N305 Focus Sheet 5 F19—Newborn, RKC Ch 17, 18, 23,24; ATI Ch 23-27 ; Newborn Assessment Power Point; breastfeeding power point; Newborn reflexes

RKC 17 & 18; ATI Ch 23

1. What does APGAR stand for?
   Appearance, Pulse, Grimace, Activity, and Respiration.

2. When are APGAR scores assigned?
   It is completed at 1 minute and 5 minute of life.

3. What is a "normal" APGAR score versus a score that requires an intervention?

   0 to 3 indicates severe distress- intervention is needed
   4 to 6 indicates moderate difficulty- intervention may be needed
   7 to 10 indicates minimal or no difficulty with adjusting to extrauterine life

4. Describe the Initial assessment of a newborn immediately after birth?

   External assessment: Skin color, peeling, birthmarks, foot creases, breast tissue, nasal patency, and meconium staining (can indicate fetal hypoxia)

   Chest: Point of maximal impulse location; ease of breathing; auscultation for heart rate and quality of tones; and respirations for crackles, wheezes, and equality of bilateral breath sounds

   Abdomen: Rounded abdomen and umbilical cord with one vein and two arteries

   Neurologic: Muscle tone and reflex reaction (Moro reflex); palpation for the presence and size of fontanels and sutures; assessment of fontanels for fullness or bulge

   Other observations: Inspection for gross structural malformations

5. What are the normal expected ranges for a newborn for each of the following

weight	25x00-4000g (5.5-8.8lb)
Length (crown of head to to heel of foot)	45-55cm (18-22in)
Head circumference (occipital to frontal)	32-36.8cm (12.6-14.5in)
Chest circumference (nipple line)	30-33cm (12-13in)
Temperature	37C (98.6F)
Pulse	110-160/min
Respiration	30-60 bpm
Blood Pressure	60-80/40-50

6. What does the New Ballard Scale (gestational age assessment) assess? (There is a PPT in the Resources with a link to at U-tube video on the New Ballard Scale)

   It assesses the neuromuscular and physical maturity.

7. Define AGA, SGA, LGA, IUGR, term, preterm or premature, post term or postdate, postmature.

   (AGA): Appropriate for gestational age at weight between the 10th & 90th percentile
   (SGA): Small for gestational age when weight is less than 10th percentile, less than 2500 g
   (LGA): Large for gestational age when weight is >90th percentile
   (IUGR): Intrauterine growth restriction when growth rate doesn't meet expected norms
   Term: birth between the 37th & 42nd week of gestation
   Preterm/premature: birth before the 37th week of gestation
   Post-term/postdate: born after the 42nd week of gestation with placental aging or insufficiency

8. Review and summarize each component of the physical exam (Also see power point slides) (There is a PPT in the Resources with a link to at U-tube video on the newborn reflexes)

Posture:
Skin: look at skin for texture, jaundice, mongolian spots, rashes
Milia-pearly white/ pale yellow unopened sebaceous glands in mouth or gums-epstein pearls
Telangiectatic nevi- flat, pink spots on the skin
Nevus flammeus- capillary malformation in the skin
Erythema toxicum-newborn rash, benign, idiopathic, generalized transient rash- a form of neonatal acne.
Head:
Caput succedaneum- Boggy edematous swelling of the fetal scalp, disappears without treatment.
Cephalohematoma- swelling and pooling of fluids from forces prior to or during birth
Eyes: 20
Ears: formed, pis, tags, rotation, position, size
Nose: nares are patent bilaterally
Mouth: check for clefts (lips and palate), arched palate, neonatal teeth, epstein pearls
Neck: range of motion, goiter, cysts, clefts
Chest: should be barrel shaped, clavicles should be intact, absence of retractions, breast nodules 3-10 cm, nipples prominent

