



**Prenatal & Newborn Risk Factors, Screening,
and Evaluation
Infant Growth and Development, Anticipatory
Guidance and Common Concerns**

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Disclosures

Teresa Whited, DNP, APRN, CPNP-PC

- Has no financial relationship with commercial interests
- This presentation contains no reference to unlabeled/unapproved uses of drugs or products

Learning Objectives

Upon completion of the review course, the participant will be able to:

- Discuss components of infant history important to every health surveillance visit.and
- Distinguish between normal and abnormal physical findings in the infant.
- Identify developmental milestones during the infancy.
- List appropriate screening tests for an infant.
- Examine “red flags” or factors that suggest that an infant is at risk for experiencing a developmental problem or delay.
- Describe appropriate anticipatory guidance for infant.
- Explain the management of common concerns during infancy.
- Describe the identification and management of an infant with signs of maltreatment.

Lets start at the beginning....



Maternal/Obstetric History

- Parents' age and health status
- Maternal health and obstetric history
- History of pregnancy
 - **Prenatal care** and duration
 - **Medications** used during pregnancy
 - **PMH: DM, epilepsy**
 - **Infectious Disease**

TORCH Diseases

- **Toxoplasmosis** (often asymptomatic at birth but can lead to cognitive disabilities, seizures, and blindness)
- **Other** (syphilis)
- **Rubella** (deafness, blindness, cardiac anomalies, limb deformities)
- **Cytomegalovirus (CMV)** (asymptomatic, symptoms present at birth or may be appear 2 or more years after birth - hearing loss, cognitive disabilities)
- **Herpes** (CNS involvement, skin, eye & mouth involvement, liver damage)

Maternal/ Obstetric History

- Rh incompatibility
- Substance Use
- Maternal morbidities
 - HTN
 - Epilepsy
 - Maternal diabetes
 - **Polyhydramnios**
 - **Oligohydramnios**

Prenatal/ Newborn Hx

- **Infant at delivery**
 - **Distress**, complications related to transition to extrauterine life (respiratory system & circulatory system)
 - **APGAR** (HR, Respirations, muscle tone, Reflexes, Color)
 - **Gestational age, birth weight (LGA, SGA)**
 - Prematurity (babies who arrive before 37 weeks gestation, WHO)
 - Post maturity (born after 42 weeks gestation)

Newborn Status Assessment

- **Gestational Age Determination**
 - Neuromuscular and physical maturity
 - Plotting weight & length against expected gestational age
 - Must be done in first 24 hours of life



Newborn Status Assessment

- **Large for Gestational Age**
 - Health risks: **hypoglycemia, broken clavicles, brachial plexis injury**, skull injury, facial palsy, polycythemia, meconium aspiration
- **Small for Gestational Age**
 - Health risks: **respiratory distress, poor feeding, hypothermia, hypoglycemia**
- **Blood Sugar: 40 - 80 mg/dl**
 - ≤ 40 mg/dL: think **infection, IDM, LGA infant**
 - ≥ 80 mg/dL: think neonatal stress

Neurologic Exam

- Observe for **symmetry of movement** and posturing
- Movements should be smooth and symmetrical
- Term infant lies with **hips abducted and partially flexed, knees flexed, arms are adducted and flexed at elbow, fists are loosely clenched with thumb resting in the palm or lying adjacent to fingers**
- Abnormalities of tone
- **Newborn tremors, chin trembles, lower lip quivers normal, immature nervous system**

Newborn reflexes

- Sucking – present at birth
- Rooting – infant’s head turns to stroking and mouth opens
- Palmar grasp
- Plantar grasp
- Babinski – Plantar extension of toes when stroking bottom of foot, is positive until one year of age. If remains positive sign of upper motor neuron damage
- Stepping reflex

Newborn Reflexes cont.

- Galant reflex – truncal incurvation , hip turns with stroking of back, symmetrical
- Startle reflex (moro) presence critical to determine intact nervous system
- Tonic neck reflex – (fencing reflex) May not be present until one month of age.



