

N432 Newborn Care Plan
Lakeview College of Nursing
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Demographics (10 points)

Date & Time of Clinical Assessment 3/1/21	Patient Initials B.R.	Date & Time of Birth 2/28/21 1554	Age (in hours at the time of assessment) 25 hours
Gender Male	Weight at Birth 3940 gm 8 lbs. 11 oz	Weight at Time of Assessment 3934 gm 8 lbs. 10.8 oz	Age (in hours) at the Time of Last Weight 5 hours
Race/Ethnicity Caucasian	Length at Birth 54.6 cm 21.5 inches	Head Circumference at Birth 37 cm 14.6 inches	Chest Circumference at Birth 35 cm 13.8 inches

There are times when the weight at the time of your assessment will be the same as birth

Mother/Family Medical History (15 Points)**Prenatal History of the Mother:**

GTPAL: G5 T4 P0 A1 L4

When prenatal care started: The mother started prenatal care on 7/22/20.

Abnormal prenatal labs/diagnostics: The mother's hemoglobin and hematocrit were decreased at the 32-week appointment.

Prenatal complications: The mother has given birth via cesarean section in a previous pregnancy.

Smoking/alcohol/drug use in pregnancy: The mother uses no alcohol, drugs, or tobacco of any form during her pregnancy.

Labor History of Mother:

Gestation at onset of labor: At the onset of labor, the fetus was 39 weeks and 2 days.

Length of labor: No length of labor documented due to scheduled cesarean section.

ROM: Rupture of membranes is not documented within the procedure notes.

Medications in labor: The mother received bupivacaine, ephedrine sulfate, propofol, Fentanyl, ketorolac, morphine, ondansetron, oxytocin, and phenylephrine.

Complications of labor and delivery: The fetus was positioned in breech presentation.

Family History: Maternal: Alcoholism, diabetes, COPD, cancer, hypertension.

Fraternal: Diabetes, COPD, heart failure, hypertension.

Pertinent to infant: None pertinent to infant.

Social History (tobacco/alcohol/drugs): The mother has never used tobacco, never used drugs, and drinks occasionally outside of pregnancy.

Pertinent to infant: No information pertinent to infant.

Father/Co-Parent of Baby Involvement: The father is involved with the child and present at the hospital during time of delivery.

Living Situation: The mother lives with the father of the child. The mother and father are not married but have children together. The couple lives in a multi-story home.

Education Level of Parents (If applicable to parents' learning barriers or care of infant):

Mother is currently a nurse at the Department of Veterans Affairs and currently has her BSN. The father declined to provide his level of education, but states that he is comfortable caring for children. The mother and father have been given information about proper hygiene of the infant and education on breastfeeding.

Birth History (10 points)

Length of Second Stage of Labor: No documented length of second stage of labor due to cesarean section.

Type of Delivery: Repeat low transverse cesarean section.

Complications of Birth: No complications occurred during the birth.

APGAR Scores:

1 minute: 6

5 minutes: 8

Resuscitation methods beyond the normal needed: No resuscitation methods necessary for this birth.

Feeding Techniques (10 points)

Feeding Technique Type: The mother has chosen to breastfeed the child.

If breastfeeding:

LATCH score: No LATCH score available for this child.

Supplemental feeding system or nipple shield: No supplemental feeding system or nipple shield was used for this child.

If bottle feeding:

Positioning of bottle: N/A

Suck strength: N/A

Amount: N/A

Percentage of weight loss at time of assessment: 15.2%

3940-3934= 6

6/3940= 0.001522

$$0.001522 \times 100 = 0.1522$$

$$0.1522 = 15.2 \%$$

****Show your calculations; if today's weight is not available, please show how you would calculate weight loss (i.e. show the formula)****

What is normal weight loss for an infant of this age? A newborn should lose up to 10% of the birth weight by the first 3-4 days of life (Ricci et al., 2021).

Is this neonate's weight loss within normal limits? This neonate's weight loss is above the normal limits.

Intake and Output (8 points)

Intake

If breastfeeding:

Feeding frequency: The child has been feeding every 1-2 hours.

Length of feeding session: Each feeding session has lasted around 10-20 minutes.