Abdomen: look at and inspect first, listen for bowels next then lastly feel tummy(palpate for liver, spleen, kidneys, and presence of masses
Anogenital: meconium passed within 24-48 hours after birth, meatus is located in male's penile tip
Extremeties: digits (number and abnormalities), arms and legs (range of motion, tone, asymmetry), clavicles (feel for fracture), Hips (Barlow and Ortaloni exam, clicks are common and benign due to estrogenic effect, clunks are indicative of hip dislocation/ relocation and can represent developmental dysplasia of the hip)
Spine: flip infant onto your forearm and look at the entire spine, feel for bony defects, examine sacral area closely- clefts, hairy tufts, change in pigmentation. Look at gross defects like meningomyelocele, teratomas, sinus tracts
Reflexes:
Sucking & rooting reflex- elicit by stroking the cheek or edge of mouth, usually disappears after 3-4 months but may last a year.
Palmar grasp- grabbing anything you put in their palm, this is normal, lessens by 3-4 months
Plantar grasp- toes should curl in when rubbing, lessens after 8 months.
Moro reflex- when you bump into a baby in its crib and it freaks out and cries
Tonic neck reflex (fencer position)- when turning the babys head to one side and those limbs on that side extend, lessens after 3 months
Babinski reflex- rub side of feet and feet should fan outward. lessens after 1 year.
Stepping- tapping their feet on a surface when close enough as in mimicking walking.
Senses:
Vision- should focus on objects 8-12 inches away, can see objects up to 2.5 feet away
Hearing- selective listening should hear once amniotic fluid drains
Touch- mouth most sensitive to touch
Taste- prefer sweet, salty, sour or bitter
Smell- prefer sweets, can smell mother, high smell senses
Habitation- accustomed to stimuli, response to repetitive stimuli decreases allowing for newborns to have continued learning , avoiding overload

9. How is a newborns blood type determined?
taken from the cord

10. What are the normal Expected laboratory values for a newborn?

HGB	14-24
Platelets	150,000-300,000
HCt	44-64%
Glucose	40-60
RBC count	4.8-7.1
Bilirubin 24 hr 48 hr 3-5 days	24 h - 2-6 48 h - 6-7 3-5 days - 4-6

Leukocytes	9,000-30,000

11. What are the 3 primary complications noted with newborns? What are the nursing interventions for each of these complications?

airway obstruction related to mucus, hypothermia, and inadequate oxygen supply.

airway obstruction - suctioned with a bulb syringe, gentle percussion over the chest to help loosen secretions

hypothermia - monitor axillary temperature every hour, place NB in radiant warmer, maintain skin temperature, early skin-to-skin contact with mom, all exams under a radiant warmer or skin-to-skin contact

inadequate oxygen - monitor respirations and skin color, stabilize body temperature or clear airway as indicated, administer oxygen, prepare for resuscitation

RKC Ch 18; ATI Ch 24

1. Summarize the physical assessment of a newborn

Vitals signs are taken every 30 min for the first hour, every hour for the 2 hours, and then every 8 hours. The weight is checked daily at the same time, inspect umbilical cord, in the first 6-8 hours observe for periods of reactivity, use pain assessment tool every 8-12 hours and following painful procedures.

2. When and how is the Neonatal screening (sometimes called metabolic screening) done?

Capillary heel stick done 24 hours following birth.

What is the importance of this test?

This test is called PKU it tests for defects in protein metabolism in which the accumulation of the amino acid phenylalanine can result in mental retardation.

Describe the collection sample procedure.

warm the baby's heel prior to procedure, done gloves, clean the are, use the outer feel, spring activated lancet at the heel, collect the sample, apply pressure with dry gauze, and cuddle and comfort.

3. What are the signs of respiratory distress in the newborn?
nasal flaring, retractions, grunting, gasping, labored breathing

4. Summarize the interventions for stabilization and resuscitation of airway.

routine suctioning, mechanical suctioning, back blows and chest thrusts

5. Apply the nursing process to thermoregulation components and list appropriate nursing interventions

preheat radiant warmer, warm stethoscope, pad a scale before weighing NB, place bassinet out of the direct line of a fan or AC, swaddle NB, keep the head covered, any procedure should be done under radiant heat, keep temperature of nursery at 72-78 degrees, gently rub NB dry with a warm sterile blanket after delivery

6. What would you teach parents regarding:

Bathing- bathing can begin once the newborns temp has stabilized to at least 97.7 F First bath will be postponed until thermoregulation stabilizes. sponge bath should be given until the umbilical cord falls off.

Diaper changes- clean perineal area after each change, pat dry, avoid alcohol on the area, for females wipe front to back.

Feeding- Newborns are fed on demand, which is normally every 3-4h for bottle fed newborns, and more frequently for breastfed newborns.

