

## **Parenting 101 Baby Basics**

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## **Introduction**

- Let's embark on a broad survey of baby topics
  - Survivor-guide style
  - Low tech (no apologies)
  - High impact
  - The stuff parents want to know
  - The stuff they don't teach in medical school

## **Parenting 101: Baby Basics**

- Baby Jobs – eat, grow, pee/poop, sleep
- Babies don't come with user manuals
- Parents **WILL** find information
- Not all information is evidence-based
- Physician Job = provide the **BEST** information
- Keep it practical and understandable

## **Feeding: Breast Milk is Best**

- Exclusive nutrient source x first 6 months
- Use until age 12 months (or longer)
- Free and convenient
- Antibodies transfer immunity
- Easy-to-Digest Proteins
- Lipid mix provides optimal absorption
- Minerals bound to digestible proteins

## **Breast Feeding Tips**

- Expect Challenges and get help early
- La Leche League, breastfeeding consultants
- More stimulation = more production
- Pump and Store
- Store in meal-sized increments
- Store in glass or made-for-BM plastic

## **Infant Formula**

- Cow milk base – tweaked by formula company
- Organic and soy-based options
- Sensitive (lactose free)
- Hydrolyzed proteins (hypoallergenic)
- Thickened with rice starch (GERD)
- Added soy fiber (Diarrhea)

## **Breast Milk Storage Times**

- Room temperature: 6 hours
- Insulated cooler with ice packs: 1 day
- Refrigerated storage: 1 week
- Freezer storage: 6 months
- Thaw in fridge or warm water

## **Formula Feeding**

- To start: hours and ounces match up
  - 1-2 ounces every 1-2 hours
  - 2-3 ounces every 2-3 hours
- Titrate up or down depending on:
  - Growth and hydration
  - Spit Ups

## **Animal Milk**

- No cow or goat milk in first year of life
- Poor iron absorption
- Protein sensitivity / gut wall inflammation
- GI bleeding common
- Severe anemia can result

## **Baby Food**

- Stage 1 – cereals, fruits, vegetables, meat
- Stage 2 – combinations
- Stage 2.5 – thicker / textures
- Stage 3 – chunks
- Stages 4 & 5 – toddlers
- Juice – after 6 months, limit to 4 oz per day

## **Baby Food**

- Parents (and grandparents) antsy to start
- Good reasons to wait
  - Food allergies
  - Obesity
  - Choking
- AAP now recommends starting at 6 months
- Child should be developmentally ready

## **Vitamins & Minerals**

- Formula contains all necessary nutrients
- No supplements needed for healthy babies
- Nursing moms should maintain good nutrition
- Breast milk deficient only in Vitamin D
- AAP: give all BF babies Vitamin D 400 IU / day

## **Vitamins & Minerals**

- **Vegan Diets lack Vitamin B12 (anemia, CNS)**
  - Supplement mother or baby
- **Premature babies have fewer iron stores**
  - Supplement baby

## **Spit Ups (GERD)**

- **Common!**
- **Warning Signs**
  - Projectile nature, blood, bile
  - Poor growth, choking, wheezing
- **Happy spitters = laundry problem**
- **Treatment – smaller, more frequent feeds**
- **Consider thicker feeds (watch weight!)**
- **H2 blockers, PPIs (if fussy or airway irritation)**
- **Surgical treatment rarely necessary (Nissen)**

## **Fluoride**

- **Not necessary during first 6 months**
- **Fluoride IS PRESENT in breast milk**
- **Supplement if local water < 0.3 PPM**
- **Substitute tap water with fluoridated water**
- **Fluoride drops are an option (not ideal)**
- **Well water should be tested if used**
- **Too much fluoride is also a concern (Fluorosis)**

## **Newborn Growth**

- **Babies are born with extra fluid on board**
- **Leaves wiggle room for feeding delay**
  - Latching problems, milk production problems
- **Acceptable loss = 10% of birth weight**
- **Monitor hydration status**
- **Back to birth weight by age 2 weeks**

## First Month Growth Averages

- Average weight gain = 2/3 ounce per day
- Average length gain = 1.5 to 2 inches
- Average head circumference gain = 3 cm

## Growth Charts

- Special well-standardized growth charts
  - Premature babies
  - Trisomy 21
  - Turner Syndrome
- Beware of online ethnic growth charts
  - Out of date
  - Limited sample sizes