One or both breasts: The child has been feeding from both breasts.

If bottle feeding:

Formula type or Expressed breast milk (EBM): N/A

Frequency: N/A

Volume of formula/EBM per session: N/A

If EBM, is fortifier added/to bring it to which calorie content: N/A

If NG or OG feeding:

Frequency: N/A

Volume: N/A

If IV:

Rate of flow: N/A

Volume in 24 hours: N/A

Output

Age (in hours) of first void: The child’s first void occurred at 1 hour after birth.

Voiding patterns:

Number of times in 24 hours: The child has voided once in the past 24 hours.

Age (in hours) of first stool: The child was 4 minutes old at the time of first stool.

Stool patterns:

Type: The child has had meconium stools.

Color: The stool appears a dark green color.

Consistency: The child’s stool is thick and tar-like.

Number of times in 24 hours: The child has defecated once in the past 24 hours.

Laboratory Data and Diagnostic Tests (15 points)

Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Name of Test	Why was this test ordered for THIS client? *Complete this even if these labs have not been completed*	Expected Results	Client’s Results	Interpretation of Results
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<p>Blood Glucose Levels</p>	<p>Blood glucose levels are ordered for newborns to determine if they are hypoglycemic (Ricci et al., 2021)</p>	<p>The expected results of a newborns blood glucose levels should be above 30 mg/dL (Ricci et al., 2021).</p>	<p>This child did not have any blood glucose levels documented.</p>	<p>Because this child's glucose levels were not checked, no interpretation is available.</p>
<p>Blood Type and Rh Factor</p>	<p>A newborn's blood type and Rh factor is tested to determine if the mother will need RhoGAM in case of Rh incompatibility (Ricci et al., 2021). The child's blood type is tested in the</p>	<p>The expected results for the blood type are A, B, AB, or O. The expected Rh factor is positive or negative.</p>	<p>This child's blood type is O+.</p>	<p>The mother does not require Rhogam. If the child needs a blood transfusion, the child will need to receive O+/- blood.</p>

	<p>event the child needs a blood transfusion in an emergency.</p>			
<p>Coombs Test</p>	<p>The Coombs test is performed to determine if any antibodies are present that attack red blood cells. This can occur when there is a transfusion reaction, Rh sensitization, or autoimmune hemolytic anemia (Ricci et al., 2021).</p>	<p>The expected finding of the Coombs test is negative or positive.</p>	<p>The client’s Coombs test results were negative.</p>	<p>The client does not have any antibodies present that could present a danger to them.</p>
<p>Bilirubin Level (All babies at 24 hours)</p>	<p>Bilirubin levels are checked in</p>	<p>Results are determined by</p>	<p>Upon input of the bilirubin</p>	<p>No interpretation available.</p>

<p>*Utilize bilitool.org for bilirubin levels*</p>	<p>newborns to determine if the child will need further treatment, as this can be a sign of infection, Rh incompatibility, or liver malfunction (Ricci et al., 2021).</p>	<p>placing the bilirubin value into bilitool.org. The returned results are compared against the client’s age in hours. The “bilitool” website will give you an expected range for the child.</p>	<p>values, bilitool.org was down for maintenance. (See below)</p>	
<p>Newborn Screen (At 24 hours)</p>	<p>The newborn is screened for any health disorders that cannot be determined inside the</p>	<p>A newborn screen’s results can show metabolic or genetic issues for the</p>	<p>(If available—these may be not available until after discharge for some clients)</p>	<p>N/A</p>

	womb that may be genetic or a metabolic condition (Ricci et al., 2021).	newborn, or lack thereof.		
Newborn Hearing Screen	The newborn hearing screen is used to determine if the child has any hearing disabilities.	Upon assessment of the hearing screen, the child can fail or pass. If the child fails, hearing deficiencies may be present. If the child passes, no hearing disabilities are present.	This newborn passed their hearing screen.	The newborn's brain responds bilaterally to acoustic sensation. This client does not have any hearing disabilities at the time of assessment.
Newborn Cardiac Screen (At 24 hours)	The newborn cardiac screening is	During the newborn screen, the	At the time of assessment, the newborn did	The newborn may present with congenital heart

	<p>done to determine if the newborn is suffering from any congenital heart defects</p>	<p>pre-ductal and post-ductal pulse oximetry values should be above 95% with less than 3% deviation (Ricci et al.,2021).</p>	<p>not pass their cardiac screening.</p>	<p>defects upon further assessment.</p>
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Lab Data and Diagnostics Reference (1) (APA):

Ricci, S. S., Kyle, T., & Carman, S. (2021). *Maternity and pediatric nursing*. Wolters Kluwer.