Newborn Sleep- Newborns sleep approximately 16-19 hours a day with periods of wakefulness gradually increasing. They should use a hard mattress with no objects on it and a light blanket.

Elimination- They should void 6-8 times per 24 hours after day 4. Meconium should be passed within the first 24-48 hr. The newborn will then continue to pass stool 3-4 times a day depending on whether he/she is being breast-or bottle-fed. Breastfed newborns stools can be yellow and seedy. They should have at least 3 stools per day for the first month.

Infection control- Provide individual bassinets equipped with a thermometer, diapers, t-shirts, and bathing supplies. All personnel who care for newborn should scrub with antibacterial soap from elbows to fingertips before entering the nursery. In between care, the nurse should follow faculty hygiene protocols.

Umbilical cord care- parents should clean the cord with water during the initial bath of the newborn. Assess the stump and base of the cord for redness, swelling, and drainage with each diaper change. The newborn's diaper should be folded down and away from the umbilical stump.

7. Medications to know:

Medication	Indications (why is this needed for THIS patient?)	Nursing Implications (what are you watching for?)	Dose
Erythromycin	eye care to prevent ophthalmia	Watch for swelling, redness,	single dose of 1-2 cm line

	neonatorum.	drainage, and temporary blurred vision for 24-48 h.	
Vitamin K (Aquamephyton)	To prevent hemorrhagic disorders	Do not give in the same spot as Hepatitis B shot.	0.5-1 mg
Hepatitis B	Provides protection against hepatitis B	Do not give in the same spot as Vitamin K.	20 mcg

8. Why is it important to monitor newborns for cold stress?

It can lead to hypoxia, acidosis, and hypoglycemia.

What signs and symptoms are noted with this?

depressed respirations

What treatment is used?

Correct hypoxia via administration of O2. Correct acidosis and hypoglycemia.

9. Why is it important to monitor newborns for hypoglycemia?

If a baby's blood sugar is low, their temperature decreases as well.

What are the signs and symptoms?

Jitteriness, cyanosis, hypothermia, and lethargy.

What is the treatment?

feeding and IV dextrose

ATI Ch 25 ;Breatfeeding powerpoint

1. Describe the key nutritional needs of the newborn.

newborns need a fluid intake of 100-140 mL/kg/24H.

Breast milk contains the vitamins necessary to provide adequate newborn nutrition.

Solids are not introduced until 6 months of age. If introduced too early, food allergies can develop.

2. According to the American Academy of Pediatrics, how often should newborns breastfeed?

Every 1.5 to 3 hour

What infant specific benefits have been found with breastfeeding?

Reduces the risk of infection by providing IgA antibodies, lysosomes, leukocytes, macrophages, and lactoferrin that prevents infection. Breast milk is easy for the newborn to digest. Breastfeeding is convenient and inexpensive. Promotes maternal-infant bonding and attachment.

3. List 4 interventions to promote successful breastfeeding.

- Show the mother proper latch-on positions -- have her support the breast in one hand with the thumb on top and four fingers underneath. With the newborns mouth in front of the nipple, the newborn can be stimulated to open his mouth by tickling his lower lip with the tip of the nipple.
- Demonstrate the four basic breastfeeding positions: football hold (under the arm), cradle (most common), or modified cradle (across the lap), and side-lying.
- Explain the let-down reflex
- Place the newborn skin-to-skin on the mother's chest immediately after birth. Initiate breastfeeding as soon as possible or within the first 30 minutes following birth.

4. Breastmilk can be stored in each of the following for how long?

__8___ hr at room temperature

__8___ days refrigerated in sterile bottles

__6____ months in frozen sterile containers in the freezer compartment of a refrigerator

__12____ months in a deep freezer

5. How often should bottle-fed babies be feeding?

3-4 hours

6. What should be assessed when determining proper nutrition for the newborn?

physical stability, state of alertness, presence of bowel sounds

7. What cues are exhibited by a newborn to show feeding readiness?

Hand to mouth or hand to hand movements, sucking motions, rooting, mouthing

8. What techniques can you teach parents in order to wake a sleepy baby to feed?

Talk to the newborn or massage the newborn’s back, and rub his hands and feet

What about a fussy baby who needs comforted?

