

N432 Newborn Worksheet

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Complete table (40 points) **Include in-text citations in APA format. Attach Reference page.**

Area	Normal Findings	Expected Variations
Skin	<p>The skin is pink and warm with acrocyanosis (Durham et al., 2023). Milia are present on the bridge of the nose and chin (Durham et al., 2023). Lanugo is present on the back, shoulders, and forehead, which decreases with advancing gestation (Durham et al., 2023). Peeling or cracking is often noted on infants >40 weeks' gestation (Durham et al., 2023). Slate gray patches, hemangiomas, nevus flammeus, and strawberry hemangiomas are developmental vascular abnormalities (Durham et al., 2023). Stork bites are found at the nape of the neck, on the eyelid, between the eyes, or on the upper lip. They deepen in color when the neonate cries, and disappear within the first month of life (Durham et al., 2023). Nevus flammeus are purple to red-colored flat areas that can be located on various portions of the body and do not disappear (Durham et al., 2023). Strawberry hemangiomas are raised, bright red lesions that develop during the neonatal period and spontaneously resolve during early childhood (Durham et al., 2023). Erythema toxicum can be present (Durham et al., 2023).</p>	<p>Central cyanosis after the first 10 minutes of life caused by reduced oxygen saturation and hypoxia, as well as circumoral cyanosis with pink mucous membranes, may be benign (Durham et al., 2023). Jaundice within the first 24 hours is pathological (Durham et al., 2023). Pallor occurs with anemia, hypothermia, shock, or sepsis (Durham et al., 2023). Greenish or yellowish vernix indicated passage of meconium during pregnancy or labor (Durham et al., 2023). Persistent ecchymosis or petechia occurs with thrombocytopenia, sepsis, or congenital infection (Durham et al., 2023). Abundant lanugo is often seen in preterm neonates (Durham et al., 2023). Thin and translucent skin, and increased amounts of vernix caseosa are common in preterm neonates (Durham et al., 2023). Nails are longer in neonates >40 weeks' gestation (Durham et al., 2023). Pilonidal dimple, which is a small pit or sinus in the sacral area at the top of the crease between the buttocks, can become infected later on in life (Durham et al., 2023).</p>
Head	<p>Molding may be present (Durham et al., 2023). Fontanels and suture lines should be inspected and palpated (Durham et al., 2023). The head should be palpated for caput succedaneum or cephalohematoma (Durham et al., 2023). There are overriding sutures when there is increased molding (Durham et al., 2023). The head circumference should be 32-36 cm (Durham et al., 2023).</p>	<p>Bruising and lacerations are observed at the site of the fetal scalp electrode or vacuum extractor (Durham et al., 2023). The presence of caput succedaneum or cephalohematoma may be observed (Durham et al., 2023). Microcephaly is when the head circumference is below the 10th percentile for the newborn's gestational age and can be related to congenital malformation, maternal drug or alcohol ingestion, or maternal infection during pregnancy (Durham et al., 2023). Macrocephaly is when the head circumference is >90th percentile</p>

		and can be related to hydrocephalus (Durham et al., 2023).
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Fontanels	Fontanels are open, soft, intact, and slightly depressed, which may bulge when crying (Durham et al., 2023). The anterior fontanel is diamond-shaped and approximately 2.5-4 cm (Durham et al., 2023). The posterior fontanel is a triangular shape that is approximately 0.5-1 cm and closes between 2-4 months (Durham et al., 2023). The fontanels may be difficult to palpate due to excessive molding (Durham et al., 2023). There are overriding sutures when there is increased molding (Durham et al., 2023).	Fontanels that are firm and bulging and not related to crying are a possible indication of increased intracranial pressure (Durham et al., 2023). Depressed fontanels are a possible indication of dehydration (Durham et al., 2023).
Face	Two eyes, one nose, one mouth, two ears should be present (Durham et al., 2023). The face is symmetrical when at rest and during movement (Durham et al., 2023). Facial features should be in proportion (Durham et al., 2023).	Variations in the facial structure can be associated with molding of the head and facial bones (Durham et al., 2023). Facial bruising or swelling may be present from birth trauma or forceps (Durham et al., 2023). Asymmetry when crying may be attributed to nerve compression and may resolve on its own (Durham et al., 2023). Transient facial edema may be present post-delivery from prolonged labor or use of a vacuum or forceps (Durham et al., 2023).
Eyes	Eyes are equal and symmetrical in size and placement (Durham et al., 2023). The neonate is able to follow objects within 12 inches of their visual field (Durham et al., 2023). Edema may be present due to pressure during labor and birth or reaction to eye prophylaxis (Durham et al., 2023). The iris is blue-gray or brown (Durham et al., 2023). The sclera is white or blueish-white (Durham et al., 2023). Subconjunctival hemorrhage may be present due to pressure during labor and birth (Durham et al., 2023). Pupils are equally reactive to light (Durham et al., 2023). Positive red light reflexes and blink reflexes are observed	Absent red-light reflex indicated cataracts (Durham et al., 2023). Unequal pupil reactions indicate neurological trauma (Durham et al., 2023). Blue sclera is a possible indication of osteogenesis imperfecta (Durham et al., 2023).

