

Nurses need to know normal transition/VS so they can recognize when there is a problem

- Pulse 120-160 bpm
 - During sleep as low as 100 bpm
 - If crying, up to 180 bpm
 - Apical pulse is counted for 1 full minute
- Respirations 30-60 rpm
 - Predominately diaphragmatic, but synchronous with abdominal movements
 - Brief periods of apnea (5-10 seconds) with no color or HR changes
- Temp 38.5-37 axillary
- Skin Temp 36-38.5
- Blood Pressure 80-60/45-40 at birth; 100/50 mm Hg at Day 10
- Blood Glucose greater than or equal to 40 mg
- Hematocrit less than 65-70% central venous sample

The transition from intra-uterine to extra-uterine life is affected by things like prematurity, maternal distress, congenital anomalies, no prenatal care, postmaturity, fetal distress...etc...

Identifying At-Risk Neonates

- Important to be able to identify those who may be at risk
- Plan of care can be more appropriate and efficient
- Birth at a facility that can care for the high risk infant (and mother)
- Signs they are at risk
 - Low socioeconomic level
 - Limited/no prenatal care
 - big issue with DM mom
 - Environmental exposure
 - Pre-existing medical problems such as heart disease, HTN, hypothyroidism, renal disease
 - Age or parity
 - Medical conditions related to pregnancy
 - Complications of the pregnancy
 - oligohydramnios, premature ROM (baby can be just fine when membranes rupture...but now baby is on a 24-hour ticking clock, because after 24 hours the risk for infection goes way way up!), preeclampsia, preterm labor, abruptio placentae
 - what are variables that tell us things are not ok when mom has PROM?
 - prolonged decelerations, infection (check mom's temp)

Morbidity vs Mortality

- Morbidity = the proportion of sickness or of a specific disease in a geographical locality
- Mortality = the relative frequency of deaths in a specific population; death rate; the number of births that don't make it in a specific population
- Nursing care depends on factors or risks

AGA vs SGA vs LGA

For each of these groups we can have babies that are preterm, term, and post-term. Make a table. When dealing with high-risk we often think of pre-term, but it's not just the premies that can be high risk.

Can have preterm babies that are SGA (were the dates off? what's going on? this is a very very vulnerable baby...placenta might not be good = IUGR, if placenta doesn't work well baby is going to be a little hypoxic and not get enough nutrient...this process is called "stress". When fetal lungs are stressed...surfactant is produced...this is a good protective mechanism that the body has...mom is still going to get betamethasone, but we can probably guess that this baby's lungs have the surfactant.)

- Can have a 32-weeker that measures 32 weeks. A-ok.
- Can have a 32 week baby that measures much bigger than other 32-week babies...mom is DM...don't be fooled by his big size! He's still a premie!
- It's gestational age that determines maturity...not the size of the baby.

- In the preterm age, always concerned about surfactant...did he get any? did mom get any?

For a 40-weeker, we expect about 6-8 pounds. If we have a term baby that's SGA...why is he small? look at placenta, maternal nutrition, drug use, infection. There is always some reason for SGA

Term baby that's LGA...we are thinking DM in mom ALWAYS....need to check this out. This is not 'no big deal'...these babies will go hypoglycemic pretty fast. We feed them if low BS...breastmilk or formula. Remember that sugar is a 'quick fix'...need them to have something with protein in it that will sustain glucose levels.

Postterm that is SGA...looks like this: wrinkly and dry skin, no vernix, no lanugo, scrawny cord, meconium. The thing we are concerned about with postterm babies...the placenta has a shelf-life of 42 weeks (at best). We see babies that have "wasting"...that's what causes the baggy skin...they've lost weight. Poor thing. Might see that mom isn't gaining any weight during this time. Mom should be gaining .5 -.75 pounds a week b/c of fetal weight. If she's not gaining, this is a sign that the baby isn't growing and is in fact losing weight.