## Growth Charts

- Compare child's growth to known population
- "Standard" chart = multi-ethnic Americans
- Measure weight, height, head circ, BMI
- Reported in % tiles (normal = 5 - 95 % tile)
- Allow for snap shots in time
  - Is baby maintaining appropriate % tile?
  - Consider family growth and ethnic group

## Developmental Milestones

- Screen with standardized, validated tool
- Important part of every well-child encounter
- Denver Developmental Screening Test
  - Commonly used
  - Gross and fine motor
  - Receptive and expressive language
  - Personal and social skills
  - Results in "Risk Category"
  - Normal, Questionable, Abnormal

## Autism Screening

- AAP and CDC recommends screening at
  - 18 and 24 months of age
- Many tools available
  - Ages and stages questionnaires (ASQ)
  - Communication and symbolic behavior scales (CSBS)
  - Parents' evaluation of developmental status (PEDS)
  - Modified checklist for autism in toddlers (MCHAT)
  - Screening tool for autism in toddlers and young children (STAT)

## Early Intervention

- Available in all states (federally funded)
- Ohio: Help Me Grow (Ohio Dept of Health)
- Multidisciplinary
  - Social Work, PT, OT, Speech, Dietician
- Often effective when stimulation issues are the cause of delay
- Persistent delay requires referral to a developmental specialist

## Developmental Delay

- Like growth, development occurs with variety
- Potential causes of developmental delay
  - Family pattern (especially if delay is not global)
  - Poor stimulation (young parents, depressed mom)
  - Disease State (Autism, Genetic Syndromes)
- Outcomes improve with
  - Early identification
  - Early intervention

## Nationwide Children's Hospital

- Developmental Resources
  - Child Development Center
  - Center for Autism Spectrum Disorders
    - Multidisciplinary
    - Full support of all pediatric specialties
  - Genetics Clinic
    - Diagnosis and management of genetic disorders
    - Genetic counseling
    - Pregnancy planning

## Infant Urination

- Urine production is ONE indicator of hydration
- Others
  - Weight loss
  - Tachycardia
  - No tears, dry mouth, cracked lips
  - Sunken fontanelle, sunken eyes
  - Poor skin turgor, delayed capillary refill

## Infant Stool

- Wide range of normal consistency
  - Thin yellow seedy, mustard-like, formed clay
- Wide range of normal frequency
  - Several stools per day, 1-2 x per week
- Volume, consistency, frequency, color, smell
  - Depend on diet, gut absorption, transit time
  - Mix of bacterial colonization

## Infant Urination

- Normal urine output
  - 6 or more wet diapers in 24 hours
  - Absorbent diapers make determination difficult
- Concentrated Urine (baby needs more fluid)
  - Small volume with strong odor
  - Brick Dust
    - Pink / red / orange powdery stain in diaper
    - Uric acid crystals

## Concerning Stool

- Red
  - Possible blood
  - Confirm with stool guaiac
  - Other possibilities
    - Diet
    - Medications
    - Purple dyes
    - Iron precipitation (cefdinir/Omnicef)

## Concerning Stool

- **Black Tarry**
  - Meconium (amniotic fluid ingestion)
  - Iron supplements
  - GI Bleed
- **White / Light Gray**
  - Antacid ingestion
  - Biliary obstruction (especially with jaundice)
- **Greasy**
  - Cystic Fibrosis

## Blood in the Stool

- **Possible causes**
  - Anal fissure
  - Swallowed maternal blood
  - Necrotizing Enterocolitis
  - Food allergy (cow milk protein)
  - Bacterial Infection
    - Salmonella
    - Shigella
    - E Coli O157:H7

## Concerning Stool

- **Diarrhea (watery, increased volume)**
  - Viral and bacterial infections
  - Juice intake
  - Lactose intolerance
  - Milk or food allergy

## Blood in Stool

- **Possible causes**
  - GI Bleed
    - Malrotation with mid-gut volvulus
    - Intussusception
    - Meckel's Diverticulum
    - Inflammatory Bowel Disease
  - Coagulation Disorders



## Blood in Stool

- **Considerations**
  - Degree and duration
  - Other symptoms
    - Bilious vomiting
    - Fever
    - Fussiness
  - Physical examination
    - Anal fissure
    - Weight loss
    - Tender / distended abdomen

