-in phase**

**uterine atony**

*Betsy had been home only 3 days when she called the OB unit where she had given birth and asked to speak to the lactation consultant. She reported pain in both breasts. Her nipples were tender due to frequent breast-feeding and she described her breasts as heavy, hard, and swollen.*

### WOW: Words of Wisdom

A new mother's expectations are seen through rose-colored glasses, and at times her fantasy is better than the reality.

The postpartum period is a critical transitional time for a woman, her newborn, and her family on physiologic and psychological levels. The **puerperium** period begins after the delivery of the placenta and lasts approximately 6 weeks. During this period the woman's

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - **THIRD EDITION** Susan Scott Ricci, **ARNP, MSN, MEd**

body begins to return to its prepregnant state, and these changes generally resolve by the sixth week after giving birth. However, the postpartum period can also be defined to include the changes in all aspects of the mother's life that occur during the first year after a child is born. Some believe that the postpartum adjustment period lasts well into the first year, making the fourth phase of labor the longest. Keeping this in mind, the true postpartum period may last between 9 and 12 months as the mother works to lose the weight she gained while pregnant, adjusts psychologically to the changes in her life, and takes on the new role of mother.

Nurses caring for childbearing families should consider all aspects of culture, including communication, space, and family roles. Communication encompasses an understanding of not only a person's language, and loudness of speech, but also the meaning of touch and gestures. The concept of personal space and the dimensions of comfort zones differ from culture to culture. Touching, placing clients in proximity to others, and taking away personal possessions can reduce client's personal security and heighten their anxiety. Nurses must be sensitive to how people respond when being touched and should refrain from touching if the client's response indicates that it is unwelcome. Cultural norms also have an impact on family roles, expectations, and behaviors associated with a member's position in the family. For example, culture may influence whether a man actively participates in the pregnancy and childbirth. Maternity health care professionals in the United States expect men to be involved, but this role expectation may conflict with that of many of the diverse groups now living in the United States. Mexican Americans, Arab Americans, Asian Americans, and Orthodox Jewish Americans, for example, usually view the birthing experience as a woman's affair (Lewallen, 2011).

Our major role as nurses is to provide safe and evidence-based care to promote optimal birth outcomes for all women, regardless of their cultural background. Nurses need to remember that there is more than one way to provide this care. Nurses are important cultural brokers as they welcome women and their families into our obstetrical units, where nurses share with those families one of the most intimate experiences of their lives (Sanchez-Birkhead, Kennedy, Callister, & Miyamoto, 2011).

This chapter describes the major physiologic and psychological changes that occur in a woman after childbirth. Various systemic adaptations take place throughout the woman's body. In addition, the mother and the family adjust to the new addition psychologically. The birth of a child changes the family structure and the roles of the family members. The adaptations are dynamic and continue to evolve as physical changes occur and new roles emerge.

## MATERNAL PHYSIOLOGIC ADAPTATIONS

During pregnancy, the woman's entire body changed to accommodate the needs of the growing fetus. After birth, the woman's body once again undergoes significant changes in all body systems to return her body to its prepregnant state.

## Reproductive System Adaptations

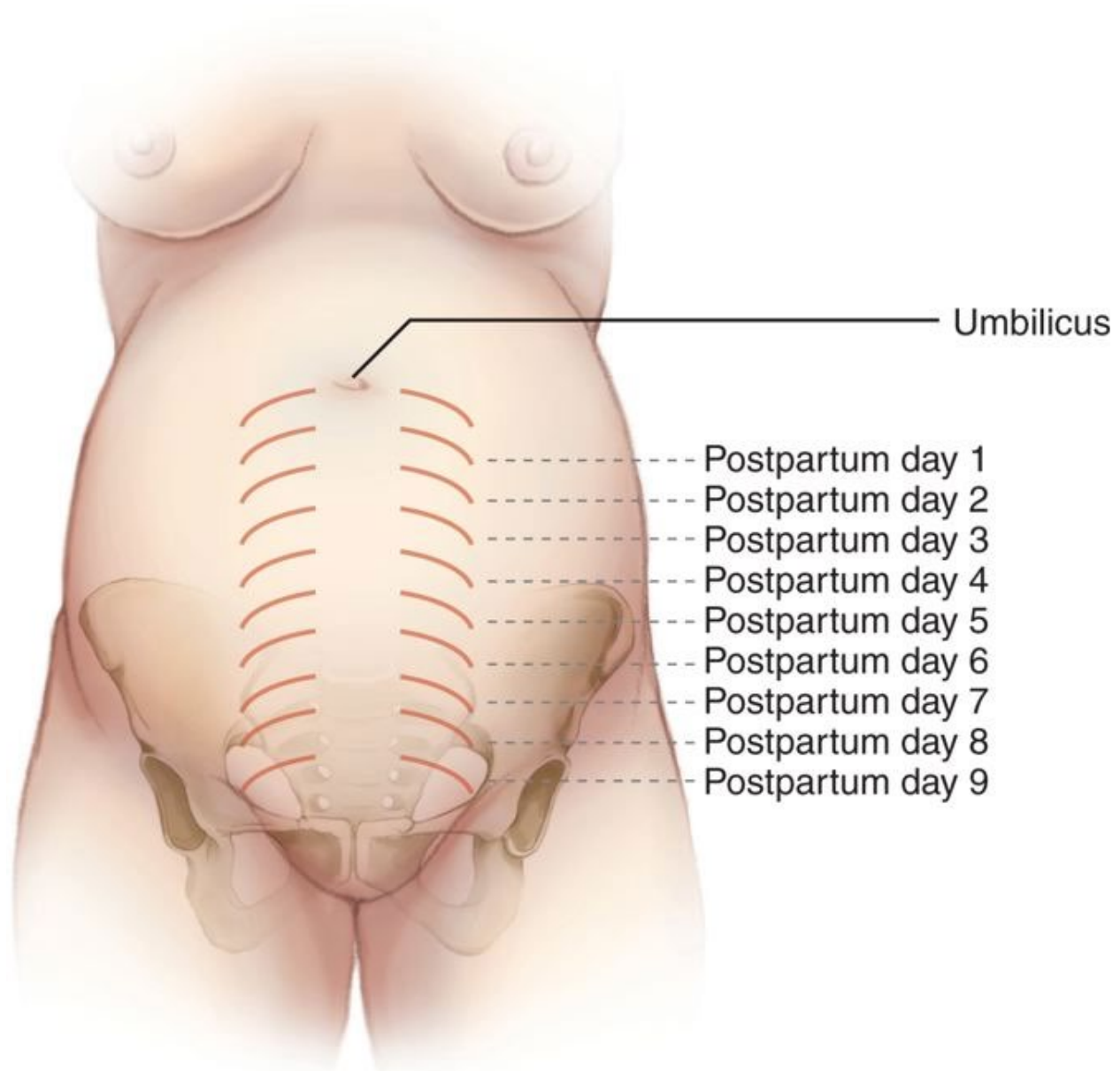
The reproductive system goes through tremendous adaptations to return to the prepregnancy state. All organs and tissues of the reproductive system are involved. The female reproductive system is unique in its capacity to remodel itself throughout the woman's reproductive life. The events after birth, with the shedding of the placenta and subsequent uterine involution, involve substantial tissue destruction and subsequent repair and remodeling. For example, the woman's menstrual cycle, interrupted during pregnancy, will begin to return several weeks after childbirth. The uterus, which has undergone tremendous expansion during pregnancy to accommodate progressive fetal growth, will return to its prepregnant size over several weeks. The mother's breasts have grown to prepare for lactation and do not return to their prepregnant size as the uterus does.