Post-term AGA...this baby did not lose weight. Skin will be pink, dry. Skin will be peeling on hands and feet...when we take their footprints after they are born the skin peels right off onto the ink pad. Gross. When we bathe these kids, they are a mess to bathe. The skin just keeps shedding and shedding. Need to prepare mom for this.

Post-term LGA...these are big kids! Diabetic babies can be in this category also...but usually the baby is delivered before this. Usually 37-38 weeks...only very very rarely to get to 39-40 weeks b/c risk of fetal demise goes up at 39. A diabetic's placenta is going to age faster, it's getting more wear-and-tear. The CV system in a Diabetic mom is not so good, so it stands to reason that the placenta is not going to be awesome either.

How we determine birthweight and age, etc...

- AGA (appropriate for gestational age)
 - Normal weight, height, head circumference and BMI
 - Lowest risks of problems, lowest morbidity and mortality
- SGA (small for gestational age)
 - Typically weigh less than 2500 gm (5 lb 8 oz) at term
 - Birthweight is at or below the 10th percentile in correlation with gestational age on a growth chart
- LGA (large for gestational age)
 - Weigh more than 4000 gm (8 lb 13 oz) at term
 - Above the 90th percentile on growth chart
- Other-
 - Low birth weight (less than 2500 gm = 5 lb 5 oz)
 - Very low birth weight (less than 1500 gm = 3 lb 5 oz)
 - Extremely low birth weight (less than 1000 gm = 2 lb 3 oz)

TIP: Nursing intervention for mom who has had a previous placental bleed: mom goes on bedrest.

Under-Lying Physiologic Complications of SGA and Preterm-AGA Neonates

- SGA- less than 2 SD below population norm or < 3rd percentile (often referred as 10th percentile on Denver curve)
- SGA: Can be preterm (<37 weeks), term (38-41 wks) or post-term (>42 wks)
- **Why:** maternal factors
 - maternal disease (treat or maintain)
 - environmental factors
 - placental factors
 - fetal factors (chromosomal issues)

SGA Complications

- Asphyxia: placental insufficiency -> chronic hypoxia (If mom has placental insufficiency you would see late decelerations on the fetal monitor)
- Chronic hypoxia -> polycythemia
- Hypothermia due to lower amount of SQ fat with increased body surface (will be in incubator)
- Heat loss leads to increased metabolic rate -> hypoglycemia

Nursing Care of SGA

- Monitor v/s
- Heel stick for glucose if appropriate
- Early feed
- Provide neutral thermal environment (NTE)

Nursing care plan available in your text pp 934-938 and includes nursing diagnoses

Impact of Maternal Diabetes Mellitus on the Newborn

- May be seen as referred to as IDMs (infant of diabetic mothers)
- Mom with long-term diabetes or severe/poorly treated diabetes at risk for vascular complications
- LGA- if mom had poorly controlled or GDM (gestational diabetes mellitus)
- Macrosomic, thick umb cord, ruddy skin, look puffy
- at risk for hypoglycemia, hypocalcemia, polycythemia, jaundice, birth trauma and RDS
- At risk for Congenital issues: cardiac defects, small left colon, sacral agenesis
- SGA infant can be seen when the diabetic mother has had vascular complications

Monitoring

- Infant's blood sugar tested within one hour after delivery, and then frequently for first 4-6 hours to assess adaptation
- Heel sticks, sometimes serum glucose testing done
- Normal blood sugars: 40-50 on accucheck, 20-25 on whole blood

Treatment

- Prevent by treating the mother prenatally
- Serum glucose of infant
 - Below 40- early feed with formula or breast milk
 - May need IV therapy if unable to stabilize blood sugar

LGA Characteristics and Complications of the LGA

- LGA is above the 90th %
- Body is proportional
- Factors of LGA
 - DM
 - Genetic
 - Multiparous
 - Male > female
 - Congenital: erthroblastosis fetalis, Beckwith-Wiedemann syndrome, transposition of the greater vessels
- At risk for: birth trauma, hypoglycemia, polycythemia/hyperviscosity (will look very red) increased chance of birth via c/s or with use of oxytocin.
 - What would lead you to believe there is birth trauma: shoulder dystocia/broken clavicle (put non-dominant hand under shoulder and lift baby up to lift the neck area...can palpate thyroid, neck and clavicle...broken clavicle will feel like a bump and may or may not be exhibiting signs of pain...but baby will be favoring one arm over the other), bruised face, overriding sutures.

