

# THE NEONATE AT 1 WEEK FOLLOWING DISCHARGE

At 1 wk of age, the newborn continues to adapt to extrauterine life, both physiologically and behaviorally. Within this adaptation period are many normal variations. Review prior assessments for risk factors or deviations from expected norms.

## NEONATAL ASSESSMENT DATA BASE

### Activity/Rest

May be wakeful/fussy between feedings  
May sleep more or less than the customary 17 hr/day

### Circulation

Heart rate ranges from 110–160 bpm; is strong and regular.

### Ego Integrity (Parents)

May verbalize unrealistic expectations of themselves and of neonate  
May express feelings of ineptness or inadequate knowledge

### Elimination

Urine pale and straw-colored, with output of 6–10 wet diapers per day.  
Abdomen soft with bowel sounds in all four quadrants.  
Defecation pattern varies; stool formed, yellow/brown, and passed 2–3 times per day in neonate fed cow's-milk formula; mustard-colored, loose, and passed initially with each feeding, then possibly every few days, in breastfed neonate.

### Food/Fluid

May have difficulty adjusting to breast or bottle feeding; oral intake may be inadequate or on occasion, excessive.  
Weight gain averaging 1 oz/day.

### Neurosensory

Facial expression symmetrical  
Reflexes associated with feeding (sucking, swallowing, gag, and rooting) present and strong  
Moro, grasp, and stepping reflexes present with strong, symmetrical response  
Uncoordinated motor and reflex activity present (continued development of the neurological system)  
Muscle tone good; head lag present

### Pain/Discomfort

Irritability, crying associated with colic may occur.

### Respiration

Respiratory rate 30–60/min with no signs of difficulty (e.g., grunting, retraction, or nasal flaring).  
Normal alternation between rapid and slow rate occurs in response to stimuli.  
Cry strong, lusty, demanding, and purposeful.  
Lungs bilaterally clear; breath sounds equal.

### Safety

Skin pink and warm to the touch, with good skin turgor; free of rashes; transitory color change or mottling may appear in response to cold.

Skin may appear slightly dry or peeling in folds.  
 Slight jaundice involving only upper body or upper extremities may be present, peaking at day 4 or 5, subsiding within 7 days of onset.  
 Temperature stable; axillary/pacifier, 97.6°F–98.6°F (36.5°C–37°C); rectal, 97.8°F–99°F (36.6°C–37.2°C).  
 Umbilical cord stump drying, with no evidence of inflammation; slight bleeding may be noted with detachment 7–14 days after birth.

## Sexuality

Circumcised penis well-healed and free of exudate

## DIAGNOSTIC STUDIES

Tests dependent on individual findings/concerns  
 Screening repeated at 7–14 days of age to detect inborn errors of metabolism

## NURSING PRIORITIES

1. Facilitate newborn's continued physiological and behavioral adaptation to extrauterine life.
2. Promote adequate fluid and nutritional intake.
3. Provide information to parent(s) about newborn's safety, developmental needs, and interactional capabilities.
4. Encourage parental use of support systems.

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### NURSING DIAGNOSIS:

#### Risk Factors May Include:

#### Possibly Evidenced By:

#### DESIRED OUTCOMES/EVALUATION CRITERIA—NEONATE WILL:

#### PARENT(S) WILL:

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### NUTRITION: altered, risk for less than body requirements

Inability to ingest/digest adequate nutrients (fatigue, increased metabolic rate, formula allergy)

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

Gain approximately 1 oz/day after initial weight loss.

Remain well hydrated as evidenced by adequate urine output (6–8 wet diapers/day), good skin turgor, moist mucous membranes.

Demonstrate proper handling and comfort with infant feeding techniques.

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## ACTIONS/INTERVENTIONS

## RATIONALE

### Independent

Weigh newborn. Compare current weight with birth weight. Note weight lost and regained.

Growth is individual, but most full-term AGA infants regain birth weight within 10–14 days of birth. Large infants lose proportionately more weight than small infants. Insufficient gains indicate nutritional risks or possible malnutrition.