### *Uterus*

The uterus returns to its normal size through a gradual process of **involution**, which involves retrogressive changes that return it to its nonpregnant size and condition. Involution involves three retrogressive processes:

- 1. Contraction of muscle fibers to reduce those previously stretched during pregnancy
- 2. Catabolism, which reduces enlarged, individual myometrial cells
- 3. Regeneration of uterine epithelium from the lower layer of the decidua after the upper layers have been sloughed off and shed during lochial discharge (Byrom, Edwards, & Bick, 2010)

The uterus, which weighs approximately 1,000 g (2.2 lb) soon after birth, undergoes physiologic involution as it returns to its nonpregnant state. Approximately 1 week after birth, the uterus shrinks in size by 50% and weighs about 500 g (1 lb); at the end of 6 weeks, it weighs approximately 60 g (2 oz), about the weight before the pregnancy (Mattson & Smith, 2011) ([Fig. 15.1](#)). During the first few days after birth, the uterus typically descends from the level of the umbilicus at a rate of 1 cm (1 fingerbreadth) per day. By 3 days, the fundus lays 2 to 3 fingerbreadths below the umbilicus (or slightly higher in multiparous women). By the end of 10 days, the fundus usually cannot be palpated because it has descended into the true pelvis.



**FIGURE 15.1**

**Uterine involution.**

If these retrogressive changes do not occur as a result of retained placental fragments or infection, subinvolution of the uterus results. Subinvolution is generally responsive to early diagnosis and treatment. Factors that facilitate uterine involution include complete expulsion of amniotic membranes and placenta at birth, a complication-free labor and birth process, breast-feeding, and early ambulation. Factors that inhibit involution include a prolonged labor and difficult birth, incomplete expulsion of amniotic membranes and placenta, uterine infection, overdistention of uterine muscles (such as by multiple gestation, hydramnios, or a large singleton fetus), a full bladder (which displaces the uterus and

# ESSENTIALS of Maternity, Newborn, & Women's Health

## Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

interferes with contractions), anesthesia (which relaxes uterine muscles), and close childbirth spacing (frequent and repeated distention decreases tone and causes muscular relaxation).

## LOCHIA

**Lochia** is the vaginal discharge that occurs after birth. It results from involution, during which the superficial layer of the decidua basalis becomes necrotic and is sloughed off. Immediately after childbirth, lochia is bright red and consists mainly of blood, fibrinous products, decidual cells, and red and white blood cells. The lochia from the uterus is alkaline but becomes acidic as it passes through the vagina. It is roughly equal to the amount occurring during a heavy menstrual period. The average amount of lochial discharge is 240 to 270 mL (8 to 9 oz) (Bope & Kellerman, 2012).

Women who have had cesarean births tend to have less flow because the uterine debris is removed manually along with delivery of the placenta. Lochia is present in most women for at least 3 weeks after childbirth, but it persists in some women for as long as 6 weeks.

Lochia passes through three stages:

- *Lochia rubra* is a deep-red mixture of mucus, tissue debris, and blood that occurs for the first 3 to 4 days after birth. As uterine bleeding subsides, it becomes paler and more serous.
- *Lochia serosa* is the second stage. It is pinkish brown and is expelled 3 to 10 days postpartum. Lochia serosa primarily contains leukocytes, decidual tissue, red blood cells, and serous fluid.
- *Lochia alba* is the final stage. The discharge is creamy white or light brown and consists of leukocytes, decidual tissue, and reduced fluid content. It occurs from days 10 to 14 but can last 3 to 6 weeks postpartum in some women and still be considered normal.

Lochia at any stage should have a fleshy smell; an offensive odor usually indicates an infection, such as endometritis.

### *Take Note!*

A danger sign is the reappearance of bright-red blood after lochia rubra has stopped. Reevaluation by a health care professional is essential if this occurs.

## AFTERPAINS

Part of the involution process involves uterine contractions. Subsequently, many women are frequently bothered by painful uterine contractions termed *afterpains*. All women experience afterpains, but they are more acute in multiparous and breast-feeding women secondary to repeated stretching of the uterine muscles from multiple pregnancies or stimulation during breast-feeding with oxytocin released

# ESSENTIALS of Maternity, Newborn, & Women's Health

## Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

from the pituitary gland. Primiparous women typically experience mild afterpains because their uterus is able to maintain a contracted state. Breast-feeding and administration of exogenous oxytocin both cause powerful and painful uterine contractions. Afterpains usually respond to oral analgesics.

### *Take Note!*

Afterpains are usually stronger during breast-feeding because oxytocin released by the sucking reflex strengthens the contractions. Mild analgesics can reduce this discomfort.

### *Cervix*

The cervix typically returns to its prepregnant state by week 6 of the postpartum period. The cervix gradually closes but never regains its prepregnant appearance. Immediately after childbirth, the cervix is shapeless and edematous and is easily distensible for several days. The cervical os gradually closes and returns to normal by 2 weeks, whereas the external os widens and never appears the same after childbirth. The external cervical os is no longer shaped like a circle, but instead appears as a jagged slit-like opening, often described as a “fish mouth” ([Fig. 15.2](#)).

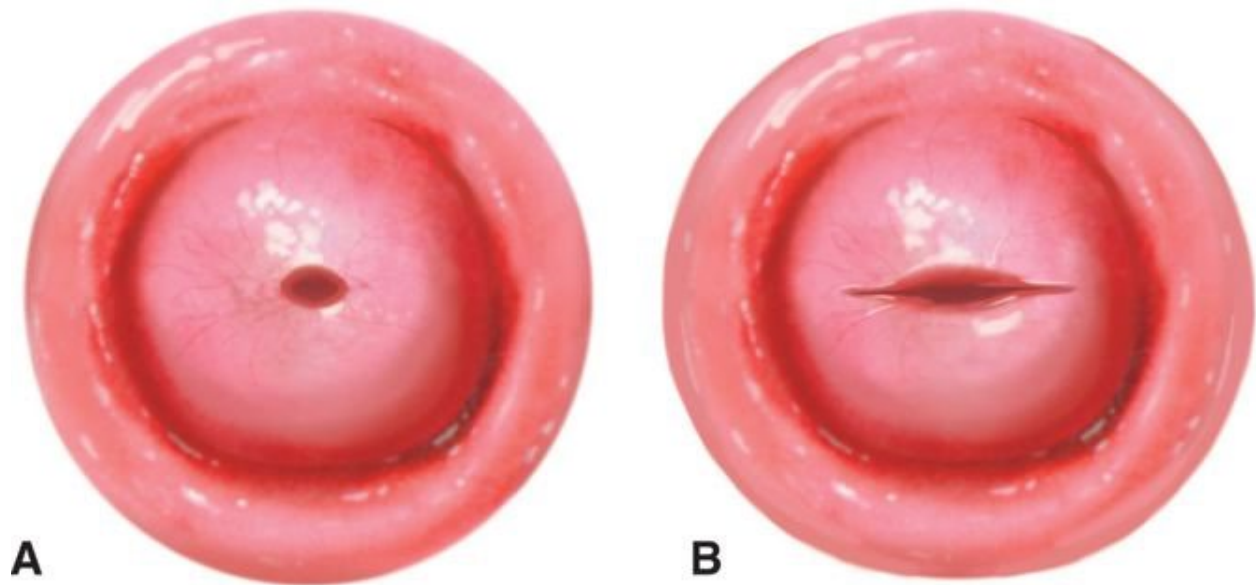


FIGURE 15.2

Appearance of the cervical os. (A) Before the first pregnancy. (B) After pregnancy.

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - THIRD EDITION Susan Scott Ricci, ARNP, MSN, MED

## *Vagina*

Shortly after birth, the vaginal mucosa is edematous and thin, with few rugae. As ovarian function returns and estrogen production resumes, the mucosa thickens and rugae return in approximately 3 weeks. The vagina gapes at the opening and is generally lax. The vagina returns to its approximate prepregnant size by 6 to 8 weeks postpartum but will always remain a bit larger than it had been before pregnancy.

Normal mucus production and thickening of the vaginal mucosa usually return with ovulation. The vagina gradually decreases in size and regains tone over several weeks. By 3 to 4 weeks, the edema and vascularity have decreased. The vaginal epithelium is generally restored by 6 to 8 weeks postpartum (Schuiling & Likis, 2013). Localized dryness and coital discomfort (dyspareunia) usually plague most women until menstruation returns. Water-soluble lubricants can reduce discomfort during intercourse.