Post-Term Infant

- Born after 42 weeks gestation
- Cause: unknown, could be LMP wrong
- Will see long fingernails and kind of stringy hair
- Morbidity and mortality rate is 2-3 times higher than term infant
 - Placental function decreased
 - Stress on infant is a result of lower nutrition and oxygen
 - Hypoglycemia, Meconium aspiration, Polycythemia, Congenital anomalies, Sz, Cold stress (big risk for cold stress in this baby!)

Nursing Care of Post-term Infant

- Assessment
 - Long fingernails, hair
 - Parchment-like skin
- Care
 - Monitor temp
 - Watch for signs of hypoglycemia
 - Watch for signs of respiratory distress

Physiologic Characteristics and Complications of the Preterm Infant

- Preterm- born before completion of 37 weeks gestation
- About 12% of births
- Transition from fetal life to external life -> complications due to body systems not yet ready for the challenge. Support the body systems until they can transition on their own.

Preterm: Respiratory and Cardiovascular Risks

- Inadequate surfactant -> atelectasis -> Respiratory distress
- Muscular coat of the pulmonary blood vessels not yet developed fully -> if low oxygen levels, they cannot constrict to compensate -> may see left-to-right shunting through the ductus arteriosus, so there is back-flow in to the lungs
- Risk of Patent ductus -> leads to pulmonary congestion, increased respiratory effort, retention of CO₂ and bounding femoral pulses

Preterm Infant: Thermoregulation

- Problems with thermoregulation are due to lower glycogen stores in the liver and less amount of brown fat available
- If we have a term baby that's 7.5 pounds, and it's temp was 98.6 and it drops to 97 d/t bathing or whatever...with this baby you put them under the warmer...if you don't put them in the warmer they're going to burn the brown fat.
- Developed in the third trimester
- Higher ratio of body surface area to body weight (5 x's greater than adult)
- Posture is extended (because laying baby on his back), and thus more heat lost
- Cannot vasoconstrict the superficial blood vessels to conserve heat in the body core
- More insensible loss of heat due to thin skin -> increased permeability

Preterm Infant: GI

- Premature GI tract affects ingestion, absorption and digestion
- If we feed too soon, he may not have ability to handle the food yet.
- Ingestion- poor gag and suck/swallow reflex, incompetent esophageal cardiac sphincter
- Small capacity of stomach- harder to promote growth, need higher calorie or freq feeds
- Inability to handle increased osmolarity of formula protein (immature kidneys)...premie doesn't have enzymes to break down protein yet.
- Difficulty in absorbing saturated fats (lower bile salts and pancreatic lipase); severe illness of prematurity also affects absorption
- Can digest simple sugars, but difficulty with lactose digestion in first few days
- Deficient in calcium and phosphorous (majority is deposited in last trimester)
- Increased basal metabolic rate and O₂ requirements (fatigue from sucking for feeding)...watch for circumoral pallor. We try them at the nipple with a small amount...seeing if they can suck and swallow without getting fatigued.
- Feeding intolerance
- Necrotizing enterocolitis (NEC) may develop due to decreased blood flow to GI secondary to hypoxia and hypoxemia at birth
 - measure abdominal girths
 - stools may be evaluated

Preterm Infant: Kidney

- GFR lower due to decreased blood flow
- Limited ability to concentrate the urine or to excrete excess fluid
 - Fluid retention with over-hydration
 - Dehydration if too little fluids
- Risk of metabolic acidosis because buffering capacity is reduced
 - If hypoxia or insult, cannot eliminate lactic acid
- Excrete glucose at lower serum level
- Pharm: ability to excrete drugs is reduced, risk of toxicity increased if oliguria

