Development 101: Birth – preschool
Objectives

• Understand basic principles of well child care visits
• Review developmental milestones for newborns – preschoolers
• Introduce important anticipatory guidance topics to discuss with parents.
Well Child Care Basics

• Start with the parents’ concerns.
• Information gathering + Counseling
  – Growth
  – Medical problems (PMH, PSH, meds, allergies)
  – Family & Social Hx
  – Development
  – PE
  – Anticipatory Guidance (e.g. Diet, Elim, Safety)
• Wrap up with parents’ concerns.
Be Flexible
Developmental Milestones

- Gross motor
- Fine motor
- Speech/Language
- Social-emotional
- Cognitive
- Adaptive
Newborn Milestones

- Gross Motor (must examine in a variety of positions!)
  - _________________
  - _________________
  - _________________
  - _________________

- Social-emotional
  - _________________
  - _________________

- Cognitive
  - _________________
  - _________________
## Primitive Reflexes

<table>
<thead>
<tr>
<th>Reflex</th>
<th>Age at Appearance</th>
<th>Age at Disappearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moro</td>
<td>Birth</td>
<td>2 mos</td>
</tr>
<tr>
<td>Walking/Stepping</td>
<td>Birth</td>
<td>2 mos</td>
</tr>
<tr>
<td>Rooting</td>
<td>Birth</td>
<td>4 mos</td>
</tr>
<tr>
<td>Tonic neck reflex</td>
<td>Birth</td>
<td>4-5 mos</td>
</tr>
<tr>
<td>Palmar grasp</td>
<td>Birth</td>
<td>5-6 mos</td>
</tr>
<tr>
<td>Plantar grasp</td>
<td>Birth</td>
<td>9-12 mos</td>
</tr>
</tbody>
</table>
Newborn Diet

• Formula or Breast Milk

• How much?
  – Enough to gain weight
  – Roughly 1-3 oz q 1-3 hrs

• No water, juice or solids
Newborn Elimination

• Urination
  – At least 6-8 wet diapers/day

• Defecation
  – Varies significantly
    • Frequency (many/day to every few days)
    • Color
    • Consistency
Newborn Safety

- Car seat
  - Rear facing until 2 yr old or reaching seat’s height/weight limits
- SIDS
- Environmental tobacco smoke (ETS) exposure
- Hot water
- Smoke alarms
- CO detectors
## One Month Milestones

<table>
<thead>
<tr>
<th>Category</th>
<th>Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Motor</td>
<td></td>
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<tr>
<td></td>
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<tr>
<td>Cognitive</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Social-emotional</td>
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<tr>
<td>Speech/Language</td>
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</tr>
</tbody>
</table>

One Month Diet

• Formula or Breast Milk
One Month Elimination

- May stool less frequently, especially ~ 2 mos of age
One Month Safety

- May be erratically mobile
- Otherwise, same as newborn
Two Month Milestones

- Gross Motor
  - __________________
  - __________________
  - __________________

- Cognitive
  - __________________

- Speech/Language
  - __________________
  - __________________

- Social-emotional
  - __________________
Progression of Motor Development

FIG. 3.6 Development of posture in prone. A, the newborn lies tightly flexed with the pelvis high and the knees under the abdomen. B, at 2 months of age, the infant extends the hips and pulls the shoulders slightly. C, at 3 to 4 months, the infant keeps the pelvis flat and lifts the head and shoulders.
Two Month Diet

• Formula or Breast Milk
• Discuss introducing solids in the future IF baby has good head control
  – Good head control
  – Oromotor coordination
Two Month Safety

• Increased mobility/rolling
• Reminders about previous topics
Four Month Milestones

• Gross Motor
  – ______________________
  – ______________________
  – ______________________
  – ______________________
  – ______________________

• Fine Motor
  – ______________________
  – ______________________

• Language
  – ______________________
  – ______________________

• Cognitive
  – ______________________
Four Month Diet

• Formula or Breast Milk
  – Usually up to 40 ounces/day

• Solids
  – If starting with rice cereal first, give off a spoon, not in the bottle.
  – Then, gradually introduce 1 new food at a time.
AVOID...
Four Month Safety

• Watch for increased mobility.
• Some hand to mouth movement.
Six Month Milestones

• Gross Motor
  - ______________________
  - ______________________

• Fine Motor
  - ______________________
  - ______________________
  - ______________________

• Speech/Language
  - ______________________

• Social-emotional
  - ______________________

• Cognitive
  - ______________________
  - ______________________
Six Month Diet

• Formula or Breast Milk
• Continue to introduce foods as is developmentally appropriate.
  – Teeth?
  – Hand to mouth coordination
Six Month Safety

- CHILDPROOFING!
  - Poisons
  - Low lying hazards
Nine Month Milestones

• Gross Motor
  - __________________
  - __________________
  - __________________

• Fine Motor
  - __________________
  - __________________
  - __________________
  - __________________
  - __________________

• Speech/Language
  - __________________
  - __________________

• Social-emotional
  - __________________
  - __________________
  - __________________
  - __________________

• Cognitive
  - __________________
Nine Month Diet

• Formula or Breast Milk
• Increasingly more complex foods
Nine Month Safety

• Car seats
  – May need convertible seat, but still must face rearward.