## *Perineum*

The perineum is often edematous and bruised for the first day or two after birth. If the birth involved an episiotomy or laceration, complete healing may take as long as 4 to 6 months in the absence of complications at the site, such as hematoma or infection (Stables & Rankin, 2010). Perineal lacerations may extend into the anus and cause considerable discomfort for the mother when she is attempting to defecate or ambulate. The presence of swollen hemorrhoids may also heighten discomfort. Local comfort measures such as ice packs, pouring warm water over the area via a peribottle, witch hazel pads, anesthetic sprays, and sitz baths can relieve pain. See [Evidence-Based Practice 15.1](#).

## EVIDENCE-BASED PRACTICE 15.1: PACIFIER USE VERSUS NO PACIFIER USE IN BREAST-FEEDING TERM INFANTS FOR INCREASING DURATION OF BREAST-FEEDING

**Women naturally gain weight during pregnancy and many gradually lose it afterward. Some women, though, find it difficult to lose the pregnancy-related weight during the postpartum period and there is concern that this may be a health risk. The retention of weight gained during pregnancy may contribute to obesity. Obesity in the general population increases the risk of diabetes, heart disease, and high blood pressure. It is suggested that women who return to their prepregnancy weight by about 6 months after childbirth have a lower risk of being overweight 10 years later. The objectives of this review were to evaluate the effect of diet, exercise, or both for weight reduction in women after childbirth, and to assess the impact of these interventions on maternal body composition, cardiorespiratory fitness, breast-feeding performance, and other child and maternal outcomes.**

## STUDY

# ESSENTIALS of Maternity, Newborn, & Women's Health Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

All published and unpublished randomized controlled trials and quasi-randomized trials of diet or exercise or both among women during the postpartum period were reviewed. Six trials involving 245 women were included. Women who exercised did not lose significantly more weight than women in the usual care group (one trial;  $n = 33$ ; MD 0.00 kg; 95% confidence interval [CI] -8.63 to 8.63). Women who took part in a diet (one trial;  $n = 45$ ; MD -1.70 kg; 95% CI -2.08 to -1.32), or diet plus exercise program (four trials;  $n = 169$ ; MD -2.89 kg; 95% CI -4.83 to -0.95), lost significantly more weight than women in the usual care.

## Findings

There was no difference in the magnitude of weight loss between diet and diet plus exercise group. The interventions seemed not to affect breast-feeding performance adversely. Preliminary evidence from this study suggests that both diet and exercise together and diet alone help women to lose weight after childbirth. Nevertheless, it may be preferable to lose weight through a combination of diet and exercise because this improves maternal cardiorespiratory fitness and preserves fat-free mass, while diet alone reduces fat-free mass. This needs confirmation in large trials.

## Nursing Implications

Based on the findings of this study, nurses can recommend to their postpartum mothers desiring to lose their pregnancy weight to include diet and exercise in their weight loss plan. Breast-feeding mothers can be reassured that this dual weight loss plan will not impact their newborn breast-feeding practices negatively. Although the results are not conclusive without larger trials, nurses can feel confident enough to discuss this with their clients.

Adapted from Amorim A., Linne, A. R., & Lourenco, P. M. (2012). Diet or exercise, or both, for weight reduction in women after childbirth. *Cochrane Database of Systematic Reviews*, 2012(3). doi: 10.1002/14651858.CD005627.pub2.

Supportive tissues of the pelvic floor are stretched during the childbirth process, and restoring their tone may take up to 6 months. Pelvic relaxation can occur in any woman experiencing a vaginal birth. Nurses should encourage all women to practice Kegel exercises to improve pelvic floor tone, strengthen the perineal muscles, and promote healing.

### *Take Note!*

Failure to maintain and restore perineal muscular tone leads to urinary incontinence later in life for many women.



# ESSENTIALS of Maternity, Newborn, & Women's Health Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

## Cardiovascular System Adaptations

The cardiovascular system undergoes dramatic changes after birth. During pregnancy, the heart is displaced slightly upward and to the left. This reverses as the uterus undergoes involution. Cardiac output remains high for the first few days postpartum and then gradually declines to nonpregnant values within 3 months of birth.

Blood volume, which increases substantially during pregnancy, drops rapidly after birth and returns to normal within 4 weeks postpartum (Heffner & Schust, 2010). The decrease in both cardiac output and blood volume reflects the birth-related blood loss (an average of 500 mL with a vaginal birth and 1,000 mL with a cesarean birth). Blood plasma volume is further reduced through diuresis, which occurs during the early postpartum period (Cheng & Caughey, 2011). Despite the decrease in blood volume, the hematocrit level remains relatively stable and may even increase, reflecting the predominant loss of plasma. Thus, an acute decrease in hematocrit is not an expected finding and may indicate hemorrhage.

### *Pulse and Blood Pressure*

The increase in cardiac output and stroke volume during pregnancy begins to diminish after birth once the placenta has been delivered. This decrease in cardiac output is reflected in bradycardia (40 to 60 bpm) for up to the first 2 weeks postpartum. This slowing of the heart rate is related to the increased blood that flows back to the heart and to the central circulation after it is no longer perfusing the placenta. This increase in central circulation brings about an increased stroke volume and allows a slower heart rate to provide ample maternal circulation. Gradually, cardiac output returns to prepregnant levels by 3 months after childbirth (Tsiaras & Poppas, 2010).

Tachycardia (heart rate above 100 bpm) in the postpartum woman warrants further investigation. It may indicate hypovolemia, dehydration, or hemorrhage. However, because of the increased blood volume during pregnancy, a considerable loss of blood may be well tolerated and not cause a compensatory cardiovascular response such as tachycardia. In most instances of postpartum hemorrhage, blood pressure and cardiac output remain increased because of the compensatory increase in heart rate. Thus, a decrease in blood pressure and cardiac output are not expected changes during the postpartum period. Early identification is essential to ensure prompt intervention.

Blood pressure values should be similar to those obtained during the labor process. In some women there may be a slight transient increase lasting for about a week after childbirth (Norwitz & Schorge, 2010). A significant increase accompanied by headache might indicate preeclampsia and requires further investigation. Decreased blood pressure may suggest an infection or a uterine hemorrhage.

### *Coagulation*

Normal physiologic changes of pregnancy, including alterations in hemostasis that favor coagulation, reduced fibrinolysis, and pooling and stasis of blood in the lower limbs, place women at risk for blood clots. Smoking, obesity, immobility, and postpartum factors such as infection, bleeding, and emergency

# ESSENTIALS of Maternity, Newborn, & Women's Health

## Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

surgery (including emergency cesarean section) also increase the risk of coagulation disorders (Morris, Algert, & Roberts, 2010).

Clotting factors that increased during pregnancy tend to remain elevated during the early postpartum period. Giving birth stimulates this hypercoagulability state further. As a result, these coagulation factors remain elevated for 2 to 3 weeks postpartum (Silver & Major, 2010). This hypercoagulable state, combined with vessel damage during birth and immobility, places the woman at risk for thromboembolism (blood clots) in the lower extremities and the lungs.

### *Blood Cellular Components*

Red blood cell production ceases early in the puerperium, causing mean hemoglobin and hematocrit levels to decrease slightly in the first 24 hours. During the next 2 weeks, both levels rise slowly. The white blood count, which increases in labor, remains elevated for first 4 to 6 days after birth but then falls to 6,000 to 10,000/mm<sup>3</sup>. This white blood cell elevation can complicate a diagnosis of infection in the immediate postpartum period.

### Consider This

Have you ever felt like a real idiot by not being able to complete a simple task in life? I had a beautiful baby boy after only 6 hours of labor. My epidural worked well and I actually felt very little discomfort throughout my labor. Because it was in the middle of the night when they brought me to my postpartum room, I felt a few hours of sleep would be all I needed to be back to normal. During an assessment early the next morning, the nurse found my uterus had shifted to the right from my midline, and I was instructed to empty my bladder. I didn't understand why the nurse was concerned about where my uterus was located and, besides, I didn't feel any sensation of a full bladder. But I did get up anyway and tried to comply. Despite all the nurse's tricks of running the faucet for sound effects, in addition to having warm water poured over my thighs via the peribottle, I was unable to urinate. How could I not accomplish one of life's simplest tasks?