Newborn Medications (7 points)

Brand/Generic	Aquamephyton (Vitamin K)	Ilotycin (Erythromycin Ointment)	Hepatitis B Vaccine	Tylenol/acetaminophen
Dose	1 mg	5 mg/ 1 g	10 mcg/ 0.5 mL	160 mg
Frequency	Once	Once	Once	PRN
Route	Intra-muscular	Ophthalmic	Intra-muscular	Oral
Classification	Vitamin K Prep	Ophthalmic Antibiotics	Viral Vaccine	Antipyretic
Mechanism of		Ilotycin	This vaccine	Inhibits

Action	Vitamin K helps the blood clot and can prevent bleeding.	inhibits the protein synthesis in certain organisms, which stops these organisms from reproducing.	helps the newborns immune system create antibodies against the hepatitis B virus.	cyclooxygenase which blocks prostaglandin production that causes inflammatory response.
Reason Client Taking	This medication was ordered for the newborn to ensure the child did not have any unnecessary bleeding.	This medication was ordered for the newborn to protect the child from any bacteria that might have entered through the child's eye.	This immunization was given to the client to prevent any possible hepatitis B infection.	This medication was ordered for the client to stop any pain the client may be experiencing.
Contraindications (2)	This medication should not be given to anyone who is allergic to aquamephyton. This medication should not be given to clients who suffer from end stage renal failure.	This medication should not be given to children with an allergy to erythromycin. This medication should not be given to children with minor ocular irritation.	This vaccine should not be given to anyone with an allergy to yeast. This vaccine should not be given to anyone with severe vitamin K deficiency.	This medication should not be given to clients with severe hepatic disease. This medication should not be given to clients with an allergy to acetaminophen.
Side Effects/Adverse Reactions (2)	Common side effects include sweating and hypotension.	Common side effects include redness and temporary blurred vision.	Common side effects include fatigue and fever.	Common side effects include hepatotoxicity and hypotension.
Nursing	Ensure	Avoid	Additional	Use cautiously

<p>Considerations (2)</p>	<p>appropriate dose is administered to the client.</p> <p>Monitor client for adverse reactions immediately after injection.</p>	<p>contaminating the applicator tip from the eyes and fingers.</p> <p>Assess for signs of infection around and on the eye.</p>	<p>doses of this vaccine may be required in those with a suppressed immune system.</p> <p>The injection site, batch number, and expiration date should be recorded at the time of administration.</p>	<p>in patients with hepatitis impairment.</p> <p>Monitor renal function in clients who use acetaminophen for long periods.</p>
<p>Key Nursing Assessment(s)/Lab(s) Prior to Administration</p>	<p>No labs are needed prior to administration but PT and INR results should be measured continually to evaluate effectiveness.</p>	<p>No assessments or labs are needed before administration.</p>	<p>No assessments or labs are needed before administration.</p>	<p>Liver function tests should be evaluated before use in clients with hepatic impairment.</p>
<p>Client Teaching needs (2)</p>	<p>Explain to the mother that vitamin K is given to reduce the risk of vitamin K deficiency thrombocytopenia.</p> <p>Avoid significant increases in daily intake of vitamin K.</p>	<p>Explain to the mother that this is used to decrease infections of the eye.</p> <p>Other eye medications should not be used unless the doctor verifies it will not react with other medicine.</p>	<p>This vaccine does not protect against hepatitis caused by other agents.</p> <p>The next hepatitis vaccine should be given at 1-2 months.</p>	<p>Ensure parents are using the appropriate dosage for an infant of this age.</p> <p>Teach parents to monitor for signs of hepatotoxicity.</p>

Medications Reference (1) (APA):

Jones & Bartlett Learning. (2020). *2020 Nurses drug handbook*.