Preterm Infant: Liver

- In term baby liver doesn't kick in for 5-7 days...even a bigger problem with premies
- At birth, glycogen stores quickly used up to give energy
- Cold stress and asphyxia reduce glycogen stores (even before birth)
- Low iron stores (normally deposited in last trimester)
 - Hemorrhage, excess blood tests and rapid growth can lead to the need of a transfusion
 - Be careful about blood sticks!
- Conjugation of bilirubin impaired
 - Increase more rapidly than the term infant

Preterm Infant: Other Complications

- Immunity –lack of passive IgG antibodies (acquired in last trimester), less protected and depleted more quickly -> risk of infection
- Skin- thin skin with greater risk of skin breakdown (excoriation), plus frequent invasions of skin via tests (blood draws, IV's, etc) -> greater risk
- Neuro- Increased risk of IVH and ICH
 - Greatest growth of brain in third trimester
 - Risk of hydrocephalus with IVH
 - *Delayed or absent reactivity -> neuro responses weaker, disorganized in sleep-wake states

Nursing Diagnoses and Plan of Care for the Preterm AGA Newborn

- Physical assessment- common findings in a preemie
- Determine gestational age using tool
- Consider maternal prenatal risk factors
- Delivery risk factors
- Family assessment
- Nursing care:
 - v/s and awareness of signs/symptoms of distress
 - Maintain NTE
 - I & O, feeding (assess readiness, prevent fatigue during feed)
 - Prevent infection

Congenital Anomalies: Nursing Assessment and Care

- Hydrocephalus
 - Enlarged or full/bulging fontanelles, wide sutures, sunset eyes
 - Head circumference > 90% on growth chart
 - Nursing care:
 - Measurement of head circumference / assess for widening suture lines
 - Assist with transillumination, ultrasounds
 - Watch skin integrity, and for s/sx of infection
 - Sheep skin under head; handle head with care
 - If post-op, keep head off of operative site
 - Clean skin creases

- Choanal Atresia- occlusion of posterior nares. This is a problem b/c infants are nose breathers. They don't know yet they can breathe through the mouth.
 - Signs: cyanosis and retractions at rest, noisy respirations, difficulty during feeding, thick mucus
 - Assessment:
 - Patency of nares - how? why?
 - Pass DeLee or feeding tube to check patency
 - If the baby needs an artificial airway, where would it be taped?
 - How would you position the head to optimize air exchange? Want to keep kid sitting up as much as possible to facilitate drainage.
 - Cleft Lip and/or Palate
 - Unilateral or bilateral- noted on nursing assessment
 - Nursing care:
 - Provide nutrition using special nipple (with a shield that creates a false palate) and after assessing suck/swallow
 - Burp frequently
 - After feed, how do you care for the cleft? Mouth care...want to take a wet swab and clean off the cleft with sterile water. Don't want there to be any infection!
 - How to position the baby after feeding?
 - Support parent coping
 - Model acceptance, and handle baby with confidence so that the parents can internalize these skills and feelings
 - Tracheoesophageal fistula (TEF)
 - What might be seen on the prenatal ultrasound? Communication between trachea and esophagus. Not good!
 - Nursing assessment: may see excessive drooling, abd distention, periodic choking/cyanotic episodes, regurg, s/sx of aspiration pneumonia (tachypnea, grunting, retractions, rhonchi, decreased breath sounds, cyanosis); inability to pass nasogastric tube
 - Care: withhold feeds until xray done; low wall suction for secretions; warmed, humidified isolette, HOB up 20-40 degrees and keep infant quiet, maintain I & O, support parents with information
 - Diaphragmatic hernia- intestine through the diaphragm and into thoracic cavity
 - Assessment: barrel chest/scaphoid abd, asymmetric chest expansion, absent breath sounds, displacement of heart sounds to right, spasmodic coughing/cyanotic spells, difficulty feeds, bowel sounds heard up in chest
 - Babies are at risk b/c that loop of bowel can strangulate..then you get necrotic bowel syndrome.
 - Care: maintain resp status, position high semi-fowler's, turn to affected side to promote expansion of unaffected lung, gastric decompression, parental education
 - Baby is going to have surgery!
 - Omphalocele
 - Gastroschisis
 - Prune Belly Syndrome
 - Myelomeningocele
 - Imperforate anus: has no anus...needs an ostomy. some kids can get surgery if the anal opening is in there somewhere and they can get to it?
 - Congenital hip
 - Club foot
- (Pictures/notes in book if you need more information)