Thoughts: Women who receive regional anesthesia frequently experience reduced sensation to their perineal area and do not feel a full bladder. The nursing assessment revealed a displaced uterus secondary to a full bladder. What additional "tricks" can be used to assist this woman to void? What explanation should be offered to her regarding why she is having difficulty urinating?

### Urinary System Adaptations

# ESSENTIALS of Maternity, Newborn, & Women's Health

## Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

Pregnancy and birth can have profound effects on the urinary system. During pregnancy, the glomerular filtration rate and renal plasma flow increase significantly. Both usually return to normal by 6 weeks after birth.

Many women have difficulty feeling the sensation to void after giving birth if they received an anesthetic block during labor (which inhibits neural functioning of the bladder) or if they received oxytocin to induce or augment their labor (antidiuretic effect). These women will be at risk for incomplete emptying, bladder distention, difficulty voiding, and urinary retention. In addition, urination may be impeded by:

- Perineal lacerations
- Generalized swelling and bruising of the perineum and tissues surrounding the urinary meatus
- Hematomas
- Decreased bladder tone as a result of regional anesthesia
- Diminished sensation of bladder pressure as a result of swelling, poor bladder tone, and numbing effects of regional anesthesia used during labor (Bope & Kellerman, 2012)

Difficulty voiding can lead to urinary retention, bladder distention, and ultimately urinary tract infection. Urinary retention and bladder distention can cause displacement of the uterus from the midline to the right and can inhibit the uterus from contracting properly, which increases the risk of postpartum hemorrhage. Urinary retention is a major cause of **uterine atony**, which allows excessive bleeding. Frequent voiding of small amounts (less than 150 mL) suggests urinary retention with overflow, and catheterization may be necessary to empty the bladder to restore tone.

Postpartum diuresis occurs as a result of several mechanisms: the large amounts of intravenous fluids given during labor, a decreasing antidiuretic effect of oxytocin as its level declines, the buildup and retention of extra fluids during pregnancy, and a decreasing production of aldosterone—the hormone that decreases sodium retention and increases urine production (Stables & Rankin, 2010). All of these factors contribute to rapid filling of the bladder within 12 hours of birth. Diuresis begins within 12 hours after childbirth and continues throughout the first week postpartum. Normal function returns within a month after birth (Mattson & Smith, 2011).

## Gastrointestinal System Adaptations

The gastrointestinal system quickly returns to normal after birth because the gravid uterus is no longer filling the abdominal cavity and producing pressure on the abdominal organs. Progesterone levels, which caused relaxation of smooth muscle during pregnancy and diminished bowel tone, also are declining.

Regardless of the type of delivery, most women experience decreased bowel tone and sluggish bowels for several days after birth. Decreased peristalsis occurs in response to analgesics, surgery, diminished intra-abdominal pressure, low-fiber diet, insufficient fluid intake, and diminished muscle tone. In addition, women with an episiotomy, perineal laceration, or hemorrhoids may fear pain or damage to the perineum with their first bowel

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - **THIRD EDITION** Susan Scott Ricci, ARNP, MSN, MEd

movement and may attempt to delay it. Subsequently, constipation is a common problem during the postpartum period. A stool softener can be prescribed for this reason.

Most women are hungry and thirsty after childbirth, commonly related to NPO restrictions and the energy expended during labor. Their appetite returns to normal immediately after giving birth.

## Musculoskeletal System Adaptations

The effects of pregnancy on the muscles and joints vary widely. Musculoskeletal changes associated with pregnancy, such as increased ligament laxity, weight gain, change in the center of gravity, and carpal tunnel syndrome, revert back during the postpartum period. During pregnancy, the hormones relaxin, estrogen, and progesterone relax the joints. After birth, levels of these hormones decline, resulting in a return of all joints to their prepregnant state, with the exception of the woman's feet. Parous women will note a permanent increase in their shoe size (Kawaguchi & Pickering, 2010).

Women commonly experience fatigue and activity intolerance and have a distorted body image for weeks after birth secondary to declining relaxin and progesterone levels, which cause hip and joint pain that interferes with ambulation and exercise. Good body mechanics and correct positioning are important during this time to prevent low back pain and injury to the joints. Within 6 to 8 weeks after delivery, joints are completely stabilized and return to normal.

During pregnancy, stretching of the abdominal wall muscles occurs to accommodate the enlarging uterus. This stretching leads to a loss in muscle tone and possibly separation of the longitudinal muscles (rectus abdominis muscles) of the abdomen. Separation of the rectus abdominis muscles, called diastasis recti, is more common in women who have poor abdominal muscle tone before pregnancy. After birth, muscle tone is diminished and the abdominal muscles are soft and flabby. Specific exercises are necessary to help the woman regain muscle tone. Fortunately, diastasis responds well to exercise, and abdominal muscle tone can be improved. (See [Chapter 16](#) for more information about exercises to improve muscle tone.)

### *Take Note!*

If rectus muscle tone is not regained through exercise, support may not be adequate during future pregnancies.

## Integumentary System Adaptations

Another system that experiences lasting effects of pregnancy is the integumentary system. As estrogen and progesterone levels decrease, the darkened pigmentation on the abdomen (linea

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - **THIRD EDITION** Susan Scott Ricci, ARNP, MSN, MEd

nigra), face (melasma), and nipples gradually fades. Some women experience hair loss during pregnancy and the postpartum periods. Approximately 90% of hairs are growing at any one time, with the other 10% entering a resting phase. Because of the high estrogen levels present during pregnancy, an increased number of hairs go into the resting phase, which is part of the normal hair loss cycle. The most common period for hair loss is within 3 months after birth, when estrogen returns to normal levels and more hairs are allowed to fall out. This hair loss is temporary, and regrowth generally returns to normal levels in 4 to 6 months in two thirds of women and by 15 months in the remainder, although hair may be less abundant than before pregnancy (Blackburn, 2013).

Striae gravidarum (stretch marks) that developed during pregnancy on the breasts, abdomen, and hips gradually fade to silvery lines. However, these lines do not disappear completely. Although many products on the market claim to make stretch marks disappear, their effectiveness is highly questionable.

The profuse diaphoresis (sweating) that is common during the early postpartum period is one of the most noticeable adaptations in the integumentary system. Many women will wake up drenched with perspiration during the puerperium. This postpartum diaphoresis is a mechanism to reduce the amount of fluids retained during pregnancy and restore prepregnant body fluid levels. It can be profuse at times. It is common, especially at night during the first week after birth. Reassure the client that this is normal and encourage her to change her gown to prevent chilling.

## Respiratory System Adaptations

Respirations usually remain within the normal adult range of 16 to 24 breaths per minute. As the abdominal organs resume their nonpregnant position, the diaphragm returns to its usual position. Anatomic changes in the thoracic cavity and rib cage caused by increasing uterine growth resolve quickly. As a result, discomforts such as shortness of breath and rib aches are relieved. Tidal volume, minute volume, vital capacity, and functional residual capacity return to prepregnant values, typically within 1 to 3 weeks of birth (Chelmow, O'Grady, & Guzman, 2011).

## Endocrine System Adaptations

The endocrine system rapidly undergoes several changes after birth. Levels of circulating estrogen and progesterone drop quickly with delivery of the placenta. Decreased estrogen levels are associated with breast engorgement and with the diuresis of excess extracellular fluid accumulated during pregnancy (Stables & Rankin, 2010). Estrogen is at its lowest level a week after birth. For the woman who is not breast-feeding, estrogen levels begin to increase by 2 weeks after birth. For the breast-feeding woman, estrogen levels remain low until breast-feeding frequency decreases.

Other placental hormones (human chorionic gonadotropin [hCG], human placental lactogen [hPL], progesterone) decline rapidly after birth. hCG levels are nonexistent at the end of the first

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - **THIRD EDITION** Susan Scott Ricci, ARNP, MSN, MED

postpartum week, and hPL is undetectable within 1 day after birth (Mattson & Smith, 2011). Progesterone levels are undetectable by 3 days after childbirth, and production is reestablished with the first menses. Prolactin levels decline within 2 weeks for the woman who is not breast-feeding, but remain elevated for the lactating woman (Chelmow et al., 2011).