Newborn Assessment (20 points)

Area	Your Assessment	Expected Variations and Findings *This can be found in your book on page 645*	If assessment finding different from expectation, what is the clinical significance?
Skin	The client's skin was warm, dry, elastic, and pink. There is no redness at the pressure points.	The client's skin should be dry, warm, pink or slightly red throughout.	N/A
Head	The client's head is symmetrical with a normal pattern and distribution of hair. The circumference of the child's head is 14.6 inches.	The client's head should be symmetrical with normal distribution of hair. The child should have a head circumference between 13-15 inches.	N/A
Fontanels	The client's fontanels are soft and flat.	The client's fontanels should be soft and flat.	N/A
Face	The client's face is symmetrical bilaterally.	The client's face should be symmetrical bilaterally.	N/A
Eyes	The client's eyes have no drainage, the sclera is white, and the irises are brown. Movement of eyes are symmetrical. Eyes are equally spread apart.	The client's eyes should have no drainage, sclera's should be white and clear, and the movement of the eyes should be symmetrical. The client's eyes should also be equally spread apart.	N/A
Nose	The client's nose has	The client's nose	N/A

	no drainage, and the nostrils are patent without deviation.	should be without drainage or discharge.	
Mouth	The client's lips are pink and moist; frenulum is normal; gums are intact with no swelling.	The client's lips should be pink or slightly red. Gums should be without swelling.	N/A
Ears	The client's ear canals are visible, ear is equal to the eye's canthus, no drainage present.	The client's ear canals should be clear and visible, without drainage. The top of the pinna should be equal with canthus of the eye.	N/A
Neck	The client's trachea has no deviation present.	The client's trachea should be midline without deviation.	N/A
Chest	The client's anterior, posterior, and lateral diameters are all equal, xiphoid process is visible.	The client's chest should be equal in all planes, and the xiphoid process should be visible.	N/A
Breath Sounds	The client has clear breath sounds bilaterally in all lobes.	Breath sounds should be equal on both sides. Breath sounds should be clear bilaterally.	N/A

Heart Sounds	The client has no murmur or extra heart beats present.	Heart murmurs within the first hours of life may be heard, but these may be benign. Otherwise, no extra heart sounds should be heard.	N/A
Abdomen	The client's abdomen is round, soft, and symmetrical.	The client's abdomen should be without distention. The abdomen should be round and soft.	N/A
Bowel Sounds	The client's bowel sounds are audible and normoactive in all quadrants.	Bowel sounds should be active 1-2 hours after birth in all four quadrants.	N/A
Umbilical Cord	The client's umbilical cord and periumbilical site are intact.	The umbilical cord should have 2 arteries and 1 vein. The umbilical cord and periumbilical site should be intact.	N/A
Genitals	The client's penis is straight, proportionate, and the testes are palpable. The urethral opening is visible.	The client's testes should be palpable, and the urethra opening should be visible.	N/A
Anus	The client's anal opening appears midline, and the anal opening is patent.	The client's anus should be midline with the anal opening visible.	N/A
Extremities	The client's capillary refill is less than 3 seconds, has all 10 fingers and 10 toes with full range of motion. No	The client should have all 10 fingers and 10 toes with full range of motion. Webbing between the toes and fingers	N/A

	webbing is present between the fingers and toes.	should not be present.	
Spine	The client's scapulae are symmetrical, and the spinal column is aligned and intact.	The spine should be midline from top to bottom, and the scapulae should be symmetrical.	N/A
Safety <ul style="list-style-type: none"> • Matching ID bands with parents • Hugs tag • Sleep position 	The client has matching identification band with the parents. The child's hug tag is present and intact.	The client should have an identification band and a hugs tag to ensure that the newborn is not given to the wrong adult.	N/A

Complete the Ballard Scale grid at the end to determine if this infant is SGA, AGA, or LGA—be sure to show your work

What was your determination? N/A

Are there any complications expected for a baby in this classification? N/A

The Ballard scale is used to determine a child's gestational age up to 4 days after birth and is used when there is no obstetrical information about the estimated date of confinement (Ricci et al., 2021).