Emphasize importance of weighing breastfed newborn at 2 wk of age.

Assess hydration level (e.g., status of fontanel, skin turgor, mucous membranes, and urine output).

Determine parents' knowledge of newborn's feeding needs. Observe feeding, evaluating parents' technique (e.g., positioning, burping, and length of feeding). Discuss importance of alternating infant's position (e.g., alternating right and left for bottle-fed baby to simulate breastfeeding).

Discuss emotional needs of newborn in relation to feedings (e.g., the need for holding and cuddling and for a quiet, nondistracting environment).

Observe newborn during feeding, noting presence or development of feeding reflexes (i.e., rooting, sucking, swallowing, and gag).

Note frequency and amounts of feeding.

Ascertain number of voidings per day and color of urine.

Review newborn's sleeping and waking habits.

Identify cues suggesting newborn fatigue (e.g., loss of eye contact [turning away from or closing of eyes], decreased muscle tone, and reduced activity of extremities/neck).

Determine mother's perception of her success or failure related to infant feedings.

Evaluation at this age is critical to detect possible failure to thrive or slow weight gains.

Sunken fontanel, poor skin turgor, decreased production of mucus, and decreased urine output indicate inadequate fluid intake. Well-hydrated tissue may indicate adequate nutrition and fluid balance.

Normal feeding should take 20–30 min. Improper positioning of infant at the breast, or improper technique of holding the bottle, may contribute to inadequate compression of maternal milk ducts or excessive air ingestion. Alternating bottle-fed infant's position provides stimulation and assists in development of eye muscles.

Skin-to-skin contact allows neonate to focus on feeding, fosters optimal emotional interaction between parents and infant, and provides tactile stimulation, which is critical to the total process of acquiring newborn's trust. Delayed gratification of hunger needs may lead to mistrust and lack of synchrony needed for the mutual gratification of mother and infant.

A deviation in any of the feeding reflexes may lead to inadequate intake of nutrients.

Breastfed neonate may initially want to nurse every 1½–3 hr with one or two night feedings, because breast milk is rapidly digested. Formula-fed infant is usually satisfied with feedings provided every 3–4 hr. Intake is considered adequate for formula-fed newborn if 6–10 feedings of approximately 2–3 oz each are ingested in a 24-hr period.

Infant is adequately hydrated if voidings occur 6–8 times per day and urine is pale or straw-colored.

Nutritional satisfaction is indicated if neonate sleeps soundly between feedings and wakes every 2–5 hr for feedings, and if feedings cause infant to stop crying.

Recognition of these cues may promote intervention to prevent undue fatigue and associated complications. Excessive handling/overstimulation can elevate newborn's metabolic rate and thereby increase caloric use in place of promoting growth.

Feelings of success or failure regarding feedings influence the mother's self-confidence. Negative self-esteem associated with the newborn's poor oral intake may establish a vicious cycle whereby mother's anxiety increases at mealtime and newborn becomes anxious in response to maternal anxiety and feeds poorly. Negative patterns at mealtime may persist throughout infancy and childhood, affecting mother-child interactions.

Auscultate bowel sounds. Note color, consistency, and odor of stools.

Assess infant's temperature and pulse. (Refer to ND: Infection, risk for.)

Using 24-hr diet recall, evaluate adequacy of nutritional intake in mothers who breastfeed. Note amount of calories and fluids, and the use of a variety of foods from all the basic food groups.

Assess adequacy of and ways to increase milk supply and promote the let-down reflex. Review effects of smoking.

Review the preparation, sterilization, and availability of different types of formula.

Measure specific gravity of urine.

Test stool for glucose (reducing imbalance). error in metabolism.

Reinforce instructions regarding the need to obtain urine from diaper for PKU screening between 2 and 4 wk after birth, or to bring child to laboratory for Guthrie test or heel-stick method of PKU testing.

## **Collaborative**

Refer to community agency, visiting nurse services, or WIC program.

Refer lactating mother to local lactation consultant or support groups such as La Leche League International, Lact-Aid.