## Constipation

- **UNLIKELY constipation**
  - 1 or 2 bowel movements/week (as usual pattern)
  - Struggling / straining to have a bowel movement
- **LIKELY constipation**
  - Dramatically fewer bowel movements than before
  - Large, hard stool +/- trace blood on surface
  - Frequently straining > 10 minutes without success
  - Fussy, spitting up more than usual

## Blood in Stool

- **Work-up**
  - Depends on symptoms, history, physical
  - Imaging: Plain Films, Upper GI, Ultrasound
  - Stool culture
  - CBC, Coags
  - Formula Change

## Constipation Treatment

- Rectal Stimulation
- Glycerin Suppositories
- Juice
  - Apple, Pear, Prune
  - Undigested sugar (sorbitol) increase osmotic load
  - Use full-strength adult juice (processed)
  - Dose: 1 ounce per month of age QD or BID
    - Max dose 4 ounces per serving

## **Severe / Stubborn Constipation**

- Consider referral to GI specialist
- Possible causes
  - Hirschprung's Disease
  - Spinal Cord Abnormalities
    - Spina Bifida
    - Tethered Cord
  - Hypothyroidism
  - Other metabolic disorders

## **Cry It Out Method**

- Controversial in the parent world
  - Some swear by it
  - Some equate it with child abuse
- Start at 6 months of age
  - Infant should be put to bed **AWAKE**
  - Develop a plan for response to crying
  - Stick with the plan!
  - Modified "Ferber" Plan

## **Normal Infant Sleep**

- Prior to 6 months: anything goes!
- By age 6 months
  - 2/3 of babies wake/cry only 1 night per week
  - 1/3 of babies wake/cry 6-7 nights per week
    - By age 15 months, these wake/cry 2 nights per week
    - By age 24 months, these wake/cry 1 night per week
- Most infants wake every night
  - The difference is self-soothing vs crying
  - Self-soothing is an important skill and can be learned

## **Cry It Out Method**

- Studies have shown
  - Converts wake/criers to self-soothers
  - No adverse effect on long-term mental health

## Colic

- Begins by age 2-3 weeks!
- Usually resolves by 4 months of age
- Affects 25% of all infants
- Usually occurs around the same time each day
- Most common: late afternoon / evening

## Colic

- Take home for moms and dads
  - Colic is **COMMON**
  - 3 + hours of crying each day is frustrating
  - Frustration and anger are normal responses
  - Put baby in safe place and walk away
  - Parents need respite care!
  - The end is in site (most cases resolve by 4 months)

## Colic

- Description
  - Infant seems angry, difficult to console
  - Tense belly, drawn up legs, clenched fists
  - Cries > 3 hours per day!
- Possible Causes
  - CNS immaturity
  - GI sensitivity
    - Recent study: ? improvement with probiotics

## Conclusion

- Infants don't come with instruction manuals
- Bad advice is readily available
- Primary care doc **MUST** remain trusted source

## Resources for Parents

- PediaCast ([www.pediacast.org](http://www.pediacast.org))
  - Weekly podcast – radio talk-show format
  - Nationwide Children’s Hospital
  - News parents can use
  - Answers to listener questions
  - Interviews with pediatric experts
- AAP ([www.HealthyChildren.org](http://www.HealthyChildren.org))
  - Comprehensive site
  - Up-to-date well-child and disease information
  - Geared toward parents

## Why Injury?

- Unintentional injury is the leading cause of death in children and adolescents in the United States
- 1 child dies from an injury every hour, and every 4 seconds, a child is treated for an injury in an Emergency Department

## Parenting 101 Injury Prevention

**Dr. Sarah Denny, MD, FAAP**  
Assistant Clinical Professor, Pediatrics  
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## Leading Causes Of Unintentional Injury Deaths in Children < 1 year

- Suffocation
- Motor vehicle traffic
- Drowning
- Burn/Fire

## **Infant Suffocation Deaths**

## **Sleep Related Deaths in Infants**

1. Asphyxiation
2. SIDS
3. Undetermined

## **Suffocation deaths**

- Sleep related suffocation/asphyxiation
- Choking
- Strangulation
- Other

## **Types of Asphyxiation**

1. Suffocation by soft bedding
2. Overlay
3. Wedging or entrapment
4. Strangulation

## Suffocation deaths

- 68% are sleep related
- 84% of infant suffocations occur in the first 6 months of life
- Increasing
- Males are at slight increased risk
- Rate of suffocation deaths in African American babies are 165% times that of Caucasian babies