Vital Signs, 3 sets (6 points)

Time	Temperature	Pulse	Respirations
Birth	100.4 F/ axilla	120 BPM	60
4 Hours After Birth	98.9 F/ axilla	132 BPM	42
At the Time of Your Assessment	98.9 F/ axilla	150 BPM	48

Vital Sign Trends: Throughout the time since the child left the uterus, the vital signs of the child have changed. The child's temperature decreased, the pulse increased, and the respirations decreased from birth but have elevated since the 4-hour period after the birth.

Pain Assessment, 1 set (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0850	N-PASS	General	Appears comfortable	N/A	No interventions were necessary at this time.

Summary of Assessment (4 points)

Discuss the clinical significance of the findings from your physical assessment:

****See the example below****

This neonate was delivered on 2/28/21 at 1554 by cesarean section. The client's Apgar scores at were 6 at 1 minute and 8 at 5 minutes. At the time of birth, the newborn weighed 8 lbs. and 11 ounces. The client was 54.6 cm long at the time of birth. The client's head circumference measures at 37 cm and the chest measures at 35 cm. During the assessment, all systems were within normal limits without deviation. At the time of birth, the client's temperature was 100.4 F, the pulse was 120 beats per minutes, and the respirations were 60 breaths per minute. The most recent set of vital signs show the temperature was 98.9 F, the pulse was 150 beats per minute, and the respirations were 48 breaths per minute. The client is breastfeeding every 1-2 hours and feeding sessions last 10-20 minutes. The neonate's bilirubin scans returned at 5.6. The neonate failed the cardiac screen. On multiple occasions, the client's pulse oximetry read below 95% in the post-ductal area and above 95% in the pre-ductal area with a deviation greater than 3%. The client will be discharged with the mother and the father. The child has not been scheduled for a well-baby check. The parents have been notified to make the appointment within 48 hours after discharge.

This neonate was delivered on 5.15.14 at 0522 by normal spontaneous vaginal delivery (NSVD). Nuchal cord x1. Apgar scores 1/3/9. EDD 5.10.14 by US. Dubowitz revealed neonate is 39 2/7 weeks and LGA. Prenatal hx complicated by PIH and GDM (diet controlled). Birth weight 9 lbs. 4 oz. (4440 grams), 21" long (53.34 cms). Upon assessment all systems are within normal limits. Last set of vitals: 38.4/155/48. BS x3 after delivery WNL with lowest being 52. Neonate is

breastfeeding and nursing well with most feedings 20”/20” q2-3 hrs. Bilirubin level at 24 hours per scan was 4.9. Neonate expected to be discharged with mother later today and to see pediatrician in the office for first well baby check within 48 hours.

Nursing Interventions and Medical Treatments for the Newborn (6 points)

Nursing Interventions and Medical Treatments (Identify nursing interventions with “N” after you list them, identify medical treatments with “T” after you list them.)	Frequency	Why was this intervention/ treatment provided to this patient? Please give a short rationale.
The client was provided acetaminophen for pain. -T	The medication was given once to the newborn.	The acetaminophen was provided for the patient to treat any pain or inflammation that the newborn was experiencing.
This client received a sponge bath 6 hours after birth. -N	The client received one bath.	The newborn was given a light sponge bath to clean any blood and amniotic fluid from the skin and hair.

Discharge Planning (2 points)

Discharge location: The child will be going home with the mother and the father upon discharge.

Equipment needs (if applicable): The mother will be using a breast pump upon discharge.

Follow up plan (include plan for newborn ONLY): The newborn does not have a scheduled appointment with the pediatrician according to the parents. The parents should plan to see the pediatrician within 3-5 days after birth (Well-baby, 2020).

Education needs: The mother has received education on how to breast feed and how to properly use a breast pump. The mother has also received education on how to properly bathe her child.

Nursing Diagnosis (30 points)

Must be NANDA approved nursing diagnosis and listed in order of priority

Two of the Nursing Diagnoses must be education related i.e. the interventions must be education for the client.”