Obtain consultation for breastfeeding mother as indicated.

Hyperactivity or hypoactivity of the gastrointestinal tract leads to inadequate utilization of food. Elimination pattern is individual and is influenced by therapy (e.g., bilirubin phototherapy) and by amount and type of feedings (e.g., breast or bottle). Green or loose stool may indicate infection or passage of excess bilirubin. Constipated stool may indicate dehydration.

Infection interferes with weight gain by increasing metabolic rate and negatively affecting oral intake.

Good nutrition in the mother enhances the nutrition of the breastfed newborn and helps mother maintain adequate energy level.

Maternal milk production may not be adequate to meet newborn's growth needs. Maternal caloric intake should be 500–800 kcal more than the level during pregnancy, with 2–3 qt of fluid consumed per 24 hr. Adequate rest is necessary for milk production. Using relaxation techniques or drinking several ounces of dark beer each day may reduce anxiety and facilitate the let-down reflex. Note: Smoking interferes with the let-down reflex, and nicotine is passed through breast milk to the infant.

Enhances proper use of commercially prepared formula. Dilution of ready-to-feed formula has been linked to failures of infant growth (height and weight).

Increased specific gravity (above 1.008) in the absence of other complications may indicate the need for additional fluid intake.

Increased glucose in stool may indicate an intolerance to formula or an

Helps ensure that newborn is screened for PKU, an autosomal recessive disorder in which absence of a liver enzyme inhibits the conversion of phenylalanine to tyrosine, with a resultant increase in phenylpyruvic acid and possible development of mental retardation.

Nutritional problems identified in the newborn may necessitate close or frequent monitoring and financial support.

May be necessary to identify and meet specific nutritional needs with consideration of individual health status and resources. Can provide role model, clarify misconceptions, assist with problem solving related to breastfeeding.

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**NURSING DIAGNOSIS:****May Be Related To:****Possibly Evidenced By:****DESIRED OUTCOMES/EVALUATION  
CRITERIA—PARENT(S) WILL:****KNOWLEDGE deficit [Learning Need], regarding newborn  
needs/care**

Lack of recall/incomplete information presented; misinterpretation

Verbalizations of concerns/misconceptions; hesi-tancy in, or  
inadequate performance of, activities; development of preventable  
complications

Verbalize understanding of infant's needs.

Adopt safe child-care practices.

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**ACTIONS/INTERVENTIONS**

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**RATIONALE****Independent**

Assess parents' comfort and skill with infant care tasks (e.g., bathing, feeding, diapering, and recognizing infant's nutritional and physiological needs). Demonstrate, supervise, and/or reinforce skills, as needed.

Review proper technique for preparation, sterilization, and storage of formula and bottles.

Discuss normal patterns of newborn growth and development, behaviors, and physical and social capabilities. Provide information about newborn's temperament and about appropriate parental responses to personality. Share with parents the Brazelton assessment process.

Note stress in home environment/family relationships and discuss ways to resolve/minimize.

Determines ability to provide appropriate care and identifies individual needs. Recognition of strengths and efforts enhances parents' sense of competence.

Faulty technique in formula preparation may lead to enteric infection. Bacterial growth can be controlled by discarding unfinished formula or by refrigerating prepared formula and discarding any unused portion after 24 hr (or per instructions on the container). Unopened commercially prepared formula may be stored at room temperature. Overdilution of formula can lead to alterations in electrolyte balance and to inadequate caloric intake. Underdilution of formula can increase renal solute load, causing dehydration.

Assists parents in monitoring neonate's physical and cognitive growth and optimizing neonate's developmental potential. By observing and understanding newborn's personality traits, parents learn to respond appropriately to individual needs of their newborn. Parents need to realize that newborn's behaviors are individually determined and not entirely a reflection of their parenting abilities.

Research indicates that brain development is negatively affected by stress and violence in the home. Understanding of this information may help families to change behavior patterns that affect not only the infant's development but also all members of the family.

Discuss newborn's ability to become habituated to stimuli.