	(Durham et al., 2023). No tear production (it begins at 2 months) (Durham et al., 2023). Transient strabismus and nystagmus are related to immature muscular control (Durham et al., 2023).	
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Nose	The nose may be flattened or bruised related to the birth process (Durham et al., 2023). Nares should be patent, and a small amount of mucus is present (Durham et al., 2023). Neonates primarily breathe through their nose (Durham et al., 2023).	Large amounts of mucus drainage can lead to respiratory distress (Durham et al., 2023). A flat nasal bridge is seen with Down syndrome (Durham et al., 2023). Nasal flaring is a sign of respiratory distress (Durham et al., 2023).
Mouth	Lips, gums, tongue, palate, and mucous membrane are pink, moist, and intact (Durham et al., 2023). Reflexes are positive (Durham et al., 2023). Dry lips are common after birth (Durham et al., 2023). Epstein's pearls are present (Durham et al., 2023).	Cyanotic or bluish mucous membranes are a sign of hypoxia (Durham et al., 2023). Dry mucous membranes are a sign of dehydration (Durham et al., 2023). Nasal teeth, which can be benign or related to a congenital abnormality, may be present (Durham et al., 2023). A thin philtrum may be indicative of fetal alcohol syndrome (Durham et al., 2023). Cleft lip or palate, which is a congenital abnormality in which the lip or palate does not completely fuse, can happen (Durham et al., 2023).
Ears	The top of the pinna is aligned with the external canthus of the eye (Durham et al., 2023). The pinna are without deformities, and are well-formed and flexible (Durham et al., 2023). The neonate responds to noises with positive startle signs (Durham et al., 2023). Hearing becomes more acute as the Eustachian tubes clear (Durham et al., 2023). Neonates respond more readily to high-pitched vocal sounds (Durham et al., 2023).	Low-set ears are associated with genetic disorders such as Down syndrome (Durham et al., 2023). Absent startle reflex is associated with possible hearing loss (Durham et al., 2023). Skin tags, dimpling, or other lesions may be associated with kidney or other abnormalities (Durham et al., 2023).
Neck	The neck is short with skin folds (Durham et al., 2023). Positive tonic neck reflex may be present (Durham et al., 2023).	Webbing or large, thick skin folds at the base of the back of the neck are a possible indication of genetic disorders (Durham et al., 2023). Absent tonic neck reflex is an indication of nerve injury (Durham et al., 2023).
Chest	The chest is barrel-shaped and symmetrical (Durham et al., 2023). Breast engorgement may be present in both male and female neonates related to maternal hormones and resolve within a few weeks (Durham et al., 2023). Clear or	Pectus excavatum is a congenital abnormality (Durham et al., 2023). Pectus carinatum can obstruct respirations (Durham et al., 2023). Chest retractions are a sign of respiratory distress (Durham et al., 2023).