2 points for correct priority

<p>Nursing Diagnosis (2 pt each) Identify problems that are specific to this patient. Include full nursing diagnosis with “related to” and “as evidenced by” components</p>	<p>Rational (1 pt each) Explain why the nursing diagnosis was chosen</p>	<p>Intervention/Rational (2 per dx) (1 pt each) Interventions should be specific and individualized for his patient. Be sure to include a time interval such as Assess vital signs q 12 hours.” List a rationale for each intervention and using APA format, cite the source for your rationale.</p>	<p>Evaluation (1 pt each)</p> <ul style="list-style-type: none"> How did the patient/family respond to the nurse’s actions? Client response, status of goals and outcomes, modifications to plan.
<p>1. Decreased tissue perfusion related to cardiac screening as evidenced by pre-ductal and post-ductal oxygen saturation values</p>	<p>The newborn failed the cardiac screen. This places the newborn at risk for decreased perfusion in the affected extremities.</p>	<p>1. Reassess pulse oximetry every hour.</p> <p>Rationale</p> <p>Reassessing the newborn’s pulse oximetry values allow care provider to evaluate any changes in the newborn’s cardiac progression (Centers for Disease Control, 2020).</p> <p>2. Assess the newborn regularly for signs of hypoxia.</p>	<p>At the end of the clinical time, the newborn continued to fail the cardiac screens.</p>

		<p>Rationale</p> <p>Assessing the newborn for hypoxia will allow care providers to determine if the child’s progression is failing and if the client requires oxygen therapy or immediate medical intervention (Centers for Disease Control, 2020).</p>	
<p>2. Risk of infection related to neonatal immune system as evidenced by cesarean section delivery.</p>	<p>Newborns have little defense against pathogens due to their underdeveloped immune system.</p>	<p>1. The newborn is given an erythromycin ophthalmic ointment to reduce the risk of infection.</p> <p>Rationale Providing the newborn with an antibiotic medication will reduce the risk of any pathogens entering the newborn from the eyes.</p> <p>2. When handling the newborn, parents and care providers must use appropriate hand hygiene.</p> <p>Rationale Using appropriate hand hygiene when handling a newborn decreases the risk of pathogens being transferred to the newborn.</p>	<p>The client showed no signs of infection at the time of clinical.</p>
<p>3. Lack of knowledge related to proper cleaning and bathing of newborn as evidenced by prolonged time</p>	<p>The parents of the newborn have not cared for a newborn child recently. This can cause some parents to forget how to</p>	<p>1. The parents were instructed through demonstration how to properly clean their child from head to toe.</p> <p>Rationale Properly cleaning the</p>	<p>The parents understand the importance of maintaining a sufficient body temperature for the newborn.</p>

<p>since caring for a newborn.</p>	<p>properly bathe their child.</p>	<p>newborn is important to ensure that the newborn does not experience decreased tissue integrity caused by moisture and bacteria.</p> <p>2. The parents were instructed through demonstration on how to keep the newborn warm during baths to ensure the child does not experience hypothermia.</p> <p>Rationale Newborns are at a higher risk for hypothermia due to the high surface area to volume ratio of their bodies. Prolonged exposure to cold temperatures takes away important energy to promote heat in the vital organs necessary for function (Stavis, 2019).</p>	<p>Expected outcome: The parents will provide their newborn with a bath on a regular basis.</p>
<p>4. Lack of knowledge related to proper feeding techniques as evidenced by prolonged time since feeding a newborn.</p>		<p>1. The mother was educated on how to properly feed the newborn with the breasts and with the breast pump and the importance of feeding.</p> <p>Rationale When feeding the baby, it is important to understand that feeding is not just providing the child with nutrition, but also provides bonding time for the mother and the newborn (Feeding your newborn, 2020).</p> <p>2. The parents were</p>	<p>The parents understand not to feed their newborn anything other than breastmilk and formula for the first six months.</p> <p>Expected outcome: The parents will feed their newborn only breastmilk and formula until the newborn reaches 6 months old.</p>

	<p>educated on the appropriate food to provide the newborn.</p> <p>Rationale Newborns should not be given anything but breastmilk and formula for the first six months after birth. Giving the newborn milk other than the mothers can cause the newborn to develop an iron deficiency and eventually iron deficiency anemia (Ricci et al., 2021).</p>	
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Other References (APA):

Centers for Disease Control and Prevention. (2020, November 17). *Congenital Heart Defects Information for Healthcare Providers*. Centers for Disease Control and Prevention. <https://www.cdc.gov/ncbddd/heartdefects/hcp.html>.