Note family history of possible neurological or sensory deficits.

Provide information about home management of the common cold in infant. Discuss recognition of signs such as nasal congestion, coughing, sneezing, low-grade fever, and swallowing difficulty (indicating sore throat).

Recommend offering extra sterile water, reducing feeding amounts, using upright position for feeding and sleeping (elevating mattress to a 30-degree angle), nasal/oral suctioning, using a cool-mist humidifier, and medicating infant only with physician's orders.

Identify signs of illness necessitating medical attention, and inform parents of availability of community agencies. Provide list of emergency numbers for posting in a prominent place (e.g., next to telephone, on refrigerator).

Discuss plans for follow-up appointments for tests, such as PKU screening.

The ability of newborn infants to lessen their responses to repeated stimuli allows them to sleep while family members carry out normal household activities. Some newborns may not become habituated to stimuli as easily as others and need a quiet environment for sleeping.

Family history of such problems may identify a genetic disorder related to seizure activity, deafness, blindness, retardation, cerebral palsy, or muscular weakness. Information may heighten parents' awareness of the need for further assessment or follow-up to determine the presence/extent of the problem and the appropriate treatment.

Promotes parental comfort in managing mild illnesses at home.

Promotes comfort. Smaller feedings help prevent overtiring of infant. Extra fluids and use of humidifier help liquefy secretions; upright positioning of head and chest promotes optimal lung expansion. Note: Prone position also allows better lung expansion when infant is having difficulty handling mucus.

Prepares parents to seek prompt medical attention and to act quickly in an emergency.

Screening tests are usually repeated in 1–2 wk.

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**NURSING DIAGNOSIS:****Risk Factors May Include:****Possibly Evidenced By:****DESIRED OUTCOMES/EVALUATION CRITERIA—NEONATE WILL:****PARENT(S) WILL:**

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**INJURY, risk for**

Physical (hyperbilirubinemia), environmental (inadequate safety precautions), chemical (drugs in breast milk), psychological (inappropriate parental stimulation or interaction), cardiopulmonary (respiratory tract obstruction)

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

Be free of injury.

Identify individual risk factors/concerns.

Adopt behaviors that provide safe growth-promoting environment.

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## **ACTIONS/INTERVENTIONS**

## **RATIONALE**

### **Independent**

Evaluate skin color from head to toe and color return on blanching of sternum. Note behavior changes (e.g., lethargy, reduced Moro's reflex, poor feeding, and listlessness). (Refer to CP: Newborn: Hyperbilirubinemia.)

Note presence/resolution of cephalhematoma.

Investigate reports of cyanosis with crying, feeding, or activity.

Determine parental knowledge of infant safety (e.g., use of car seats, proper restraints, and protected surfaces; proper assessment of temperature of bath water and formula).

Ascertain mother's use of drugs (prescription/over-the-counter/street), especially if she is breastfeeding. Discuss potentially harmful effects of specific and commonly ingested drugs, and the need to avoid taking medication until after discussion with healthcare provider.

### **Collaborative**

Refer to visiting nurse service as appropriate.

Report family to social service or to protective services if potential for abuse, or possible safety or risk factors, are identified.

Hyperbilirubinemia caused by elevated levels of unconjugated bilirubin can result in kernicterus, which is associated with deposition of excess bile pigments in the basal ganglia of the brain.

Large cephalhematoma may contribute to increased bilirubin levels during reabsorption of blood.

May indicate cardiopulmonary compromise (e.g., unresolved PDA, infection) requiring prompt evaluation/intervention.

Most common injuries in the newborn are related to accidental falls from unprotected surfaces. Bath water or formula should be comfortably warm to the inside of the wrist. Infant needs to be in federally approved car seat at all times when riding in any vehicle, with car seat positioned according to guidelines relative to infant's size/age.

Many drugs are passed to infant through breast milk. Nicotine, caffeine, alcohol, cocaine, marijuana, and other drugs tend to reach levels in newborn that are directly related to maternal intake. Caffeine (equivalent to more than 1 or 2 cups of coffee/tea per day) may cause restlessness, sleeplessness, and significant diuresis in infant. Excessive alcohol may increase circulating cortisol levels. Insulin, aspirin, most antibiotics, epinephrine, and antidiarrheal agents are usually viewed as safe, if used in moderation.