*Think back to Betsy, the woman experiencing painful changes in her breasts. What is Betsy describing to the lactation consultant? Why has the condition of her breasts changed compared to when she was in the hospital?*

## *Global Health of Childbearing Women*

Globalization has changed our society in numerous ways, yet the health of women is remaining stagnant or growing worse in many parts of the world. Many women in developing countries are denied their fundamental right to enjoy a complete state of health as defined by the World Health Organization (Murthy & Smith, 2010). More than half a million women die each year from complications during and after childbirth, the vast majority of them in Africa and Asia (Murthy & Smith, 2010).

Women throughout the world continue to face enormous obstacles in attempting to access obstetric care. Nurses throughout the world can help advocate for cost-effective, evidence-based interventions to prevent and battle complications from childbirth to save women's lives. The challenge is to guarantee that every pregnant woman who needs care gets it. Nurses can make a difference outside their own country's borders by advocating for all international women through their governmental political systems and encouraging those governments to offer help and save lives.

## *Lactation*

**Lactation** is the secretion of milk by the breasts. It is thought to be brought about by the interaction of progesterone, estrogen, prolactin, and oxytocin. Breast milk typically appears within 4 to 5 days after childbirth.

During pregnancy, the breasts increase in size and functional ability in preparation for breast-feeding. Estrogen stimulates growth of the milk collection (ductal) system, whereas progesterone stimulates growth of the milk production system. Within the first month of gestation, the ducts of the mammary glands grow branches, forming more lobules and alveoli. These structural changes make the breasts larger, more tender, and heavy. Each breast gains nearly 1 lb in weight by term, the glandular cells fill with secretions, blood vessels increase in number, and the amounts of connective tissue and fat cells increase (Stables & Rankin, 2010).

Prolactin from the anterior pituitary gland, secreted in increasing levels throughout pregnancy, triggers the synthesis and secretion of milk after the woman gives birth. During pregnancy, prolactin, estrogen, and progesterone cause synthesis and secretion of colostrum, which contains protein and carbohydrate but no milk fat. It is only after birth takes place, when the high levels of estrogen and progesterone are abruptly withdrawn, that prolactin is able to stimulate the glandular cells to secrete milk instead of colostrum. This takes place within 4 to 5 days after

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - THIRD EDITION Susan Scott Ricci, ARNP, MSN, MEd

giving birth. Oxytocin acts so that milk can be ejected from the alveoli to the nipple. Therefore, sucking by the newborn will release milk. A decrease in the quality of stimulation causes a decrease in prolactin surges and thus a decrease in milk production. Prolactin levels increase in response to nipple stimulation during feedings. Prolactin and oxytocin result in milk production if stimulated by sucking (Gardner, Carter, Enzman-Hines, & Hernandez, 2011) ([Fig. 15.3](#)). If the stimulus (sucking) is not present, as with a woman who is not breast-feeding, breast engorgement and milk production will subside within days postpartum.

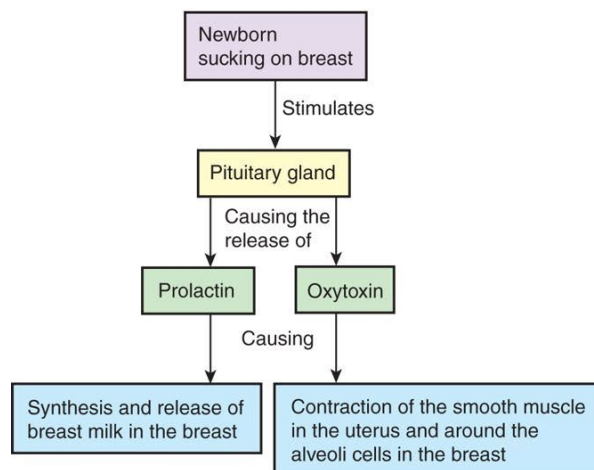


FIGURE 15.3

## Physiology of lactation.

Researchers realizing a newborn instinct they named the *breast crawl* that helps initiate breast-feeding immediately after childbirth. This instinct arises occurs when a newborn, left undisturbed and skin-to-skin on the mother's trunk following birth, moves toward her mother's breast for the purpose of locating and self-attaching for the first feeding. From there, the newborn uses leg and arm movements to propel herself toward the breast. Upon reaching the sternum, the newborn will bounce her head up and down and side to side. As the newborn approaches the nipple, her mouth opens and, after several attempts, latch-on and suckling take place. Newborns have senses and skills that enable early initiation of

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - **THIRD EDITION** Susan Scott Ricci, ARNP, MSN, MEd

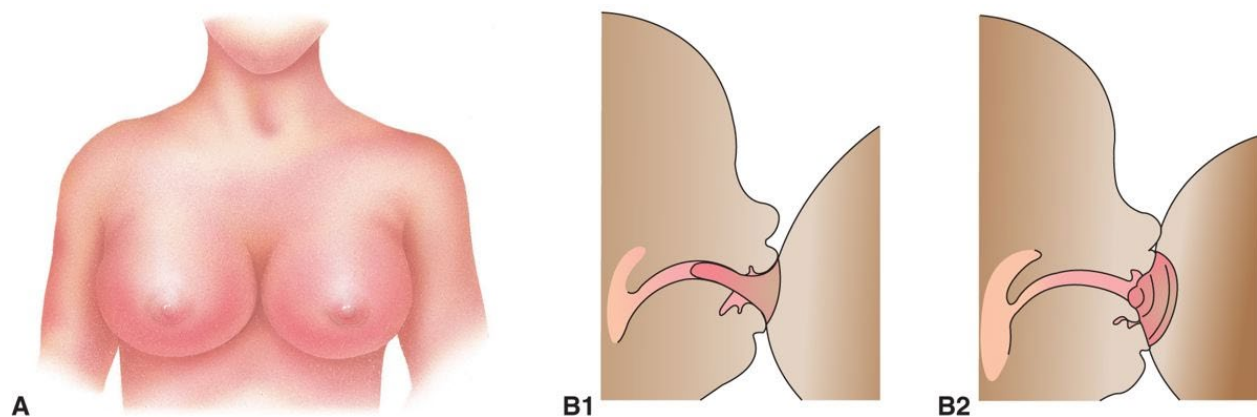
feeding at the breast. Nurses can help facilitate the breast crawl as a continuation of the birthing process. Nurses have a responsibility to promote the health of their childbearing families and provide evidence-based care. Encouraging use of the breast crawl can be the first step in health promotion for every newborn (Henderson, 2011).

Breast milk production can be summarized as follows:

- Prolactin levels increase at term with a decrease in estrogen and progesterone levels.
- Estrogen and progesterone levels decrease after the placenta is delivered.
- Prolactin is released from the anterior pituitary gland and initiates milk production.
- Oxytocin is released from the posterior pituitary gland to promote milk let-down.
- Infant sucking at each feeding provides continuous stimulus for prolactin and oxytocin release (Mattson & Smith, 2011).

Typically, during the first 2 days after birth, the breasts are soft and nontender. The woman also may report a tingling sensation in both breasts, which is the let-down reflex that occurs immediately before or during breast-feeding. After this time, breast changes depend on whether the mother is breast-feeding or taking measures to prevent lactation.

**Engorgement** is swelling of the breast tissue as a result of an increase in blood and lymph supply as a precursor to lactation (**Fig. 15.4**). Breast engorgement usually peaks in 3 to 5 days postpartum and usually subsides within the following 24 to 36 hours (Chapman, 2011). Engorgement can occur from infrequent feeding or ineffective emptying of the breasts and typically lasts about 24 hours. Breasts increase in vascularity and swell in response to prolactin 2 to 4 days after birth. If engorged, the breasts will be hard and tender to touch. They are temporarily full, tender, and very uncomfortable until the milk supply is ready. Frequent emptying of the breasts helps to minimize discomfort and resolve engorgement. Standing in a warm shower or applying warm compresses immediately before feedings will help to soften the breasts and nipples in order to allow the newborn to latch on easier.