Mayo Foundation for Medical Education and Research. (2020, April 4). *Feeding your newborn: Tips for new parents*. Mayo Clinic. <https://www.mayoclinic.org/healthy-lifestyle/infant-and-toddler-health/in-depth/healthy-baby/art-20047741>.

Mayo Foundation for Medical Education and Research. (2020, July 31). *Well-baby exam: What to expect*. Mayo Clinic. <https://www.mayoclinic.org/healthy-lifestyle/infant-and-toddler-health/in-depth/healthy-baby/art-20044767>.

Stavis, R. L. (2019, July). *Hypothermia in Neonates - Pediatrics*. Merck Manuals Professional Edition. <https://www.merckmanuals.com/professional/pediatrics/perinatal-problems/hypothermia-in-neonates>.

Ballard Gestational Age Scale

Neuromuscular Maturity

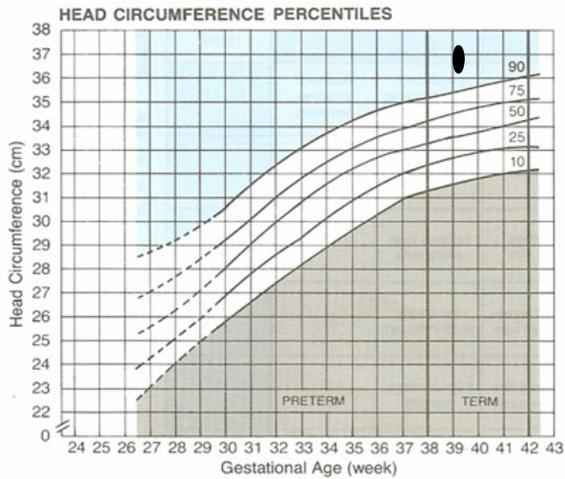
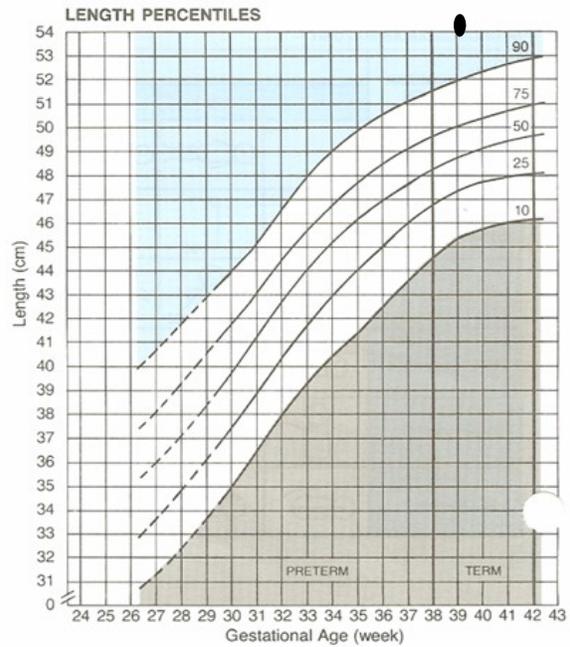
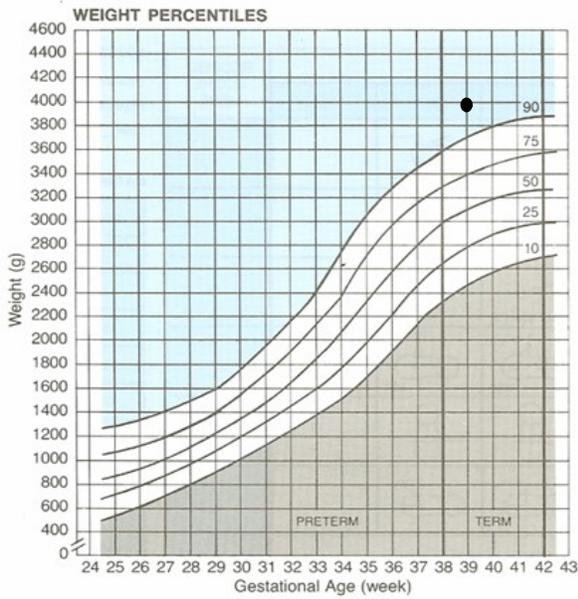
Score	-1	0	1	2	3	4	5
Posture							
Square window (wrist)	> 90°	90°	60°	45°	30°	0°	
Arm recoil		180°	140-180°	110-140°	90-110°	< 90°	
Popliteal angle	180°	160°	140°	120°	100°	90°	< 90°
Scarf sign							
Heel to ear							