May benefit from additional home visits/follow-up to monitor potential complications.

May be necessary for further evaluation of newborn's well-being and parents' child-care practices.

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### **NURSING DIAGNOSIS:**

#### **Risk Factors May Include:**

#### **Possibly Evidenced By:**

#### **DESIRED OUTCOMES/EVALUATION CRITERIA—NEONATE WILL:**

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### **BODY TEMPERATURE, risk for altered**

Extreme of age (immaturity of the hypothalamus, inability to shiver or perspire adequately)

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

Maintain temperature WNL.

**PARENT(S) WILL:**

Verbalize understanding of the influence of heat, cold, and dehydration on the newborn’s temperature.

Demonstrate appropriate regulation of newborn’s environment and clothing.

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**ACTIONS/INTERVENTIONS**

**RATIONALE**

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**Independent**

Assess newborn’s temperature. Note diaphoresis (overheating) or pallor, cyanosis, or coolness associated with hypothermia.

Detects deviations from normal range: rectal, 97.8°F–99.0°F (36.6°C–37.2°C); axillary/pacifier, 97.6°F–98.6°F (36.5°C–37.0°C). Thin skin and the proximity of blood vessels to skin surface result in rapid circulatory changes with cooling.

Review thermoregulatory needs of newborn.

Assist parents in recognizing importance of heat regulation; helps protect newborn from harm caused by temperature extremes. Note: Body temperature fluctuations require expenditure of calories to regain balance, decreasing reserves available for growth. In addition, chilling increases the risk of newborn jaundice as the affinity of serum albumin for bilirubin is diminished.

Assess environmental temperature and neonate’s dress and coverings in relation to parental attire. Provide guidelines for dressing and bundling newborn, controlling environmental temperature, and evaluating infant for overheating or underheating.

Newborn is usually comfortable when dressed in the same number of clothing layers as parents. Overdressing in warm temperatures causes discomfort and prickly heat. Underdressing in cold temperatures results in discomfort and possible frostbite of cheeks, fingers, and toes. Informed parents can lessen the risks of such complications. Note: Cultural dictates may require bundling of newborn in excess of environmental needs, necessitating sensitivity and additional discussion of infant needs.

Suggest use of appropriate hat in all temperatures.

Protects infant’s scalp from sunburn and shades eyes in summer; minimizes heat loss in cool environment.

Determine how parents check temperature of bath water. Provide guidance, as appropriate.

Water temperature should feel warm to inside of wrist or elbow to avoid chilling or scalding newborn.

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**NURSING DIAGNOSIS:**

**CONSTIPATION/DIARRHEA, risk for**

**Risk Factors May Include:**

Type and amount of oral intake; medications or dietary intake of the lactating mother; presence of allergies, infection

**Possibly Evidenced By:**

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

**DESIRED OUTCOMES/EVALUATION CRITERIA—NEONATE WILL:**

Evacuate with ease stool that is yellow-brown or golden-yellow and soft, with frequency appropriate for type of feeding.

**PARENT(S) WILL:**

Adjust specific contributing factors to promote optimal bowel pattern.

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**ACTIONS/INTERVENTIONS**

**RATIONALE**

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**Independent**

Determine frequency, amount, character, and odor of stool.

Newborn's elimination pattern is individual. Stool of newborns fed on cow's milk is pale yellow and formed, and is usually passed 1–2 times per day. Stool of newborns who are breastfed is golden or mustard-colored, and initially may be passed every few days. Diarrhea may be caused by overfeeding or enteric infection; constipation may be caused by dehydration or inappropriate lactating diet.

Ascertain total fluid intake (ounces of formula or frequency and length of feeding in breastfed infant) and number of wet diapers over 24-hr period. Determine skin turgor, observe mucous membranes. Obtain urinary specific gravity and Labstix results.