**FIGURE 15.4**

(A) Image of engorged breasts. Note swelling and inflammation of both breasts. (B) Breast engorgement can disrupt breast-feeding: (1) When sucking at a normal breast, the infant's lips compress the areola and fit neatly against the sides of the nipple. The infant also has



# ESSENTIALS of Maternity, Newborn, & Women's Health Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

adequate room to breathe. (2) When a breast is engorged, however, the infant has difficulty grasping the nipple and breathing ability is compromised. (From Pillitteri, A. [2010], *Maternal and Child Nursing (6th ed.)*, Philadelphia, PA: Lippincott Williams & Wilkins.)

Treatments to reduce the pain of breast engorgement include heat or cold applications, cabbage leaf compresses, breast massage and milk expression, ultrasound, breast pumping, and anti-inflammatory agents (King & Brucker, 2011). A nonprescription anti-inflammatory medication can also be taken for the breast discomfort and swelling resulting from engorgement. These measures will also enhance the let-down reflex. Between feedings, applying cold compresses to the breasts helps to reduce swelling. To maintain milk supply, the breasts need to be stimulated by a nursing infant, a breast pump, or manual expression of the milk ([Fig. 15.5](#)).



**FIGURE 15.5**

Nurse instructs the new breast-feeding mother about use of a breast pump. (Copyright B. Proud.)

*Remember Betsy, with the breast discomfort? The lactation consultant explained that she was experiencing normal breast engorgement and offered several suggestions to help her. What relief measures might she have suggested? What reassurance can be given to Betsy at this time?*

Various pharmacologic and nonpharmacologic interventions have been used to suppress lactation after childbirth and relieve associated symptoms. Despite the large volume of literature on the

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - **THIRD EDITION** Susan Scott Ricci, ARNP, MSN, MEd

subject, there is currently no universal guideline on the most appropriate approach for suppressing lactation in postpartum women (Oladapo, 2010). It is estimated that more than 30% of women in the United States do not breast-feed their infants, and a larger proportion discontinues breast-feeding within 2 weeks of childbirth (Karp & Lutenbacher, 2011). Although physiologic cessation of lactation eventually occurs in the absence of physical stimulus such as infant suckling, a large number of women experience moderate to severe milk leakage and discomfort before lactation ceases.

Up to two thirds of non-breast-feeding women experience moderate to severe engorgement and breast pain when no treatment is applied (Chelmow et al., 2011).

If a woman is not breast-feeding, some relief measures include wearing a tight, supportive bra 24 hours daily, applying ice to her breasts for approximately 15 to 20 minutes every other hour, avoiding sexual stimulation, and not stimulating the breasts by squeezing or manually expressing milk from the nipples. In addition, avoiding exposing the breasts to warmth (e.g., a hot shower) will help relieve breast engorgement. In women who are not breast-feeding, engorgement typically subsides within 2 to 3 days with application of these measures.

## *Ovulation and Return of Menstruation*

Changing hormone levels constantly interact with one another to produce bodily changes. Four major hormones are influential during the postpartum period: estrogen, progesterone, prolactin, and oxytocin. Estrogen plays a major role during pregnancy, but levels drop profoundly at birth and reach their lowest level a week into the postpartum period. Progesterone quiets the uterus to prevent a preterm birth during pregnancy, and its increasing levels during pregnancy prevent lactation from starting before birth takes place. As with estrogen, progesterone levels decrease dramatically after birth and are undetectable 72 hours after birth. Progesterone levels are reestablished with the first menstrual cycle (Byrom et al., 2010).

During the postpartum period, oxytocin stimulates the uterus to contract during the breast-feeding session and for as long as 20 minutes after each feeding. Oxytocin also acts on the breast by eliciting the milk let-down reflex during breast-feeding. Prolactin is also associated with the breast-feeding process by stimulating milk production. In women who breastfeed, prolactin levels remain elevated into the sixth week after birth (Bope & Kellerman, 2012). The levels of the hormone increase and decrease in proportion to nipple stimulation. Prolactin levels decrease in nonlactating women, reaching prepregnant levels by the third postpartum week. High levels of prolactin have been found to delay ovulation by inhibiting ovarian response to follicle-stimulating hormone (Jackson & Glasier, 2011).

The timing of first menses and ovulation after birth differs between women who are breast-feeding and women who are not breast-feeding. For nonlactating women, menstruation may resume as early as 7 to 9 weeks after giving birth, but the majority take up to 3 months, with the first cycle being anovulatory (Mattson & Smith, 2011). The return of menses in the lactating woman depends on breast-feeding frequency and duration. It can return anytime from 3 to 18 months after childbirth, depending on whether the woman is exclusively breast-feeding or supplementing with formula.

### *Take Note!*

Ovulation may occur before menstruation. Therefore, breast-feeding is not a totally reliable method of contraception unless the mother exclusively breast-feeds, has had no menstrual period since giving birth, and whose infant is younger than 6 months old (Alexander, LaRosa, Bader, & Garfield, 2010).

*Betsy tries several of the measures the lactation consultant suggested to relieve her breast discomfort, but is still having heaviness and pain. She feels discouraged and tells the nurse she is thinking of reducing her breast-feeding and using formula to feed her newborn. Is that a good choice? Why or why not? What interventions will help Betsy get through this difficult time?*

## CULTURAL CONSIDERATIONS FOR THE POSTPARTUM PERIOD

Nurses practice in an increasingly multicultural society. Therefore, they must be open, respectful, nonjudgmental, and willing to learn about ethnically diverse populations. Although childbirth and the postpartum period are unique experiences for each individual woman, how the woman perceives and makes meaning of them is culturally defined. Two areas that are significantly different from Western culture involve beliefs about the balance of hot and cold and confinement after childbirth (Dean, 2010).

For many cultures, good health requires the balancing of hot and cold substances. Because childbirth involves the loss of blood, which is considered hot, the postpartum period is considered cold, so the mother must balance that with the intake of hot food. Foods consumed should be hot in nature, and cold foods, such as fruits and vegetables, avoided. Western practices frequently use cold packs or sitz baths to reduce perineal swelling and discomfort. These practices are not acceptable to women of many cultures and can be viewed as harmful. Hot–cold beliefs are common among Latin American, African, and Asian people (Mattson & Smith, 2011).

To reduce infant and mother vulnerability and potential illness, women may practice a monthlong confinement period after childbirth. During this confinement period, new mothers rest and recuperate. The postpartum period is a time to avoid cold—both in temperature and foods. Women are kept warm, stay inside to prevent becoming chilled, bathe infrequently, and avoid exercise (Etienne & Pavlovich-Danis, 2010).

Postpartum nurses need to understand these diverse cultural beliefs and provide creative strategies for encouraging hygiene (sponge baths, perineal care), exercise, and balanced nutrition, while remaining respectful of the cultural significance of these practices. The best

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - THIRD EDITION Susan Scott Ricci, ARNP, MSN, MEd

approach is to ask each woman to describe what cultural practices are important to her and plan accordingly.

## PSYCHOLOGICAL ADAPTATIONS

The process of becoming a mother requires extensive psychological, social, and physical work. Women experience heightened vulnerability and face tremendous challenges as they make this transition. Nurses have a remarkable opportunity to help women learn, gain confidence, and experience growth as they assume the mother identity.

Mothers' and fathers' experiences of pregnancy are necessarily different, and this difference continues after childbirth as they both adjust to their new parenting roles. Parenting involves caring for infants physically and emotionally to foster the growth and development of responsible, caring adults. During the early months of parenthood, mothers experience more life changes and get more satisfaction from their new roles than fathers. However, fathers interact with their newborns much like mothers (Tach, Mincy, & Edin, 2010). Other members of the newborn's family, such as siblings and grandparents, also experience changes related to the birth of the newborn (see [Chapter 16](#)). Early parent–infant contact after birth improves attachment behaviors.