Swaddle the newborn, hold the newborn close, move, and rock him gently

9. What is failure to thrive?

A child that loses weight from birth and does not regain it appropriately.

ATI Ch 26

Since the majority of OB is about education/teaching, you are responsible for all information in this chapter, as you will use it clinically and during theory/exam.

RKC Ch 23 & 24; ATI Ch 27

1. Describe what the neonate going through substance withdraw would look like.

High-pitched screaming, twitching/tremors, inconsolable.

2. How can infants be tested for maternal drug use and what nursing care should be implemented for infants who are withdrawing?

Cord testing after birth.

3. What medications are often used to help with withdrawl symptoms?

Morphine or clonidine

4. Hypoglycemia in the newborn is defined as:

Blood sugars are less than 50mg/dL

5. What does a hypoglycemic infant look like?

JIttery

How would they be treated?

feeding or IV dextrose

6. RDS is a result of surfactant deficiency in the lungs causing poor gas exchange and ventilatory failure. What is surfactant?

A liquid that reduces the surface tension of the pulmonary fluid and air within the lungs.

What complications arise from RDS?

pneumothorax, pneumomediastinum, retinopathy of prematurity, bronchopulmonary dysplasia, infection, intraventricular hemorrhage

7. What risk factors are included in the assessment for RDS?

preterm, perinatal asphyxia, maternal DM, maternal use of barbiturates or narcotics, maternal hypotension, c-section without labor, hydrops fetalis, maternal

bleeding during third trimester, hypovolemia

8. What does an RDS infant look like?

tachypnea, nasal flaring, expiratory grunting, retractions, labored breathing with prolonged expiration,

9. Describe the order of interventions during the immediate period after the infant is born.presentation and care of the newborn.

airway, breathing, skin-to-skin contact

10. SGA vs LGA, compare and contrast.

	SGA	LGA
Risk factors:	congenital or chromosomal anomalies maternal infections, disease, or malnutrition gestational hypotension or diabetes Maternal smoking, drug, or alcohol use multiple gestations placental factors fetal congenital infections	newborn who are postmature maternal fetal cardiovascular disorder of transposition of the great vessels genetics maternal obesity multiparous
Findings	weight below 10th percentile reduced body dimensions sparse hair wide skull sutures dry, loose skin decreased subcutaneous fat decreased muscle mass thin, dry, yellow, and dull umbilical cord drawn abdomen respiratory distress and hypoxia wide-eyed and alert	weight above 90th percentile large head plump and full-faced from increased subcutaneous fat hypoxia birth trauma sluggishness, hypotonic muscles, hypoactivity tremors from hypocalcemia hypoglycemia respiratory distress meconium aspiration

	hypotonia evidence of meconium aspiration hypoglycemia acrocyanosis	immature lungs dilated pupils vomiting bulging fontanels high-pitched cry
Care considerations	support respiratory efforts, and suction the NB to maintain open airway provide neutral thermal environment to prevent cold stress initiate early feedings administer parenteral nutrition if necessary maintain adequate hydration conserve NB energy level prevent skin breakdown protect NB from infection	prepare for vacuum-assisted or cesarean birth prepare to place client in mcroberts position prepare to apply suprapubic pressure to aid in the delivery of the anterior shoulder assess NB for birth trauma obtain early and frequent heel sticks initiate early feedings or IV therapy to maintain glucose levels provide thermoregulation with an isolette identify and treat any birth injuries

11. Discuss the variations between physiologic and pathologic jaundice.

Physiologic Jaundice - benign, resulting from normal newborn physiology of increased bilirubin production due to the shortened lifespan and breakdown of fetal RBCs and liver immaturity

Pathologic Jaundice - result of an underlying disease. Appears before 24 hours of age or is persistent after day 14.

How are they treated?
Phototherapy

12. Congenital anomalies: Describe patent ductus arteriosus, Tetralogy of Fallot, and Down Syndrome.

patent ductus arteriosus - non cyanotic heart defect in which the ductus arteriosus connecting the pulmonary artery and the aorta fails to close after birth

Tetralogy of Fallot - cyanotic heart defect characterized by a ventricular septal defect, the aorta positioned over the ventricular septal defect, stenosis of the pulmonary valve, and hypertrophy of the right ventricle

Down Syndrome - trisomy 21, which is the most common trisomic abnormality with 47 chromosomes in each cell.