Alterations in hydration status may be associated with or cause altered bowel function. Less than five voidings per day, concentrated urine, poor skin turgor, dry mucous membranes indicate the need for increased fluid intake.

Auscultate bowel sounds.

An area of absent or diminished bowel sounds may signify blockage at a proximal segment of the bowel. Hyperactive bowel sounds indicate irritability.

Palpate for abdominal distension or tenderness.

Gas accumulation is associated with constipation or enteric infection and can cause varying degrees of discomfort.

Inspect perianal area for irritation, discharge, or rectal fissures. (Refer to ND: Skin Integrity, risk for impaired.)

Improper technique in formula preparation may result in bacterial growth, diarrhea, and resultant skin irritation.

Encourage positioning of newborn on right side after feedings.

Allows swallowed air to rise above fluid and exit through esophagus, and permits ingested formula or breast milk to flow toward pyloric sphincter.

Review fluid intake and diet of lactating mother, using 24-hr recall. Encourage client to increase frequency of feedings, and provide water to newborn between feedings as appropriate. Determine newborn's behavior in response to mother's ingested foods; counsel mother to avoid problem foods.

Inadequate fluid intake promotes constipation. Supplemental water may be beneficial during hot weather/in presence of constipation. In addition, certain foods ingested by lactating mother can alter newborn's elimination pattern and result in excess gas accumulation and constipation or diarrhea. Avoidance of these foods usually eliminates the problem.

Assess drug use in lactating client.

Use of cathartics may cause loose stools in infant.

**Collaborative**

Instruct parent(s) in proper technique of administering glycerin suppository.

Glycerin suppository aids in the passage of hard stool. Promotes parental management of infant's needs.

Refer parent(s) to healthcare provider for severe or protracted problems, or for suspected enteric infections.

May be necessary to determine exact cause of problem and to bring about resolution. Antispasmodics or antidiarrheal medications may be necessary.

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**NURSING DIAGNOSIS:****SKIN INTEGRITY, risk for impaired****Risk Factors May Include:**

Excretions (ammonia formation from urea), chemical irritation from laundry detergent or diapering material, mechanical factors (e.g., long fingernails)

**Possibly Evidenced By:**

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

**DESIRED OUTCOMES/EVALUATION CRITERIA—NEONATE WILL:**

Be free of diaper dermatitis/dermal injury.

**PARENT(S) WILL:**

Identify and adopt measures to maintain skin integrity.

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**ACTIONS/INTERVENTIONS****RATIONALE**

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**Independent**

Stress need to assess diaper area for presence of rash that may be eroded, tender, indurated, or encrusted.

Early diagnosis and intervention may prevent spread of dermatitis to entire buttock area.

Recommend diaper changes, thorough cleaning and drying of area after each voiding and stool, exposure of area to air or monitored heat source, and application of a thin coat of petroleum jelly or A and D Ointment over the diaper area. Stress importance of not applying ointments before exposure to heat source, or use of cornstarch/powders.

Prevention of diaper rash maintains perineal skin integrity. Exposure to heat aids in drying and healing. Use of 25-W bulb placed 24 in (61 cm) from affected area is preferable to use of sunlight through window, which may cause sunburn. Infant may need to be gently restrained to prevent possible contact with heat source and should not be left unattended. Petroleum jelly or A and D Ointment acts as a barrier to protect the skin, but may intensify effects of heat, resulting in a burn. Powders tend to cake with urine and irritate buttocks; use of cornstarch may lead to a fungal infection.

Encourage parents to change brand of detergent and fabric softener or diaper (e.g., brand of disposable diaper, or cloth versus disposable) if rash develops or fails to clear.

Eliminates possible causes of rash.

Review proper/safe nail-cutting techniques, e.g., cutting nails straight across with blunt-ended infant scissors/clippers while newborn sleeps.

At about 1 wk of age, the tips of the newborn's nails separate from the underlying skin. Uncoordinated activity of the upper extremities creates the risk of dermal trauma.