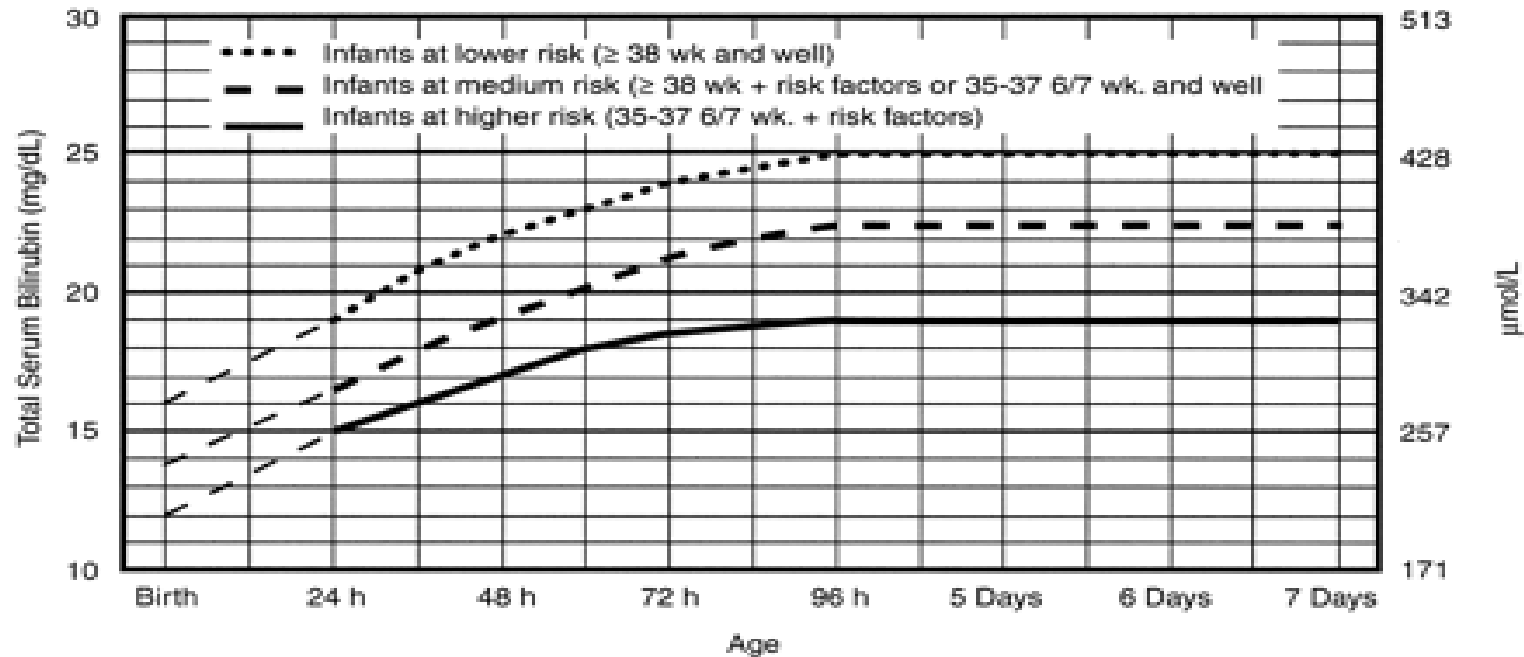
Assessment of the Newborn

Integumentary

- Physiologic Jaundice - Bilirubin deposited on skin, **peaks at day 3-5 of life- usually resolves by day 10 of life**
- Estimating bili level by progression
 - **Cephalocaudal-** beginning with sclera and mucous membranes
 - Estimated 5 if nipple line
 - Estimated 10 if hips
 - Estimated > 12 lower extremities
 - Verify with lab work

Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation

- Promote and support successful breastfeeding.
- Establish nursery protocols for the identification and evaluation of hyperbilirubinemia.
- **Measure the total serum bilirubin (TSB) or transcutaneous bilirubin (TcB) level on infants jaundiced in the first 24 hours.**
- Recognize that visual estimation of the degree of jaundice can lead to errors, particularly in darkly pigmented infants.
- Interpret all bilirubin levels according to the infant's age in hours.
- Recognize **that infants at less than 38 weeks' gestation**, particularly those who are breastfed, are at **higher risk** of developing hyperbilirubinemia and require close surveillance and monitoring.
- Perform a systematic assessment on all infants before discharge for the risk of severe hyperbilirubinemia.
- Provide parents with written and verbal information about newborn jaundice.
- Provide appropriate follow-up based on the time of discharge and the risk assessment.
- Treat newborns, when indicated, with **phototherapy or exchange transfusion.**



- The dashed lines for the first 24 hours indicate uncertainty due to a wide range of clinical circumstances and a range of responses to phototherapy.
- Immediate exchange transfusion is recommended if infant shows signs of acute bilirubin encephalopathy (hypertonia, arching, retrocollis, opisthotones, fever, high pitched cry) or if TSB is ≥ 5 mg/dL (85 $\mu\text{mol/L}$) above these lines.
- Risk factors - isoimmune hemolytic disease, G6PD deficiency, asphyxia, significant lethargy, temperature instability, sepsis, acidosis.
- Measure serum albumin and calculate B/A ratio (See legend)
- Use total bilirubin. Do not subtract direct reacting or conjugated bilirubin
- If infant is well and 35-37 6/7 wk (median risk) can individualize TSB levels for exchange based on actual gestational age.

Physiologic Hyperbilirubinemia

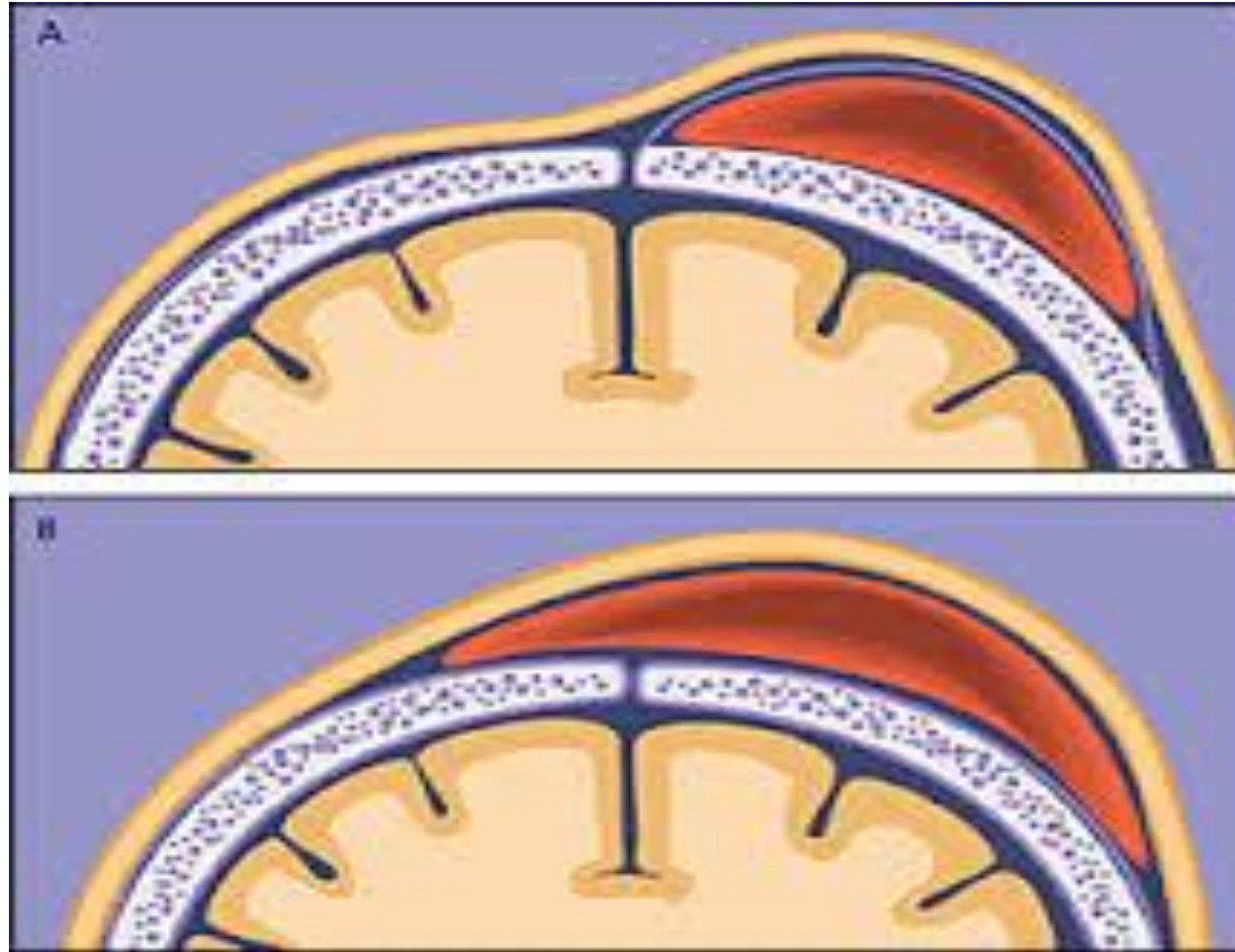
- Treatment
 - Hydration and feeding
 - Phototherapy
 - at or above 15 mg per dL in infants 25 to 48 hours old
 - At or above 18 mg per dL (308 mol per L) in infants 49 to 72 hours old
 - At or above 20 mg per dL (342 mol per L) in infants older than 72 hours
 - Exchange Transfusion