## Parental Attachment Behaviors

The postpartum period is a unique time distinguished by the inseparable relationship parents have with their newborn. To enable an attachment to be built, closeness of this family unit is essential. **Attachment** is the formation of a relationship between a parent and his or her newborn through a process of physical and emotional interactions (Hopwood, 2010). Maternal attachment has the potential to affect both child development and parenting. Attachment begins before birth, during the prenatal period where acceptance and nurturing of the growing fetus takes place. It continues after giving birth as parents learn to recognize their newborn's cues, adapt to the newborn's behaviors and responses, and meet their newborn's needs.

Early and sustained contact between newborns and their parents is vital for initiating their relationship. Nurses play a crucial role in assisting the attachment process by promoting early parent–newborn interactions. In addition, nurses can facilitate skin-to-skin contact (kangaroo care) by placing the infant onto the bare chests of mothers and fathers to enhance parent–newborn attachment. This activity will enable them to get close to their newborn and experience an intense feeling of connectedness and evoke feelings of being nurturing parents. Encouraging breast-feeding is another way to foster attachment between mothers and their newborns. Finally, nurses can encourage nurturing activities and contact such as touching, talking, singing, comforting, changing diapers, feeding—in short, participating in routine newborn care.

The process of attachment is complex and is influenced by many factors including environmental circumstances, the newborn's health status, and the quality of nursing care (Kearvell & Grant, 2010). Nurses need to minimize parent–newborn separation by promoting parent–newborn interactions through kangaroo care, breast-feeding, and participation in their newborn care.

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - **THIRD EDITION** Susan Scott Ricci, **ARNP, MSN, MEd**

Nurses who provide positive psychosocial support and clear communication to parents will help support the attachment process within family units.

## Maternal Psychological Adaptations

Childbirth is supposed to be the most joyous period in a woman's life and involves the almost spiritual experience of giving birth and being able to give life to another being. For many, this can be a life-changing event and through the centuries have been anticipated with excitement and joy and has even been referred to as a blessing. In reality, childbirth and child rearing are very stressful, financially challenging, and emotionally demanding.

In the postpartum period, mood disorders can be divided into three distinct entities in ascending order of severity: maternal (baby) blues, postpartum depression, and psychosis. These disorders, however, have not been clearly demarcated and it is a matter of much debate whether they are discrete disorders or a single disorder that ranges along a continuum of severity (Miles, 2011).

Many women experience the "maternal blues," also known as the "baby blues," which are characterized by mild depressive symptoms, anxiety, irritability, mood swings, tearfulness (often for no discernible reason), increased sensitivity, and fatigue. The "blues" typically peak on postpartum days 4 and 5, may last hours to days, and usually resolve by day 10. Although these symptoms may be distressing, they do not reflect psychopathology, and they typically do not affect the mother's ability to function and care for her child.

Different from the baby blues, symptoms of postpartum depression last longer, are more severe, and require treatment. Some signs and symptoms of depression include feeling:

- Restless
- Worthless
- Guilty
- Hopeless
- Moody
- Sad
- Overwhelmed (Neiman, Carter, Van Sell, & Kindred, 2010)

Postpartum depression affects the transition to the maternal role for many mothers.

Between 60% and 80% of new mothers suffer from the short-lived postpartum mood disorder termed "baby blues." In addition, each year in the United States, about 15% of new mothers or more suffer debilitating postpartum depression, a prevalence that continues unabated (Joy & Contag, 2010). There is growing evidence of the adverse impact of postpartum depression on the emotional, behavioral, and cognitive development of the newborn (Davalos, Yadon, & Tregellas, 2012). Behavior patterns of mothers experiencing postpartum depression, such as withdrawal and detachment, are likely to have a negative impact on the infant, which may lead to poor mother-baby bonding (Miles, 2011).

Postpartum depression can lead to alienation from loved ones, daily dysfunction secondary to overwhelming sorrow and disorientation, and, at its most extreme, personal terror

# ESSENTIALS of Maternity, Newborn, & Women's Health

## Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

resulting in dangerous thoughts and violent actions. For additional information, see [Chapter 22](#).

The woman experiences a variety of responses as she adjusts to a new family member and to postpartum discomforts, changes in her body image, and the reality of change in her life. In the early 1960s, Reva Rubin identified three phases that a mother goes through to adjust to her new maternal role. Rubin's maternal role framework can be used to monitor the client's progress as she "tries on" her new role as a mother. The absence of these processes or inability to progress through the phases satisfactorily may impede the appropriate development of the maternal role (Rubin, 1984). Although Rubin's maternal role development theories are of value, some of her observations regarding the length of each phase may not be completely relevant for the contemporary woman of the 21st century. Today, many women know their infant's gender, have "seen" their fetus in utero through four-dimensional ultrasound, and have a working knowledge of childbirth and child care. They are less passive than in years past and progress through the phases of attaining the maternal role at a much faster pace than Rubin would have imagined. Still, Rubin's framework is timeless for assessing and monitoring expected role behaviors when planning care and appropriate interventions.

### *Taking-In Phase*

The **taking-in phase** is the time immediately after birth when the client needs sleep, depends on others to meet her needs, and relives the events surrounding the birth process. This phase is characterized by dependent behavior. During the first 24 to 48 hours after giving birth, mothers often assume a very passive role in meeting their own basic needs for food, fluids, and rest, allowing the nurse to make decisions for them concerning activities and care. They spend time recounting their labor experience to anyone who will listen. Such actions help the mother integrate the birth experience into reality—that is, the pregnancy is over and the newborn is now a unique individual, separate from herself. When interacting with the newborn, new mothers spend time claiming the newborn and touching him or her, commonly identifying specific features in the newborn, such as "he has my nose" or "his fingers are long like his father's" ([Fig. 15.6](#)).



FIGURE 15.6

Mother bonding with newborn during the taking-in phase.

*Take Note!*

The taking-in phase typically lasts 1 to 2 days and may be the only phase observed by nurses in the hospital setting because of the shortened postpartum stays that are the norm today.

*Taking-Hold Phase*

# ESSENTIALS of Maternity, Newborn, & Women's Health

## Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

The **taking-hold phase**, the second phase of maternal adaptation, is characterized by dependent and independent maternal behavior. This phase typically starts on the second to third day postpartum and may last several weeks.

As the client regains control over her bodily functions during the next few days, she will be taking hold and becoming preoccupied with the present. She will be particularly concerned about her health, the infant's condition, and her ability to care for her or him. She demonstrates increased autonomy and mastery of her own body's functioning, and a desire to take charge with support and help from others. She will show independence by caring for herself and learning to care for her newborn, but she still requires assurance that she is doing well as a mother. She expresses a strong interest in caring for the infant by herself.

### *Letting-Go Phase*

In the **letting-go phase**, the third phase of maternal adaptation, the woman reestablishes relationships with other people. She adapts to parenthood through her new role as a mother. She assumes the responsibility and care of the newborn with a bit more confidence now (Edelman & Mandle, 2010). The focus of this phase is to move forward by assuming the parental role and to separate herself from the symbiotic relationship that she and her newborn had during pregnancy. She establishes a lifestyle that includes the infant. The mother relinquishes the fantasy infant and accepts the real one.

Nurses have recognized the importance of the process of becoming a mother (BAM) to maternal–infant nursing since Rubin's report on maternal role attainment (MRA). Mothers' perceptions of their competence or confidence, or both, in mothering and their expressions of love for their infants included age, relationship with the father, socioeconomic status, birth experience, experienced stress, available support, personality traits, self-concept, child-rearing attitudes, role strain, health status, preparation during pregnancy, relationships with own mother, depression, and anxiety. Infant variables identified as influencing MRA/BAM include appearance, responsiveness, temperament, and health status (Wendy, 2010).

More current research has led to renaming the four stages a woman progresses through in establishing a maternal identity in BAM:

- 1. Commitment, attachment to the unborn baby, and preparation for delivery and motherhood during pregnancy
- 2. Acquaintance/attachment to the infant, learning to care for the infant, and physical restoration during the first 2 to 6 weeks following birth
- 3. Moving toward a new normal
- 4. Achievement of a maternal identity through redefining self to incorporate motherhood (around 4 months). The mother feels self-confident and competent in her mothering and expresses love for and pleasure interacting with her infant (Mercer & Walker, 2006)

The woman's work in the first stage is to make a commitment to the pregnancy and to the safe birth and care of her unborn child. This commitment is associated with a positive adaptation to motherhood.