## Collaborative

Recommend contacting healthcare provider for severe or persistent diaper rash.

Demonstrate application of medicated topical creams, and explain treatment schedule.

May need additional help and further treatment or stronger therapeutic agents.

Eradicates organisms causing dermatitis and aids in healing process.

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**NURSING DIAGNOSIS:****Risk Factors May Include:****Possibly Evidenced By:****DESIRED OUTCOMES/EVALUATION CRITERIA—NEONATE WILL:****PARENT(S) WILL:**

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**INFECTION, risk for**

Thin, permeable skin, extra portals of entry(umbilical cord, circumcision), and immature immunologic response

[Not applicable, presence of signs/symptoms establishes an *actual* diagnosis]

Be free of signs of infection.

Identify individual risk factors and appropriate actions.

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**ACTIONS/INTERVENTIONS****RATIONALE**

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### Independent

Demonstrate proper hand-washing technique prior to handling infant. Ensure that only clean objects come in contact with newborn.

Prevents spread of infection. Hand washing is especially important following maternal perineal pad changes and following contact with vaginal lochia, because some organisms, such as listerial or streptococcal organisms, may be present in the lochia for as long as 10 days following delivery.

Instruct parents to keep newborn away from crowds and from people with known contagious illnesses until newborn is at least 1 mo of age.

Shields newborn from direct contact with infected persons, reducing cross-contamination.

Assess healing of umbilical cord stump; reinforce measures to promote healing and drying of stump through exposure to air and the use of astringents.

Stump usually heals and detaches by the 10th day of life. Small beads of blood may be present when infant strains while crying or passing stool.

Inspect penis of newborn who has been circumcised.

Penis should be well healed by 7 days following circumcision.

Discuss home management of upper respiratory infections, including the use and cleaning of cool-mist humidifiers, vaporizers, and bulb syringes; upright positioning; and increasing fluid intake. Identify possible sequelae associated with otitis media, feeding problems, breathing difficulty, and coughing. (Refer to CP: Four Weeks Following Birth; ND: Infection, risk for.)

Enhances client's ability to meet neonate's needs and promote health. Note: Water reservoirs in humidifiers and vaporizers may harbor bacteria and require special care to prevent secondary health problems.

Stress importance of refraining from medicating infant without first consulting healthcare provider; stress importance of using acetaminophen in place of aspirin products.

Inspect skin for vesicular lesions surrounded by erythema (may be encrusted if ruptured).

Review signs of generalized infection (e.g., pulmonary congestion, cough, and retractions; more than one episode of forceful vomiting; refusal of two feedings in a row) or sepsis (e.g., temperature instability, lethargy, restlessness, irritability, frequent vomiting over a 6-hr period; two consecutive green, watery stools; fewer than six wet diapers per day). Discuss when to notify healthcare provider.

Demonstrate proper technique for obtaining neonate's temperature.

Discuss advantages of breast milk for newborn.

Inspect buccal cavity for white, curdy patches on tongue, palate, and inner aspects of cheeks; check for presence of fever and/or gastric distress.

## Collaborative

Obtain/review complete blood count (CBC) results and cultures, as indicated.

Demonstrate proper administration of local systemic antibiotics or fungicides.

In general, safety of medications has not been determined/tested in the newborn population. The use of aspirin-containing products in presence of viral infection has been linked to Reye's syndrome.

May indicate impetigo caused by various strains of group A or B hemolytic streptococci, or by coagulase-positive *Staphylococcus aureus*.

Studies show that neonatal infections with late onset of signs, appearing from 2–12 wk of age, are most frequently caused by cytomegalovirus and by organisms of *Chlamydia* and *Ureaplasma*.

In presence of suspected illness, healthcare provider may prefer rectal temperature readings, because core temperature is a more accurate indicator for febrile state.

Human milk contains iron-binding protein, which exerts a bacteriostatic effect on *Escherichia coli*; macrophages and lymphocytes, which promote a local inflammatory response; and passive transfer of maternal immunity to common mucosal pathogens, such as respiratory syncytial virus.