Integumentary

- Bruising due to traumatic delivery vs **mongolian spots**
- **Acne of newborn**
 - Small red facial bumps
 - Begins 3 -4 weeks of age
 - May last 4 to 6 months
 - **Transfer of maternal androgens just prior to birth**
 - No good treatment
- **Erythema Toxicum**
 - ½ to 1-inch erythematous papules, vesicles
 - Can be numerous and on any body surface
 - Transitory on trunk and perineum



Cephalohematoma vs Caput



Neck

- Full range of motion, easily rotates neck
 - **Rooting reflex causes infant to open mouth and turn head**
 - **Head persistently turned to one side suspect torticollis**
- Clavicle inspection
 - Evidence of fracture
 - **A palpable mass, crepitus or tenderness**
 - Observe for equal arm movements

Perineum

- Check anus for **patency and anal wink**
- Female newborns – **labial swelling with enlarged clitoris**
 - As maternal hormones decline infant may have clear, white or blood-tinged discharge
- Male – Penis
 - **Meatal opening should be center of shaft**
- Scrotum - inspect for size and presence of testes
 - **Testicle is not in the scrotum in about 4%** of full-term newborn males (Preterm infants higher percentage - testes do not descend until 32 weeks gestation)
 - **Undescended at one-year of age REFER for surgical intervention**

Anticipatory Guidance of the Newborn

- Feeding
 - Feed when hungry
- Breastfeeding
 - **8-12 times in 24 hours**
 - Need to supplement with **VIT D**
 - **400IU per day**
 - Formula Bottle feeding
 - **2 ounces every 2-3 hours**

Anticipatory Guidance of the Newborn

- **Safety**

- Car seat
- Smoking
- Sleep
- Temperature

- **Routine baby care**

- Elimination
- Umbilical care
- Hand washing

AAP Guidelines on Sleep

- Place the baby **on his or her back on a firm sleep surface** such as a crib or bassinet with a tight-fitting sheet.
- **Avoid use of soft bedding**, including crib bumpers, blankets, pillows and soft toys. The crib should be bare.
- **Share a bedroom with parents, but not the same sleeping surface, preferably until the baby turns 1 but at least for the first six months.** Room-sharing decreases the risk of SIDS by as much as 50 percent.
- **Avoid baby's exposure to smoke, alcohol and illicit drugs.**

Atypical Newborns

- **Drug exposure/Signs of Withdrawal**
 - General:
 - **high-pitched cry, poor feeding and sleeping, ↑ muscle tone, tremors, sweating, excoriation of heels, elbows**
 - Cocaine (Crack):
 - SGA and IUGR, ADHD & LD, delayed growth, feeding difficulties, irritability, tremors
 - Alcohol:
 - SGA, MR, delayed growth, heart & CNS problems, dysmorphic facial features

Developmental Screening

- Developmental *Surveillance*
 - Should be done at every office visit
 - Informal process
 - **Compares the child's skill against list of expected milestones**
- Developmental *Screening*
 - Done at WCC
 - **Standardized evidenced based tools should be used**
 - **High risk kids should be screened more often**
 - Early intervention is key!

Developmental Screening Tools

- **Edinburgh (free)**
 - Screens for maternal depression
 - 2 weeks and 2 months
- **Denver Developmental Screening Test II (DDSTII)**
 - Birth to 6 years
 - Does not adequately assess the complexities of socio-emotional development
- **Ages and Stages (ASQ)**
 - 4-60 months
 - Parent report
 - Available in Spanish
- **Ages and Stages-Social Emotional (ASQ-SE)**
 - Screening for behavioral and emotional problems
- **Pediatric Evaluation of Developmental Status (PEDS)**
 - Parent report

Anticipatory Guidance

The First Year of Life

Anticipatory Guidance: 2 months

- *Breastfeeding still best
 - **avoid fish containing mercury**
- Back to sleep
 - no more swaddling unless held
- Breastfeeding
- Non-nutritive sucking
 - **pacifiers decrease incidence of SIDS**
 - **need to get hands to mouth**
- Babies may be **crying more: learn to self soothe.**
- Assess babe/ parent relationship
- Assess for **maternal depression**
- **"Don't shake the baby"** discussion
- **Tummy time**
- Talk, sing, & read to baby
- Childcare
- Car seat safety
- Firearm safety
- Burns/ hot liquids
- Immunizations