# ESSENTIALS of Maternity, Newborn, & Women's Health

## Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

During the second stage while the mother is placing the infant in her family context and learning how to care for her infant, her attachment and attitude toward her infant, and her self-confidence or sense of competence in mothering, or both, consistently indicate an interdependence of these two variables. The nursing care provided during the first two stages is especially important in assisting mothers as they begin to mother. Follow-up is needed as mothers move toward a new normal and recognize a transformation of self in BAM can continue to reinforce their capabilities (Mercer, 2006).

To foster maternal role attainment, two specific interventions for nurses were identified in a review of the literature (Miles, Holditch-Davis, Burchinal, & Brunssen, 2011). First, instructions about infant care and the infant's capabilities are more effective if they are specifically focused on that particular mother's infant. Second, mothers prefer live classes rather than videotapes so they can ask questions. In short, interactive nurse-client relationships are associated with positive maternal growth. Nurses who interact with clients long term during pregnancy, childbirth and during well child care help build maternal competence. Pregnancy, birth, and becoming a mother collectively represent a critical period of physical and emotional upheaval in a woman's life. The need for a holistic care approach that supports the emotional and physical health of the dyad is imperative (Foulkes, 2011).

## Partner Psychological Adaptations

For partners, whether they are husbands, significant others, boyfriends, same-sex life partners, or just friends, becoming a parent or just sharing the childbirth experience can be a perplexing time as well as a time of great change. This transition is influenced by many factors, including participation in childbirth, relationships with significant others, competence in child care, the family role organization, the individual's cultural background, and the method of infant feeding.

The transition from being merely a partner to being a father can propel many men to reorganize their lifestyles. During the postpartum period, men frequently find themselves struggling to balance personal and work needs with the new demands of father status and their new self-image. The complexities of the transitional process involved in forging a fatherhood identity can be viewed at three different levels: readjustment to a new self-image, formation of a triadic family relationship, and adaptation to redefining himself and his relationship with his partner: the "more united tag team" (Chin, Hall, & Daiches, 2011).

Nurses can play a key role in supporting men's transition to fatherhood by keeping fathers informed about birth and postpartum routines, reporting on their newborn's health status, and reviewing infant development. They can also contribute by creating "participative space" for new fathers during the postpartum period. This can be achieved, for example, by helping fathers take on their new role by supporting and promoting their degree of involvement in the process. They can also be encouraged to actively participate in caring for, and maintaining contact with, their newborns.

# ESSENTIALS of Maternity, Newborn, & Women's Health Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

## *Take Note!*

Most research findings stress the importance of early contact between the father or significant other and the newborn, as well as participation in infant care activities, to foster the relationship (Discenza, 2010).

Infants have a powerful effect on their fathers and others, who become intensely involved with them ([Fig. 15.7](#)). The father's or significant other's developing bond with the newborn—a time of intense absorption, preoccupation, and interest—is called *engrossment*.



FIGURE 15.7

# ESSENTIALS of Maternity, Newborn, & Women's Health Nursing - THIRD EDITION

Susan Scott Ricci, ARNP, MSN, MEd

Engrossment of the father and his newborn.

## *Engrossment*

**Engrossment** is characterized by seven behaviors:

- 1. Visual awareness of the newborn—the father or partner perceives the newborn as attractive, pretty, or beautiful.
- 2. Tactile awareness of the newborn—the father or partner has a desire to touch or hold the newborn and considers this activity to be pleasurable.
- 3. Perception of the newborn as perfect—the father or partner does not “see” any imperfections.
- 4. Strong attraction to the newborn—the father or partner focuses all attention on the newborn when he is in the room.
- 5. Awareness of distinct features of the newborn—the father or partner can distinguish his newborn from others in the nursery.
- 6. Extreme elation—the father or partner feels a “high” after the birth of his child.
- 7. Increased sense of self-esteem—the father or partner feels proud, “bigger,” more mature, and older after the birth of his child (Sears & Sears, 2010).

Frequently, fathers or partners are portrayed as well meaning but bumbling when caring for newborns. However, they have their own unique way of relating to their newborns and can become as nurturing as mothers. A father or partner's nurturing responses may be less automatic and slower to unfold than a mother's, but they are capable of a strong bonding attachment to their newborns (Sears & Sears, 2010). Encouraging fathers or partners to express their feelings by seeing, touching, and holding their son or daughter and by cuddling, talking to, and feeding him or her will help to cement this new relationship. Reinforcement of this engrossing behavior helps fathers or partners to make a positive attachment during this critical period.

## *Three-Stage Role Development Process*

Similar to mothers, fathers or partners also go through a predictable three-stage process during the first 3 weeks as they too “try on” their roles as parents. The three stages are expectations, reality, and transition to mastery (Sears & Sears, 2010).

### STAGE 1: EXPECTATIONS

New fathers or partners pass through stage 1 (expectations) with preconceptions about what home life will be like with a newborn. Many men may be unaware of the dramatic changes that can occur when this newborn comes home to live with them. For some, it is an eye-opening experience.

### STAGE 2: REALITY

# ESSENTIALS of Maternity, Newborn, & Women's Health

## Nursing - THIRD EDITION Susan Scott Ricci, ARNP, MSN, MED

Stage 2 (reality) occurs when fathers or partners realize that their expectations in stage 1 are not realistic. Their feelings change from elation to sadness, ambivalence, jealousy, and frustration. Many wish to be more involved in the newborn's care and yet do not feel prepared to do so. Some find parenting fun but at the same time do not feel fully prepared to take on that role.

Men's stress, irritability and frustration in the days, weeks, and months after the birth of their child can turn into depression, just like new mothers experience. Unfortunately, men rarely discuss their feelings or ask for help, especially during a time when they are supposed to be the "strong one" for the new mother. Depression in men can cause marital conflicts, reckless or violent behavior, poor job performance, and substance abuse. In addition, paternal depression following childbirth can have a detrimental effect on a couple's relationship, the parent-child relationship, and on their children's future development (Wee, Skouteris, Pier, Richardson, & Milgrom, 2011).

Risk factors for male postpartum depression include previous history of depression, financial problems, a poor relationship with his partner, and an unplanned pregnancy. Symptoms of depression appear 1 to 3 weeks after birth and can include feelings of being very stressed and anxious, being discouraged, fatigued, resentment toward the infant and the attention he or she is getting, and headaches. Men experiencing these symptoms should understand that it is not a sign of weakness and professional help can be helpful for them.

## STAGE 3: TRANSITION TO MASTERY

In stage 3 (transition to mastery), the father or partner makes a conscious decision to take control and be at the center of his newborn's life regardless of his preparedness. This adjustment period is similar to that of the mother's letting-go phase, when she incorporates the newest member into the family.

## KEY CONCEPTS

- The puerperium period refers to the first 6 weeks after delivery. During this period, the mother experiences many physiologic and psychological adaptations to return her to the pre-pregnant state.
- Involution involves three processes: contraction of muscle fibers to reduce stretched ones, catabolism (which reduces enlarged, individual cells), and regeneration of uterine epithelium from the lower layer of the decidua after the upper layers have been sloughed off and shed in lochia.
- Lochia passes through three stages: lochia rubra, lochia serosa, and lochia alba during the postpartum period.
- Maternal blood plasma volume decreases rapidly after birth and returns to normal within 4 weeks postpartum.
- Reva Rubin (1984) identified three phases the mother goes through to adjust to her new maternal role: the taking-in, taking-hold, and letting-go phase.

# ESSENTIALS of Maternity, Newborn, & Women's Health

Nursing - **THIRD EDITION** Susan Scott Ricci, **ARNP, MSN, MEd**

- The transition to fatherhood is influenced by many factors, including participation in childbirth, relationships with significant others, competence in child care, the family role organization, the father's cultural background, and the method of infant feeding.
- Like mothers, men go through a predictable three-stage process during the first 3 weeks as they too "try on" their roles as fathers or partners. The three stages include expectations, reality, and transition to mastery.