	milky fluid from nipples is related to maternal hormones (Durham et al., 2023).	
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Breath Sounds	Lung sounds are clear and equal (Durham et al., 2023). Scattered crackles may be detected during the first few hours after birth due to retained lung fluid being present, and will be absorbed through the lymphatic system (Durham et al., 2023).	Persistent crackles, wheezes, stridor, grunting, paradoxical breathing, decreased breath sounds, or prolonged periods of apnea (>15-20 seconds) are signs of respiratory distress (Durham et al., 2023). Decreased or absent breath sounds are often related to meconium aspiration or pneumothorax (Durham et al., 2023).
Heart Sounds	S1 and S2 are present (Durham et al., 2023). Regular rhythm with some variability related to activity and respiratory changes is normal (Durham et al., 2023). Murmurs occur in 20% of neonates and should disappear within 2 days of birth (Durham et al., 2023).	Persistent murmurs indicate persistent return to fetal circulation, which is the opening of shunts with blood flow through them (Durham et al., 2023).
Abdomen	The abdomen is soft, round, protuberant, and symmetrical (Durham et al., 2023). Passage of meconium stool within 48 hours postbirth (Durham et al., 2023).	Asymmetrical abdomen indicates a possible abdominal mass (Durham et al., 2023). Hernias or diastasis recti are more common in Black neonates and usually resolve on their own within the first year (Durham et al., 2023). Failure to pass meconium stool is often associated with imperforated anus or meconium ileus (Durham et al., 2023).
Bowel Sounds	Bowel sounds are present but may be hypoactive for the first few days (Durham et al., 2023).	Hyperactive bowel sounds are common shortly after feeding or during periods of increased peristalsis (Durham et al., 2023). Brief periods of silence can be normal (Durham et al., 2023).
Umbilical Cord	The cord is opaque or whitish blue with two arteries and one vein, and covered in Wharton's jelly (Durham et al., 2023). Skin around the umbilical cord should be assessed for infection and have no redness, swelling, drainage, or foul odor (Durham et al., 2023). The cord becomes dry and darker in color within 24 hours postbirth and detaches from the body within 2 weeks (Durham et al., 2023).	One umbilical artery and vein is associated with heart or kidney malformation (Durham et al., 2023).
Genitals	Female: Labia Majora covers the labia minora and clitoris (Durham et al.,	Female: Prominent clitoris and small, visible labia minora are often present in

	<p>2023). Labia majora and minora may be edematous (Durham et al., 2023). Blood-tinged vaginal discharge is related to the abrupt decrease in maternal hormones (Durham et al., 2023). Whitish vaginal discharge observed in response to maternal hormones (Durham et al., 2023). Urine may appear dark with urate crystals that appear as a red or rust-colored stain on the diaper, and is normal for the first few days of life (Durham et al., 2023). The neonate urinates within 24 hours (Durham et al., 2023). The urinary meatus is midline (Durham et al., 2023).</p> <p>Male:</p> <p>The urinary meatus is at the tip of the penis (Durham et al., 2023). The scrotum is large, pendulous, and edematous with rugae present (Durham et al., 2023). Both testes are palpated in the scrotum (Durham et al., 2023). The neonate urinates within 24 hours with an uninterrupted stream (Durham et al., 2023). The urine may appear dark with urine crystals that appear as red, orange, pink, or rust-colored stains on the diaper, and is normal in the first few days of life (Durham et al., 2023).</p>	<p>preterm neonates (Durham et al., 2023). Ambiguous genitalia may require genetic testing to determine sex (Durham et al., 2023). No urination in 24 hours may indicate a possible urinary tract obstruction, polycystic disease, or renal failure (Durham et al., 2023).</p> <p>Male:</p> <p>The urethral opening is on the ventral surface of the penis and indicates hypospadias (Durham et al., 2023). The urethral opening is on the dorsal side of the penis and indicates epispadias (Durham et al., 2023). Undescended testes indicate cryptorchidism, and testes may not be palpated in the scrotum (Durham et al., 2023). A hydrocele can be seen where the scrotum is enlarged due to excess fluid (Durham et al., 2023). No urination in 24 hours may indicate possible urinary tract obstruction, polycystic disease, or renal failure (Durham et al., 2023). Ambiguous genitalia may require genetic testing to determine sex (Durham et al., 2023). And inguinal hernia may be present (Durham et al., 2023).</p>
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Anus	The anus is patent (Durham et al., 2023). The neonate passes stool within 24 hours (Durham et al., 2023).	Imperforated anus requires immediate surgery (Durham et al., 2023). Anal fissures or fistulas may be present (Durham et al., 2023).
Extremities	Arms are symmetrical in length and equal in strength (Durham et al., 2023). Legs are symmetrical in length and equal in strength (Durham et al., 2023). 10 fingers and 10 toes are present (Durham et al., 2023). Full range of motion is observed in all extremities (Durham et al., 2023). There are no clicks at the joints (Durham et al., 2023). There are equal gluteal folds (Durham et al., 2023). Rapid recoil of extremities to the flexed position is normal (Durham et al., 2023).	Extra digits (polydactyly) may indicate a genetic disorder (Durham et al., 2023). Webbed digits (syndactyly) may indicate a genetic disorder (Durham et al., 2023). Unequal gluteal folds or positive Barlow or Ortolani maneuvers are associated with congenital hip dislocation. Decreased range of motion or muscle tone may indicate a possible birth injury, neurological disorder, or prematurity (Durham et al., 2023). Swelling, crepitus, or neck tenderness indicates a possible broken clavicle, which can occur during the birthing process in neonates with large shoulders (Durham et al., 2023). Simian creases, short fingers, and a wide space between the big toe and the second toe are common with Down syndrome (Durham et al., 2023).
Spine	A C-shaped spine with no openings is felt or observed in vertebrae (Durham et al., 2023). No dimpling or sinuses are observed (Durham et al., 2023).	Vertebrae openings may indicate spina bifida (Durham et al., 2023). Dimpling or sinuses may indicate a pilonidal cyst or a more serious neurological disorder (Durham et al., 2023). Paralysis indicates possible birth trauma or spinal injury (Durham et al., 2023).