Anticipatory Guidance: 4 months



- **Increased drooling:** teething?
- Think about **starting solids**
- **Discourage bottle propping**
- Needs non-nutritive sucking
- **Sleeping through the night**
- **Able to self soothe**
- **Tummy time**
- Back and forth **talking**
- Reading is important
- Use name of objects
- **No walkers**
- Child-proofing
- Immunizations

Anticipatory Guidance: 6 months

- Feeding
 - Breast is best
 - **No more night feedings**
 - No bottle in bed
- Introducing solids
 - **Structured mealtimes with family**
 - **Give spoon and cup to infant**
 - **Normal messiness**
 - **Iron, zinc, vitamin D**
- Teeth
 - Brush and floss
 - Fluoride
- Sleeping
 - Work on sleeping thru night
- Cognitive
 - **Name activities as you do them**
 - **Cause and effect toys**
 - **Interactive games**
 - **Reciprocal play**
- Safety
 - Car seats
 - Burns/ hot surfaces
 - Child-proofing
 - Child care
 - Immunizations

Anticipatory Guidance: 9 months

- **Feeding:**
 - Predictable, healthy meals & snacks
 - **Transition to cup/ self feeding**
 - **Weaning (start thinking about it)**
- **Sleep:**
 - Sleeping through the night
 - **Easily disrupted (busy day, vacation, etc.)**
- **Cognitive**
 - Predictability is important; consistent
 - **Praise good behavior**
- **Oral Care**
 - **Brush and floss teeth; fluoride**
 - Dental home visit
- **Language**
 - Social referencing (look to parents as reference)
 - Uses gestures
- **Motor**
 - Playing is important (**cause and effect**)
 - **Rapid development 9-12 months**
- **Safety**
 - Water (bath, pool, etc.)
 - Ingestion/ poison safety
 - Firearm safety
 - Stair safety /home safety
- **Use “No” carefully**
- **Immunizations**

Physical Exam

Normal Findings

- AF: 2-5 cm at birth
- AF closes: 18-24 mo
- PF: 1-2 cm at birth
- PF closes: 6 weeks-2 mo
- Overriding sutures until 5-6 mo
- Skull shape
 - Skull deformities from birth will straighten by 3 months
- Always check parent's heads
- Hair distribution and color

Head

Abnormal Findings

- Micro-/ macrocephaly
- **Craniosynostosis**
 - premature closure sutures/
fontanelles
- Dolicocephalic
 - Long and narrow
- Plagiocephalic
 - Positional
- Hair
 - White forelock
 - Whorls

VISION

- * Careful prenatal history and interim history at each age WCC
- * **Corneal Light Reflex**
 - +Any ocular misalignment at 4-6 mo. of age-REFER
- * EOMI: by 6 mo infant should follow horizontally and vertically
- * Nystagmus: may be normal up to one month of age
- * Cover/ Uncover: +/-
- * PERRLA
- * **Red Reflex:** exam each eye separately (darkened room)
 - +Bruckner: RR both eyes from 2-3 feet away (darkened room)



Visual Development: Infancy

Age	Developmental Stage of Vision	Visual Acuity
Birth	Awareness of light and dark	
2 weeks	Intermittent fixation	
4 weeks	Follows moving object	
6 weeks	Fixates and follows moving object	
8 weeks	Convergence beginning to stabilize	
4 months	Looks at hands and feet	20/300
6 months	Retrieves small objects; hand-eye coordination appears	
9 months	Binocular vision established; depth perception	
12 months	Interested in pictures; fusion is established	20/180

EYE

NORMAL FINDINGS

- Extra ocular movements intact
- Corneal light reflex equal
- PEERL(A)
- Red reflex is present bil
- Blink reflex present at 4-5 months
- Nasolacrimal duct

ABNORMAL FINDINGS

- Ptosis
 - May be familial
 - May cause amblyopia (covers ½ pupil)
- EOM abnormal
 - Neuro deficit
 - Orbit fracture; Orbital cellulitis
 - Amblyopia; blindness
 - Nystagmus
 - Not normal after 1 month
- Corneal Light Reflex abnormal
 - Strabismus
 - Pseudostrabismus
- White reflex (leukocoria)
 - Retinoblastoma
- Blocked NLD
- Conjunctivitis

HEARING

- Universal Newborn Hearing Screening
 - Birth to 1 month
 - Failed: referred to audiologist by 3 months and early intervention by 6 months of age
- Infancy: reaction to noise at different frequencies
- Refer to **ENT or audiology any child under 3 years of age:**
 - **Parental concern about hearing**
 - **At risk for or known speech/ language delay**
- Do not delay evaluation



Ear

Normal Findings

- Normal positioning
 - Top of pinna lines up with outer canthus of eye
- Normal shape
- TM's pearly gray and landmarks intact



Abnormal Findings

- **Low set or rotated ears worrisome for syndrome**
- **Preauricular pits**
- Otitis media



Nose, throat, and neck...