Newborn may have been contaminated by *Candida albicans* during descent through birth canal, or as a result of poor hand-washing technique or contaminated bottles or nipples. Thrush typically causes gastrointestinal inflammation in addition to the "local" response.

May be necessary if temperature is elevated or presence of lesions/drainage warrants further evaluation to clarify diagnosis.

Eradicates invading pathogen or infectious process. A fungicide such as nystatin (Mycostatin) applied after feedings to surfaces of oral cavity is usually effective against *Candida albicans* infections.

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### NURSING DIAGNOSIS:

#### Risk Factors May Include:

#### Possibly Evidenced By:

### DESIRED OUTCOMES/EVALUATION

### PAIN [acute], risk for

Accumulation of gas in a confined space, with cramping of intestinal musculature

[Not applicable; presence of signs/symptoms establishes an *actual* diagnosis]

Be free of, or display less frequent, crying spells

**CRITERIA—NEONATE WILL:**

and episodes of colic.

**PARENT(S) WILL:**

Report parent-infant tension is relieved or easing.

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## **ACTIONS/INTERVENTIONS**

## **RATIONALE**

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### **Independent**

Evaluate neonate's behavior.

Colicky infant typically cries loudly, draws legs up to abdomen in pain, clenches fists, and sucks vigorously.

Obtain thorough, detailed history of normal daily events, household activity pattern, time of day in which attacks occur, and relationship of attacks to feeding.

Typically, attacks occur at a specific time of day. By determining the circumstances that possibly contribute to onset of attack and by manipulating those circumstances or environmental conditions, parents may be able to reduce overstimulation and tension that usually precipitate the attack.

Obtain 24-hr dietary recall when mother is breastfeeding. Suggest adoption of a milk-free diet for 5 days. Stress importance of reading food product labels; e.g., nondairy creamers may contain calcium caseinate, a cow's milk protein.

Gas-forming vegetables, spices, and chocolate may cause discomfort. Sensitivity to cow's milk products may precipitate colic attacks when milk products pass through the breast milk.

Observe feeding procedure. Analyze and discuss technique and behaviors with parents. Encourage burping infant in upright over-shoulder position before and after feedings. Recommend smaller, more frequent feedings and placing infant in upright position after feeding. Use slow bicycling of legs from extension to knee-chest position.

Excess air ingestion from too-rapid or improper bottle position and/or inadequate burping may result in gas accumulation. Overfeeding or excess carbohydrate ingestion may lead to excess fermentation and gas production. Upright position and bicycling maneuver promote gas expulsion.

Encourage parents to administer 1–2 oz of warm, diluted tea, then to place newborn in prone position over heated towel or protected heating pad and to change infant's position frequently.

Helps stimulate peristalsis to relieve abdominal cramping.

Suggest use of collapsible bags in feeding bottles.

Reduces air ingestion.

Discuss neonate's physical condition and well-being.

Gastric acidity reduces within first week of life, affecting digestion and/or development of colic, which usually resolves within 2–3 mo. Despite colic attacks, infant normally thrives, gains weight, and tolerates feedings. However, the relationships between the parents/other family members may suffer the stressful effects of a crying, irritable infant; this may have a negative impact on the bonding process.

Assess parental response to colic attacks, methods used to relieve crying, and coping strategies. Initiate creative problem solving to diminish impact of attacks.

Parental responses of anxiety and increased tension are transmitted to the newborn, escalating tension, irritability, and crying. Adoption of different strategies may stimulate a different response in the newborn.

Encourage parents to share feelings of frustration, anger, helplessness, and insecurity. Recommend that parents spend time in diversionary activities away from the house and the newborn.

### **Collaborative**

Provide information and demonstrate insertion of glycerin suppository using a well-lubricated finger.

Discuss and demonstrate technique for administering sedatives (phenobarbital elixir), anticholinergics (atropine), antispasmodics, and antiflatulents, if used.

Helps support parents through crisis of colic.

Stimulates passage of flatus and feces.

Medications may be needed to reduce gastrointestinal motility and provide relief.