Drug-Exposed Newborns

- Narcotics pass through placenta. you can expect placental insufficiency if mom is using drugs.
- Risks:
 - Intrauterine asphyxia
 - Intrauterine infections
 - Alterations in birth weight
 - Low APGAR scores
- RDS
- Jaundice

- Congenital anomalies and IUGR
- Behavioral abnormalities
- Withdrawal symptoms

Nursing Care of the Newborn Exposed to Drugs

- Monitor for hyperthermia...when a baby is hot it breathes fast
- Monitor pulse and respirations- look for symptoms of distress
- Baby will be jittery...if on tummy, watch for breakdown b/c they are moving constantly.
- High pitched cry (not the same as ICP cry)
- Small frequent feedings (will be on formula b/c druggie mom can't breastfeed)
 - Watch for vomiting, diarrhea, regurg
 - Weigh
 - Position side-lying or high-Fowler's
 - Swaddle snugly so they can't wiggle and cause skin breakdown
 - Quiet room, dimmed lights if possible
 - Do well with a repetitive motion like rocking

Newborns Exposed to Tobacco

- 15-20% mothers continue to smoke
- Pregnancy risk: SAB, placenta previa and abruptio placentae
- Risk to fetus: IUGR, intrauterine distress, neonatal habituation abnormalities, hyper- or hypotonia, tremors/increased Moro, signs of nicotine toxicity (tachycardia, poor feeding, irritable)

Physical Assessment and Cardiac Defects

- 1% live births affected; deaths can be prevented by early dx and tx
- Often no specific trigger; multifactorial
- At risk of cardiac defect if:
 - Infection (rubella, CMV, coxsackie)
 - Exposure to alcohol, some anti-seizure meds, lithium, steroids, pesticides, mom with PKU disorder who doesn't follow diet
- Assessment:
 - Cyanosis, heart murmur, signs of congestive heart failure
 - CHF sx in neonate: diaphoresis (babies usually don't have this!), tachypnea, tachycardia, hepatomegaly and cardiomegaly

Cardiac Defects (see slide)

1. Increased pulmonary blood flow

Newborn Screening and Inborn Errors of Metabolism

- State mandated screening of all newborn infants
- Nurses assess for signs of the disorders
- Important because these errors can cause mental retardation and other neurological and health problems.

Inborn Errors of Metabolism

- PKU (baby has to have some protein in the system in order to test for this). Has to be done after they have eaten and before they leave hospital...usually done at about 48 hours.
- Maple Syrup Urine Disease (MSUD)
- Homocystinuria
- Galactosemia
- Congenital Hypothyroidism

Metabolic Abnormalities and Their Effects on the Newborn

- PKU- If not treated early with diet low in phenylalanine, can develop mental retardation by 6th month
 - special formula before first month to minimize CNS damage

- Maple Syrup Urine Disease (MSUD)- odor of urine is like maple syrup
 - during first week of life may see neurological signs (sz, spasticity)
 - need a formula low in branched-chain amino acids, especially before day 12 to avoid mental retardation (\$\$\$)
- Congenital Hypothyroidism (CH)- large tongue, umbilical hernia, cool and mottled skin, large fontanelles.
 - Poor feeders, constipation and low-pitched cry
 - Treated with thyroid medication; adjusted frequently to allow proper growth
- Galactosemia- see vomiting soon after taking in milk-based formula or breastmilk
 - also: diarrhea, jaundice, mental retardation, poor weight gain, may see cataracts on exam
 - symptoms are reversible when galactose is removed from the diet, but still may have some learning disabilities, speech problems and female ovarian failure
- Homocystinuria-skeletal abnormalities, mental retardation, dislocation of ocular lenses, intravascular thromboses; these are due to toxic build up of methionine and the metabolite homocystine in the blood
 - diet low in methionine; given supplements of cystine and vitamin B6.
 - Early diagnosis and diet changes may help prevent mental retardation
- (Hearing screens also done in CA)