Normal Findings

- Nasal patency
- Throat with normal structures
- Teething



Abnormal Findings

- Choanal atresia
- **Nasal obstruction from mucus is sufficient to cause marked respiratory distress**
- Nasal foreign body
- Thrush
- Torticollis

Oral Health

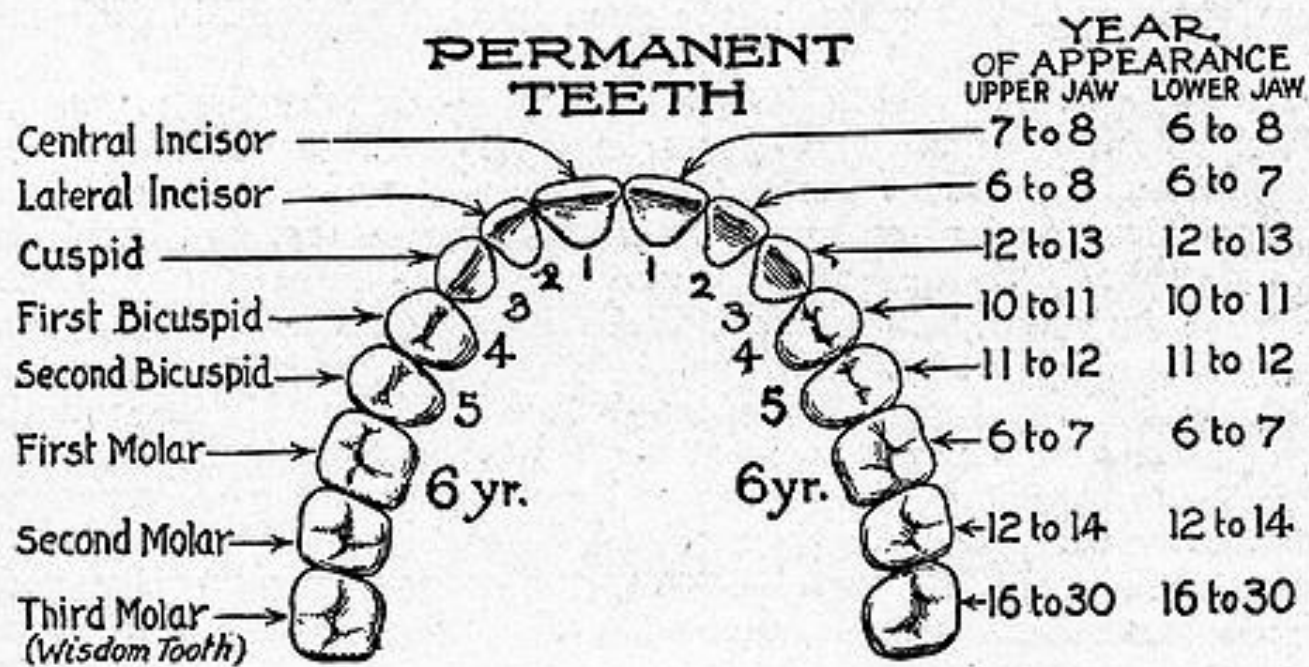
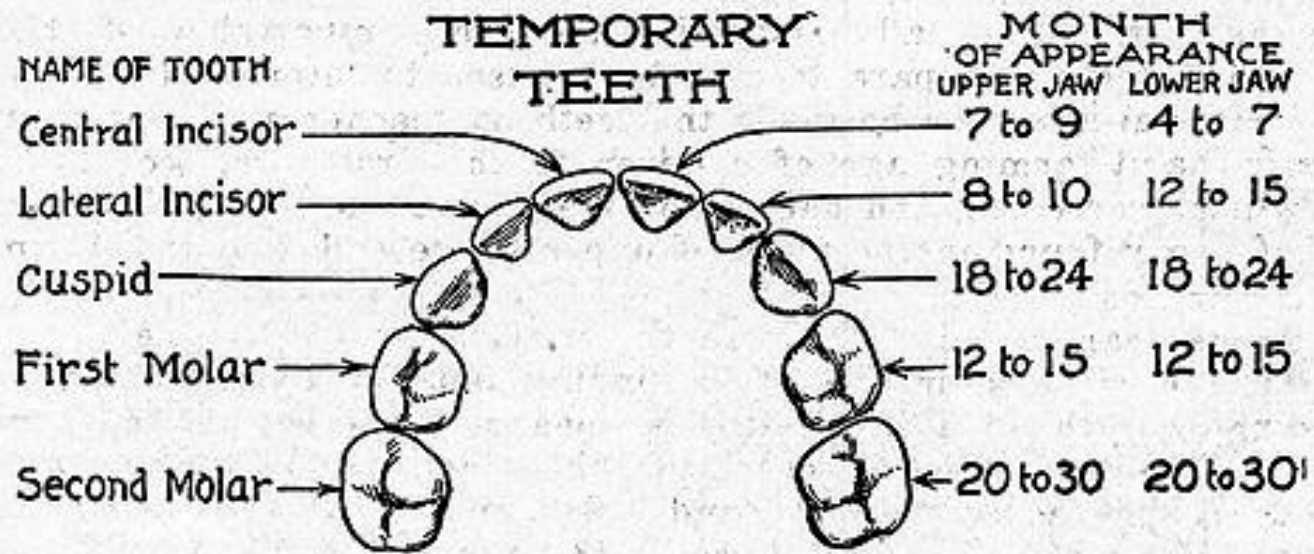
- Refer to dentist
 - When first tooth erupts if child at high risk of caries
 - **Within 6 months of the first tooth eruption**
 - **No later than 12 months**
- AAP Oral Health Risk Assessment tool
- High risk for dental caries includes
 - Mother with **active dental caries**
 - **More than 3 between meal** sugary snacks or drinks
 - Child put **to bed with a bottle containing a sugary liquid**
 - ALL Children with **special health care needs**
 - Living in **low income area**
 - **Immigrant**

Oral Health

- Prevention of dental caries
- **Fluoride dental varnish** (strong evidence)
 - Applied by primary care at WCC visits
 - **Start with first tooth eruption through 5 years of age**
 - **Recommended every 6 months for children NOT at risk**
 - **Recommended every 3 months for children AT risk**
 - Does not cause fluorosis if swallowed
- **Fluoride supplementation**
 - Not needed before 6 months of age
 - **Needed >6 months of age if water in deficient in fluoride.**
 - There is not standard mentioned in Bright Futures
 - Will cause fluorosis if swallowed
- **Fluoridate toothpaste only**
 - **Infants scant amount on brush**
 - Size of piece of rice
 - Can cause fluorosis