## AAP Safe Sleep Recommendations

- Prenatal care
- Avoid smoke exposure
- Avoid drugs and alcohol during pregnancy
- Breastfeed
- Pacifier at nap and bedtime
- Avoid overheating
- Immunize

## Preventing Suffocation Deaths in Infants



- Back to sleep
- Firm surface
- Room sharing without bed sharing
- Keep soft objects and loose bedding out of the crib

ABC's of  
Safe Sleep  
Alone, on their Back and in a Crib

Image provided courtesy of Kansas Infant Death and SIDS Network

## Child Passenger Safety

### AAP best-practice recommendation

- All Children 2 years or older, or those younger than 2 years who have outgrown the rear facing weight or height limit for their CSS should use a forward facing CSS with a harness for as long as possible



### AAP best-practice recommendation

- ALL infants and toddlers should ride in a rear-facing car seat until they are 2 year old or until they outgrow their car seat



Image provided courtesy of Wendy Thomas, Seattle, WA.

### AAP best-practice recommendation

- Children who have reached the weight or height limit of their forward-facing CSS should use a belt-positioned booster seat



## Booster Seats



## AAP best-practice Recommendation

- All Children Younger than 13 years should be restrained in the rear seat for optimal protection

## AAP best-practice Recommendation

- When children are old enough and large enough to use the vehicle seat belt alone, they should always use lap-and-shoulder seat belts for optimal protection

An infographic titled "IS YOUR CHILD IN THE RIGHT CAR SEAT?" featuring four icons representing different car seat types: an infant car seat, a convertible car seat, a booster seat, and a vehicle seat belt. Below the icons, the text "IS YOUR CHILD IN THE RIGHT CAR SEAT?" is written in bold. At the bottom, there are logos for "Ad Council", "SAFERCAR.GOV/THERIGHTSEAT", "NHTSA", and "Child Car Safety". A line of text at the bottom states: "Free downloadable posters, fact sheet and other campaign materials available at <http://www.safercar.gov/parents/TRS/toolkit.htm>".

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Image provided courtesy of NHTSA



## Installation

- According to the National Highway and Traffic Safety Administration, 3 out of 4 child passenger safety seats are installed incorrectly.
- 20% of all drivers of child passengers do not read any instructions on how to install car seats

## Drowning

### 5 most common installation mistakes

- Wrong harness slot used
- Harness chest clip too low
- Loose car seat
- Loose harness
- Seat belt placement was wrong



Image from Wikipedia

## Drowning

- The majority of infants drown in the home, either in the bathtub or in large buckets
- Lapse of supervision is the most common factor in drowning deaths
- Bathing seats are not a safety device and infants should not be left unattended in the seat

## **Fire/Burn**

## **Fire/Burn**

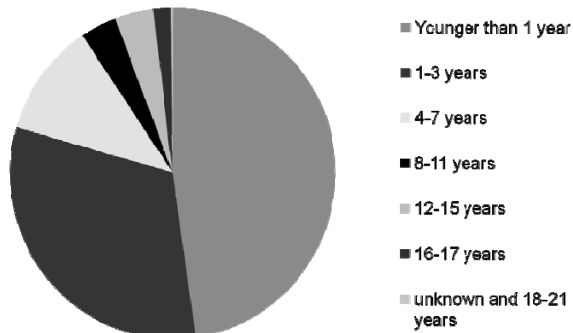
- Use outlet covers
- Smoke detectors on every level of the house
- Use fireplace screens
- Keep space heaters at least 3 feet from curtains and other object
- Sleep with bedroom doors closed

## **Fire/Burn**

- Majority of infant burns are due to scalding burns
  - Hot water heaters should be set at 120° F
  - Check bath water temperature before putting baby in the tub
  - Keep hot liquids away from the baby, never hold a hot drink and baby at the same time
  - Keep hot liquids and foods away from the edge of the table
  - Turn pot handles backward

## **Child Abuse in Infancy**

## Child Abuse and Neglect Fatality Victims by Age, 2010



## Prevention

- It is ok to put a crying baby down in a safe place and take a time out to regroup
- Ask for help
- Recognize that crying is normal, not a problem

## Shaken Baby Syndrome

- 3-4 children a day
- Parents or their partner
- Exhaustion
- Excessive crying

## Soothing techniques

- Walking
- Rocking
- Pacifier
- Don't overfeed
- Rhythmic voice, vacuum, car, white noise, fan
- Swaddling
- Rubbing baby's back

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