Nursing Care of IEMs

- Assessment: aware of signs of disorders
- State-Mandated screening
- Referral of parents to support group
- Referral of parents to sources of education
- Dietary management

Infants and Resuscitation: Identifying Who May Be At Risk

- Non-reassuring fetal heart rate pattern
- Difficult birth
- Fetal scalp/capillary blood sample
 - Acidosis < 7.20
- Meconium stained fluid
- Prematurity
- Macrosomia or SGA
- Male infant
- Significant intrapartum bleeding
- Congenital heart disease
- Maternal infection
- Narcotic use during labor
- Infant of DM mother
- Arrhythmias
- Cardiomyopathy
- Fetal anemia

Respiratory Distress Syndrome (RDS)

- Deficiency or absence of surfactant...there's nothing to keep lung expanded and it sticks to itself....atelectasis. They also explode! Shows as big snowy areas where the micro-alveoli have ruptured
- Atelectasis
- Hypoxemia, hypercarbia, acidemia
- May be due to prematurity or surfactant deficiency
- Nursing Care
 - Maintain adequate resp status
 - Maintain adequate nutritional status
 - Why would feeding be held? Will give then NG feedings b/c already having so much trouble breathing.
 - Maintain hydration
 - Education and support of family, keep them informed
- Assessments for Respiratory Distress...see book.

Transient Tachypnea of the Newborn (TTN)

- Failure to clear lung fluid, mucus and debris
- C/S babies are “gunky”
- Exhibit signs of distress shortly after birth
 - Sx: Expiratory grunting
 - Nasal flaring
 - Subcostal retractions
 - Slight cyanosis
- Nursing care:
 - Maintain adequate resp status
 - Maintain adeq nutritional status
 - Maintain hydration
 - Support/educate family

Meconium Aspiration Syndrome (MAS)

- Mechanical obstruction of the airway
- If gets into alveoli they collapse and you get atelectasis.
- The further down it goes, the worse it is.
- Will be stained yellow, greenish. Check fingernails.
- Chemical pneumonitis
- Vasoconstriction of the pulmonary vessels
- Inactivation of surfactant
- Doc holds tongue until we can flush the fluid out...this keeps baby from breathing.
- Nursing Care:
 - Assess for complications of MAS
 - Maintain resp status, nutrition, hydration

Persistent Pulmonary Hypertension of the Newborn (PPHN)

- Blood shunts away from the lungs
- Increased pulmonary vascular resistance
- This baby is SICK!
- Primary
 - Pulmonary vascular changes before birth resulting in PVR
- Secondary
 - Primary vascular changes after birth resulting in PVR
- PPHN: Nursing Care
 - Minimize stimulation
 - Maintain adequate respiratory status
 - Observe for signs of pneumothorax
 - Maintain adequate nutrition
 - Maintain adequate hydration
 - Support/educate the parents

Cold stress

- Increase in O2 requirements
- Increase in use of glucose
- Acids in blood released
- Surfactant production decreases
- Nursing Care
 - Watch for s/sx
 - Maintain NTE
 - Warm the baby slowly
 - Frequently monitor temp
 - Tx accompanying hypoglycemia

Hypoglycemia

- Normal 40-50 by Accucheck; 20-25 on whole blood
- Routine screening of those at risk
- Early feeding
- D10W with initial feed

Jaundice: Background Information

- RBC lifespan
- Breakdown (hemolysis) of heme
- Unconjugated (= indirect bilirubin)– needs albumin to be transported to the liver for disposal. Liver cells transform unconjugated bilirubin to a water-soluble form (pigment)
- Conjugated (= direct bilirubin)- now the bilirubin can be excreted through the GI tract, and a small amount via the kidneys
- Testing/Screening
 - Total Serum Bilirubin (= indirect + direct Bilirubin tested)
 - Coombs test if Rh or ABO incompatibility
 - Transcutaneous
- If not excreted or not broken down by the liver cells, the bilirubin is reabsorbed, and the level rises causing a yellowing of the skin