Oral Health

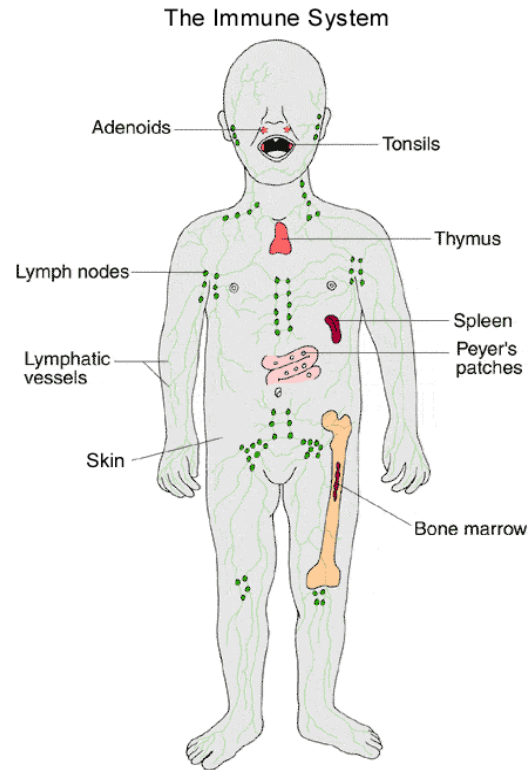
- Natal teeth
 - **Present at birth**
 - Rare in Caucasian
 - Common in Native Americans and children with cleft lip/ palate
 - 1:2000 births
- Neonatal teeth
 - **Erupt in first month of life**
- Refer to dentist
 - May or may not be pulled
 - ? Aspiration risk
- Parental Oral Health
 - Practice good oral hygiene
 - **Do not share utensils or toothbrush with child**
 - **Do not clean pacifier in parent mouth**
 - Consult with dentist regarding
 - Xylitol gum or lozenges
 - May have positive effect by decreasing bacterial load in adult's mouth.



Lymph

Normal Findings

- Lymph system includes:
 - Lymph nodes
 - Tonsils
 - Adenoids
 - Thymus
 - Spleen
- Children have **very reactive lymph tissue.**
- **Shotty, non tender, mobile lymph nodes are common**



Abnormal Findings

- **ALWAYS WORRY ABOUT SUPRACLAVICULAR AND SUPRASTERNAL LYMPH NODES**
- Nodes >1-2 cm, firm, immobile, tender, with overlying redness are concerning for lymphadenitis
- Nodes that are hard, matted, and immobile concerning for malignancy

Cardiac

Normal Findings

- Heart rate regular
- No murmurs
- No rubs or clicks
- **Pulses equal bilaterally**
- Perfusion is good
- **CRT <2-3 seconds**
- Normal growth & development

Abnormal Findings

- Tachycardia
- Bradycardia
- Arrhythmias
- **Murmurs**
 - Functional
 - Pathologic
- **Pulses in upper extremities normal or bounding with lower extremities weak or nonexistent**
- **Poor perfusion r/t dehydration or shock**
- **Feeding intolerance; poor growth**

Lungs

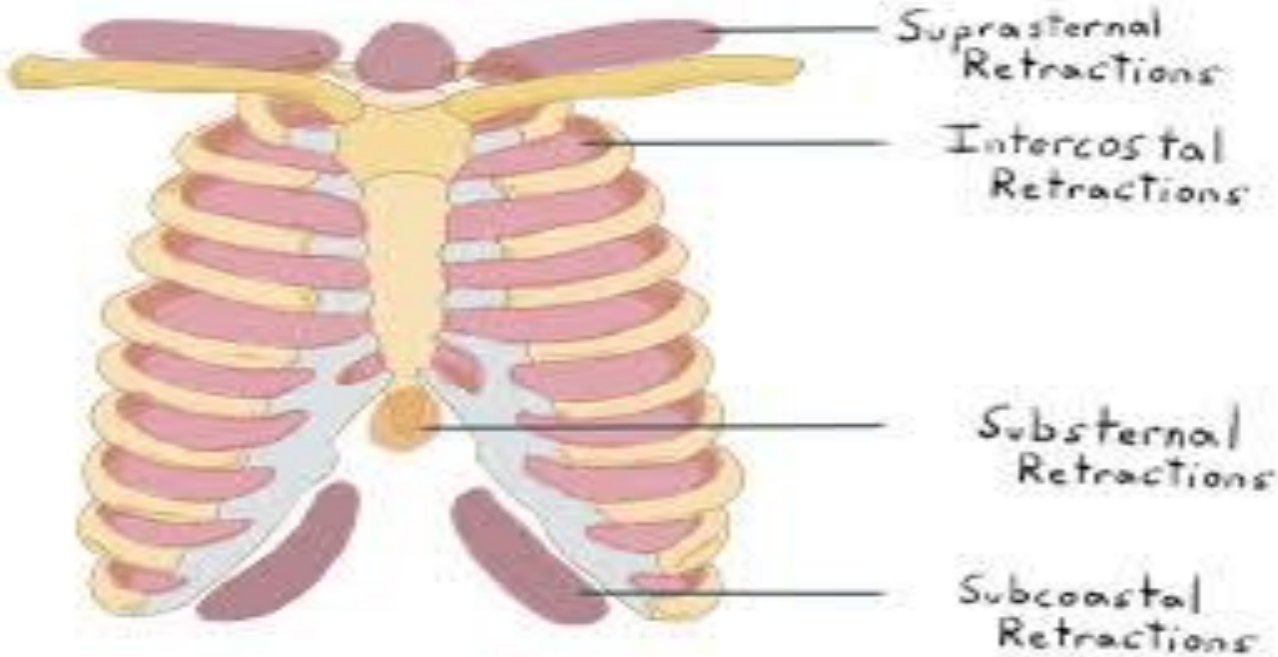
Normal Findings

- **RR 40-50**
- No increased WOB
- Clear breath sounds with good air exchange

Abnormal Findings

- Increased WOB
 - increased RR
 - **Retractions**
 - **Accessory muscle use**
 - **Nasal flaring**
 - **Stridor**
 - **Grunting**
 - **Wheezing**