Physical Maturity

	Score -1	Score 0	Score 1	Score 2	Score 3	Score 4	Score 5	Maturity Rating	
Skin	Sticky, friable, transparent	Gelatinous, red, translucent	Smooth, pink; visible veins	Superficial peeling and/or rash; few veins	Cracking, pale areas; rare veins	Parchment, deep cracking; no vessels	Leathery, cracked, wrinkled		
Lanugo	None	Sparse	Abundant	Thinning	Bald areas	Mostly bald			
Plantar surface	Heel-toe 40-50 mm; -1 < 40 mm: -2	> 50 mm, no crease	Faint red marks	Anterior transverse crease only	Creases anterior 2/3	Creases over entire sole		Score	Weeks
Breast	Imperceptible	Barely perceptible	Flat areola, no bud	Stippled areola, 1-2 mm bud	Raised areola, 3-4 mm bud	Full areola, 5-10 mm bud		-10	20
Eye/Ear	Lids fused loosely: -1 tightly: -2	Lids open; pinna flat; stays folded	Slightly curved pinna; soft; slow recoil	Well curved pinna; soft but ready recoil	Formed and firm; instant recoil	Thick cartilage, ear stiff		-5	22
Genitals (male)	Scrotum flat, smooth	Scrotum empty, faint rugae	Testes in upper canal, rare rugae	Testes descending, few rugae	Testes down, good rugae	Testes pendulous, deep rugae		0	24
Genitals (female)	Clitoris prominent, labia flat	Clitoris prominent, small labia minora	Clitoris prominent, enlarging minora	Majora and minora equally prominent	Majora large, minora small	Majora cover clitoris and minora		5	26
								10	28
								15	30
								20	32
								25	34
								30	36
								35	38
								40	40
								45	42
								50	44

**CLASSIFICATION OF NEWBORNS (BOTH SEXES)
BY INTRAUTERINE GROWTH AND GESTATIONAL AGE ^{1,2}**

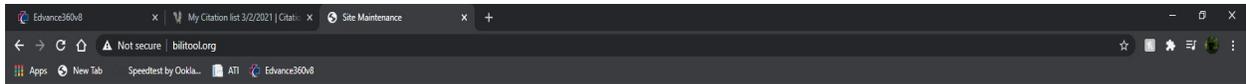
NAME _____ DATE OF EXAM _____ LENGTH _____
 HOSPITAL NO. _____ SEX _____ HEAD CIRC. _____
 RACE _____ BIRTH WEIGHT _____ GESTATIONAL AGE _____
 DATE OF BIRTH _____



CLASSIFICATION OF INFANT*	Weight	Length	Head Circ.
Large for Gestational Age (LGA) (>90th percentile)		●	●
Appropriate for Gestational Age (AGA) (10th to 90th percentile)	●		
Small for Gestational Age (SGA) (<10th percentile)			

*Place an "X" in the appropriate box (LGA, AGA or SGA) for weight, for length and for head circumference.

References
 1. Battaglia FC, Lubchenco LO: A practical classification of newborn infants by weight and gestational age. *J Pediatr* 1967; 71:1-10,123



We'll be back soon!

Sorry for the inconvenience but we're performing some maintenance at the moment. We'll be back online shortly!