Jaundice: Risks of Developing

- ABO incompatibility
- Prematurity
- Breast feeding
- Medications: valium, oxytocin
- Maternal DM
- Infrequent feeds
- Bruising/trauma
- Polycythemia
- Race: can be more prevalent in Asian and Native American babies

Jaundice: Pathologic and Physiologic

- Physiologic
 - Appears after 24 hours
 - Disappears within 14 days
 - Due to increased red cell mass
- Pathologic
 - Appears within first 24 hours
 - Serum bili rises > 0.2 mg/dL per hour
 - Bili concentration exceeds 95th percentile
 - Conjugated bili concentration greater than 2 mg/dL
 - Clinical jaundice persists > 2 weeks
 - Causes: hemolytic disease, erythroblastosis fetalis, hydrops fetalis, ABO incompatibility

• Rh Incompatibility and ABO incompatibility

- Rh incompatibility
 - Rh- negative mother
 - Rh- positive fetus
- ABO incompatibility
 - O mother
 - A or B fetus

Pathologic Jaundice: Treatment

- Resolve anemia
- Removing maternal antibodies and sensitized erythrocytes
- Increasing serum Albumin
- Reducing serum bilirubin levels
- Minimizing the consequences of hyperbilirubinemia
 - Kernicterus- severe jaundice can cause brain damage or death

Phototherapy: Nursing Care

- Maximize exposure of skin surface to light
- Periodic assessment of bilirubin level
- Good skin care
 - re-position every 2 hours
- Protect eyes
- Maintain NTE
- Maintain hydration and nutrition
- Educate parents

Sepsis: Clues and Nursing Assessment

- Lethargy
- Hypotonia
- Hypotension
- Pallor, duskiness or cyanosis
- Cool, clammy skin
- Temp instability (one of the first things you can see)
- Feeding intolerance
- Hyperbilirubinemia
- Tachycardia followed by apnea/bradycardia

Sepsis: Risks and Diagnosis

- Risks
 - PROM > 24 hours
 - Maternal infection
 - Maternal fever
 - High risk behavior (drug use/multiple partners)
- Diagnosis
 - Blood culture
 - Lumbar puncture for spinal fluid
 - Urine culture
 - Skin culture if lesions present
 - Other cultures: nose, ear, eye, rectal, gastric fluid
 - CBC
 - Chest x-ray

Sepsis: Nursing Care

- Good handwashing- nosocomial infections are a big threat to nurseries/NICUs
 - what about stethoscopes and other equipment?
- Assessment for signs of distress/monitoring
- Collecting specimens
- Meds: Ampicillin and Gentamycin are common
- Maintain:
 - NTE?
 - Fluids/hydration/nutrition

Parental Attachment of the At-Risk Infant

- Preemies are separated from family due to their illness or complications
- Nurses promote positive feelings about the baby
- Encourage early involvement in the care of the baby
- Skin-to-skin (kangaroo) care
- Promote a developmentally supportive environment/teach parents about it
- Preparing for discharge

Initial and Long-Term Needs of the At-Risk Infant

- Initial
 - Care of infant is planned, sometimes “minimal handling”
 - Nursing care and parent support
- Long-term
 - Pre-discharge planning
 - Referrals
 - Medical equipment

Parent/Family Adaptation

- When a family has a newborn with health problems, they go through a predictable pattern of adaptation
 - shock
 - denial
 - depression
 - acceptance
 - reorganization

Fetal Death

- Referred to as fetal death, fetal demise, or perinatal loss
- Support grieving parents
 - One-on-one care
 - Quiet environment
 - After birth, baby is dressed
 - Parents are given option to hold or view baby
 - Take home a memory box
 - Other support- chaplains, family, etc