Retractions



Abdomen

Normal Findings

- Normal growth and development
- **Normal stool output**
- **and round**
- Active bowel sounds
- Tolerating feeds
- Flat umbilicus

Abnormal Findings

- Constipation
 - Risky times
 - Blood on stool
- Diarrhea
 - **Blood**
 - **Mucus**
- Vomiting
 - **Projectile vomiting**
 - **Bilious emesis**
- **Firm, tender:** acute abdomen
- Umbilical hernia

Female Genitalia

Normal Findings

- Normally place clitoris, vagina, urethra, and rectum
- **A creamy white or slightly blood tinged discharge for up to 10 days after birth**

Abnormal Findings

- Discharge

Male Genitalia

Normal Findings

- **No formal recommendation for or against circumcision**
- **Foreskin not retracted till 3-4 years of age**
- Normally placed urethra
- Testicles
 - Descended by 6 mo
 - Cremasteric reflex
 - Retractable testes: known to have been in scrotum
 - Rugae

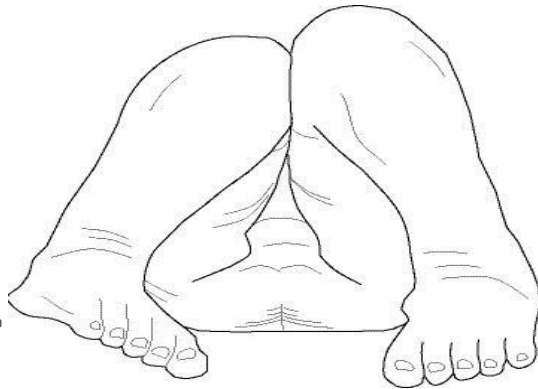
Abnormal Findings

- **Paraphimosis:** retracted foreskin of an uncircumcised male cannot be returned to its normal anatomic position
- **Balanitis:** inflammation of the glans penis
- **UTI**
 - 2x more common in males until 6 months of age
 - Rare after the age of 6 months
- **Inguinal hernia**

MSK

Normal Findings

- Normal tone and strength
- Symmetrical
- **No hip clunks**
 - **ORTOLONI**
 - **BARLOW**
- Spine
 - **No hair tufts or**
 - **Congenital scoliosis**
- **Metatarsus abductus**



Abnormal Findings

- Hypotonia
- Hypertonia
- Delayed developmental milestones
- Asymmetry
- Developmental Dysplasia of the Hip
- **Club feet**



Fever as a Sign of Illness in Young Children

- Fever itself is never dangerous
- There is some evidence it may be beneficial.
- Fever is a symptom, not a disease.
- **Fevers rarely rise above 106.**
 - FEVER VERSUS HYPERTHERMIA
- Much “fever phobia” among parents and providers.
- Fever is common in young children with minor illnesses such as colds.

Septic Work Up

- **Fever of unknown origin**
- Infants **less than 3 months** with any **fever 100.4 or greater.**
 - at increased risk for bacteremia up to age 3 years of age.
- Delineate symptoms to find out what you think it might be.
- **Full SWU:** includes **lumbar puncture.**
- **Mini SWU (low risk):** CBC, blood culture, UA (culture), stool culture (if diarrhea present), CXR
- If 1-3 months of age: Treatment with **Ceftriaxone 50mg/kg x 1 IM with 24 hour follow up in clinic.**

Antipyretic Doses in Children

- **Acetaminophen**—10-15 mg/kg every 4-6 hours, not to exceed 5 times a day
- **Ibuprofen** (age 6 months and older) 10 mg/kg every 6 to 8 hours
 - Not to be used with chicken pox or varicella zoster
- Give antipyretic to make them more comfortable and willing to drink fluids.
- NEVER aspirin for fever or viral illness

How NOT to Treat a Fever

- Sponging with cold cloths. (stop any shivering)
- **Sponging with alcohol--DANGEROUS** due to alcohol absorption through the skin.
- **Alternating acetaminophen and ibuprofen--**no evidence to support its' efficacy & may lead to overdosing due to confusion in dosing times (and feeds fever phobia)
- **Withholding food or fluids--**let the child eat and drink whatever they choose and encourage fluids.

Colic

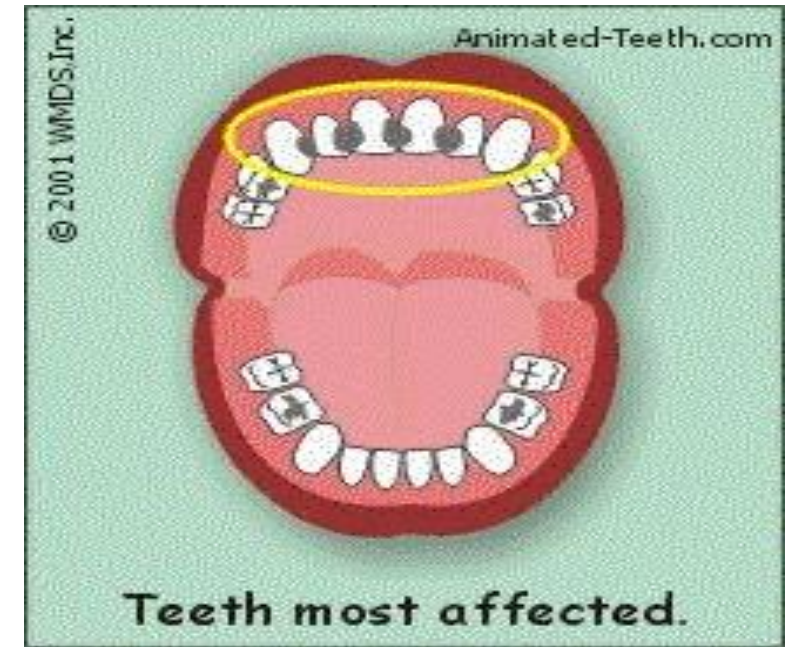
- Episodes of inconsolable crying in young infants without any discernable cause.
- Greater than 3 hours a day for 3 days a week
- Typical crying curve starting in the second week, peaking at 6 weeks and often resolved by 4 months
- Crying most common in the **evening**
- Need to rule out illness or injury, volvulus, intussusception, incarcerated hernia, etc.
- Colic will not harm the baby but it's very stressful to families.