For the following questions and tables, include in-text citations in APA format. Attach Reference page.

1. What safety and security measures are in place for newborns? **(5 points)**
 - a. Some common safety measures in place for newborns include assessing vital signs per policy, completing a neonatal assessment at least once per shift, and bathing the neonate following the institution's policy (Durham et al., 2023). Some common security measures in place for newborns include taking footprints and photos of the infant for identification purposes, placing armbands on the mother, her partner, and the neonate that contain the same identification number, placing infant security tags to an angle band or cord clamp, and requiring name tags of personnel working on the unit. Using verbal education and providing written instructions to the parents of the neonate on ways to promote newborn safety is vital for ensuring the safety of the newborn.

2. What are normal ranges for an infant's heart rate and respiratory rate? **(2 points)**
- The normal range for an infant's heart rate is 110-160 bpm (Durham et al., 2023).
The normal range for an infant's respiratory rate is 30-60 breaths per minute (Durham et al., 2023).
3. What is the normal range and method for acquiring an infant's temperature? Why is this? **(2 points)**
- The normal range for an infant's temperature is 97.7-99 degrees Fahrenheit (Durham et al., 2023). Taking the infant's temperature axillary is the preferred method for assessing the temperature because it is the least invasive way of obtaining it (Durham et al., 2023). Also, brown adipose tissue (BAT) is located in the axillary area, and taking the temperature in this area gives an accurate reading of the temperature as well as how the infant responds to temperature changes (Durham et al., 2023).

Complete Table (10 points)

Medication	Dosage	Administration Site	Possible side effects	Why is this administered?
Vitamin K	Inject 0.5-1.0 mg IM to the infant (Hand et al., 2022).	Intramuscular (IM) injection in the lateral thigh muscle (Durham et al., 2023).	Pain, bruising, or swelling at the injection site (Durham et al., 2023). Skin scarring is less common but has been noted (Durham et al., 2023).	Babies don't produce Vitamin K for a week (Durham et al., 2023).. Administering Vitamin K helps prevent hemorrhagic disease caused by Vitamin K deficiency (Durham et al., 2023).
Erythromycin	Use 0.5% strength, and give one unit dose (1 cm) to both eyes (Medscape, 2024).	Ointment is administered to both eyes after birth (Durham et al., 2023).	There may be hypersensitivity reactions, minor ocular reactions, or redness (Medscape, 2024).	Erythromycin is administered as prophylaxis to prevent gonococcal and chlamydia infections (Durham et al., 2023).
Hepatitis B	5 mcg/0.5mL, First dose: Inject 0.5 mL IM within 24	Intramuscular (IM) injection in the lateral thigh muscle	There may be pain, bruising, fever, or pruritus from	This is given to stimulate active immunity to hepatitis B in a