Management of Colic

- Rule out other causes of incessant crying.
 - TOURNIQUETS
 - CORNEAL ABRASION
- Reassure and support the caregivers.
- Try to break the crying-air swallowing-crying cycle.
- Use safe options to calm the infant
- **RARELY is colic due to food allergies or intolerance.**
- **Have a plan for when you cannot take it anymore!**

Baby Bottle Tooth Decay

- Refers to cavities due to prolonged and frequent exposure to sugars.
- Often occur on the **inside of the front teeth.**
- Children who take bottles to bed are at highest risk.
- Lactose in milk is a sugar.
- **NO bottles in bed, get child off bottle shortly after teeth erupt.**



Early Childhood Caries



- Prevention is key
- **No bottles after 1 year of age**
- **No bottles in bed**
- Clean teeth
- “Sip all day, get decay”
- Sucking on a baby’s pacifier and putting it back in their mouth inoculates the mouth with cavity-causing bacteria.

Lead Poisoning

- Lead poisoning can have long-term behavioral, cognitive, and physical effects.
- Not all children with lead exposure have symptoms
 - USPSTF recommends not treating a high serum lead level in an asymptomatic child.
- Major environmental exposure from **lead-based paint dust**.
- Lead enters body primarily through inhalation or ingestion. Children who are **deficient in iron absorb lead more readily**.

Lead Screening

- AAP recommends **screening at 12 months and again if at risk at 24 months.**
- **USPSTF does not recommend universal screening**
- Screening for risk of exposure:
 - ***Does the child live in, visit, or attend day care in a house built before 1960 that is in poor condition or renovated in the last 6 months?***
- Public health role of investigation, determination of exposure, follow-up, monitoring, & education.

Thrush

- **Yeast infection of the oral mucous membranes.**
- **White patches on the buccal mucosa**, and perhaps a white coating on the **tongue**.
- Can interfere with the child's ability to eat.
- Often associated with **candida diaper rash** or with **yeast infection of the nipples of the nursing mother**.
- Treated with **Nystatin** solution
 - Cream for mom's breasts and diaper dermatitis
- Can occur following a course of antibiotics

Oral Thrush



Major Causes of Injury and/or Death in Infancy

- Falls
- Burns
- Poisoning
- Choking
- Abuse
- Drowning
- Fires
- Motor vehicle passenger injuries

The Developmental Approach to Injury Risk

- **Infants**

- Completely dependent on caretaker
- Rapidly developing motor skills
- **Increased risks for falls when learn to roll over**
- **Increased risk for choking as pincer grasp develops**
- Lots of **hand-mouth behavior**
- **No real protective instincts**
- **Able to access environmental risks when they learn to crawl and walk**

Car Safety for Infants

- Correctly used safety seats are estimated to reduce fatalities by 71% and injuries by 67%.
- The **GOOD NEWS:**
 - Rate of car seat use is high.
- The **BAD NEWS:**
 - Between **1/2 and 1/3** of all car seats are used incorrectly.

New AAP guidelines from 2011

- **Rear facing until age 2** or until they reach the highest weight or height allowed by the car seat manufacturer.
- All Children 2 and older, or those younger than 2 who have outgrown their rear facing seat should be in a **FORWARD facing seat with a 5 point harness until age 4.**

Never use a car seat that...

- You do not know the history of
- Has visible cracks
- Is too old
- Does not come with instructions
- Is recalled
- Was in an accident

Question 1

You are seeing a 4-week-old infant whose mother states that the child's right eye is wet all the time and sometime there is some thick mucus on the lashes. There has been no fever and the baby is feeding well. Eye exam reveals a normal red reflex bilaterally with no evidence of purulent drainage, conjunctival erythema, or cloudiness over the cornea. You suspect:

1. Adenovirus conjunctivitis
2. Nasolacrimal duct stenosis
3. Chlamydial conjunctivitis
4. Congenital cataract

Question 1

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Answer: Nasolacrimal duct stenosis

Question 2

A 9-month-old infant who was born at 32 weeks reaches for a block with only the left hand. The right arm remains still at the side of her body. The PNP would:

1. record these findings as normal for a premature infant
2. Refer the infant for further evaluation
3. refer the child for a muscle biopsy
4. record that the child will likely be left handed

Question 2

A 9-month-old infant who was born at 32 weeks reaches for a block with only the left hand. The right arm remains still at the side of her body. The PNP would:

Answer: Refer the infant for further evaluation

Question 3

During a 2-month-old well child visit you you note that the red reflex in one eye seems paler than in the other. What is the most appropriate follow-up step for this observation?

1. Assess and document a normal the corneal light reflex in that eye.
2. Perform the cover/ uncover test.
3. Re-evaluate the red re-screening test in 2 weeks.
4. Refer the infant to a pediatric ophthalmologist immediately

Question 3

During a 2-month-old well child visit you you note that the red reflex in one eye seems paler than in the other. What is the most appropriate follow-up step for this observation?

Answer: **Refer the infant to a pediatric ophthalmologist immediately**

Question 4

Primary dentition erupts between:

1. 6 and 11 years
2. 6 months and 30 months
3. 1 and 5 years
4. 12 months and 24 months

Question 4

Primary dentition erupts between:

Answer: 6 months and 30 months