	hours of birth. Second dose: Inject 0.5 mL IM 4 weeks after the first dose. Final dose: Inject 0.5 mL IM 16 weeks after the first dose, or 8 weeks after the second dose (Medscape, 2024).	(Medscape, 2024).	the injection (Medscape, 2024).	newborn, because the CDC recommends that all neonates be vaccinated for hepatitis B before hospital discharge (Durham et al., 2023).
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Complete Table (20 points)

Name of Test	Why is this test ordered?
Blood Glucose	The blood glucose test is ordered for high-risk infants, such as infants of diabetic mothers and SGA, LGA, preterm, and post-term infants, because hypoglycemia can occur (Durham et al., 2023).
Blood type and Rh Factor	The blood type and Rh factor test is ordered to determine the type and Rh factor of the newborn, and can help determine if a Coombs' Test is necessary to prevent Rh isoimmunization (Durham et al., 2023).
Coombs Test	The Coombs' Test is ordered to screen for when a Rh-negative woman gives birth to an Rh-positive newborn and screens for anti-Rh antibodies (Durham et al., 2023). This can determine if Rhogam is necessary to prevent Rh isoimmunization (Durham et al., 2023).
Bilirubin levels	Bilirubin levels are ordered because hyperbilirubinemia occurs in most newborns, but extreme levels of bilirubin can be toxic and cause acute bilirubin encephalopathy or kernicterus (Durham et al., 2023).
Newborn Screen	The newborn screen focuses on disorders for which early detection and treatment improve health outcomes (Durham et al., 2023).
Hearing Screen	The hearing screen is ordered because hearing loss is a common congenital abnormality, and early detection provides parents with the opportunity to seek interventions that foster language development (Durham et al., 2023).
Newborn Cardiac Screen	Newborn cardiac screening is ordered because newborns born with congenital heart defects can go undetected, as the neonate shows no signs or symptoms on the first day after birth (Durham et al., 2023).

1. Identify 3 educational topics that should be discussed with caregivers of the infant. **(6 points)**
 - a. Circumcision care should be discussed with the caregivers of the infant so that they understand the proper healing manifestations of circumcision and how to identify and notify a provider of adverse symptoms of the procedure (Durham et al., 2023). Using verbal education coupled with visual handouts of the healing process can help the caregivers grasp a deeper understanding of the instructions.
 - b. Cord care should be discussed with the caregivers of the infant because the umbilical cord becomes dry, hard, and black and then falls off (Durham et al., 2023). Educating the caregivers on proper healing of the site, proper cleaning techniques, proper diaper placement, and when to notify a provider if there is bleeding, foul-smelling drainage, or redness with fever ensures the infant is safe and healing properly (Durham et al., 2023). Providing both verbal, written, and teach-back techniques can increase the understanding of this education.
 - c. Educating the caregivers on crying and colic can ensure they are aware that crying is how infants communicate, and excessive, inconsolable crying for no apparent reason is considered colic (Durham et al., 2023). Instructing the caregivers using verbal and written materials can help them understand the education. Providing instructions on keeping a diary of the crying patterns of the infant can be helpful in assisting the provider in providing proper care for the infant (Durham et al., 2023)..
2. Identify 2 potential nursing diagnoses for a newborn patient. **(10 points)**
 - a. Ineffective thermoregulation related to immature physiological responses to temperature changes, as evidenced by low axillary temperature readings.
 - b. Risk for infection related to an immature immune system, as evidenced by exposure to chlamydia during a vaginal birth.

References

- Durham, R. F., Chapman, L. & Miller, C. (2023). *Davis Advantage for Maternal-Newborn Nursing: Critical Components of Nursing Care* (4th ed., p. 481-573). F. A. Davis Company.
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