• CHILDPROOFING
Other Nine Month AG

• **NO WALKERS!**

• Stranger anxiety

• **Red Flags**
  – Very stiff or like a rag doll
  – Not rolling in either direction
  – Reaches with only 1 hand
  – Does not smile spontaneously
Toddlerhood - Key Developmental Themes

- Independence
- Exploration – self and surroundings
Twelve Month Milestones

- Gross Motor
  - __________________
  - __________________

- Fine Motor
  - __________________
  - __________________
  - __________________
  - __________________

- Language
  - __________________
  - __________________
  - __________________
  - __________________

- Cognitive
  - __________________
  - __________________
Progression of Pincer Grasp

- **5 MONTHS RAKE**: Thumb adducted, proximal thumb joint flexed, distal thumb joint flexed.
- **7 MONTHS RADIAL-PALMAR GRASP**: Raking object into palm with adducted totally flexed thumb and all flexed fingers, or with two partly extended fingers.
- **9 MONTHS RADIAL-DIGITAL GRASP**: Between thumb and side of curled index finger, distal thumb joint slightly flexed, proximal thumb joint extended.
- **10 MONTHS INFERIOR-PINCER GRASP**: Between ventral surfaces of thumb and index finger, distal thumb joint extended, beginning thumb opposition.
- **12 MONTHS FINE PINCER GRASP**: Between fingertips or fingernails, distal thumb joint flexed.
Twelve Month Red Flags

– Lack of gestures
– Not pulling to stand
Fifteen Month Milestones

• Gross Motor
  – __________________

• Fine Motor
  – __________________
  – __________________

• Speech/Language
  – __________________

• Social-emotional
  – __________________

• Cognitive
  – __________________
  – __________________
  – __________________
Fifteen Month Red Flag

– No cruising
Eighteen Month Milestones

- Gross Motor
  - __________________

- Fine Motor
  - __________________
  - __________________

- Speech/Language
  - __________________
  - __________________
  - __________________

- Social-emotional
  - __________________

- Cognitive
  - __________________
  __________________
Eighteen Month Red Flags

- Lack of words
- Lack of protodeclarative pointing and/or gaze monitoring
- Lack of pretend play
- Lack of shyness, embarrassment
- Large amount of self-stimulatory behavior
12-18 Month Diet

- Whole milk at 12 mos
- Table foods – allow them to feed themselves
- Increase complexity of texture of foods
- Use appropriate utensils!
12-18 Month Safety: Advanced Childproofing
Other 12-18 Month Issues

- Temper Tantrums
- Biting
- Discipline
- Toilet Training
- Sleep Disruption
The Preschool Years: Key Developmental Themes

- Physical changes
  - More mature, “lean” look
  - Growth velocity actually slows
- Explosion of language development
- Increasing independence
  - Development of “sense of self”
- Learning social skills
- Magical thinking
Adiposity Rebound

- BMI nadir at 4-6 years of age with gradual increase through adolescence and adulthood.
- Early adiposity rebound is associated with increased risk of adult obesity, independent of parental obesity and BMI at adiposity rebound (Whitaker et al, 1998)
Two Year Milestones

• Gross Motor
  – Runs
  – Goes up and down stairs

• Language
  – At least 50 words
  – 2 word sentences
  – ~50% intelligible to a stranger
  – Recognize some object names and some body parts

• Social/Emotional
  – Can alternate emotions rapidly – excited, confused, scared
  – Temper tantrums
  – Excited to be around other children
    • Parallel play
Three Year Milestones

- **Gross Motor**
  - Jumps, runs, *pedals tricycle*, kicks ball

- **Fine Motor**
  - Copies a circle
  - Turn pages one at a time

- **Language**
  - Understands 3-step commands
  - 4-5 word sentences, with pronouns & plurals
  - 75% intelligible

- **Social/Emotional**
  - Starts to play with others
    - Sharing may be a challenge
  - Emotions are extreme and short-lived.

- **Cognitive**
  - Pretend play
  - Simple puzzles
  - Knows name, age, sex

- **Adaptive**
  - Interested in or has completed toilet training
Four Year Milestones

• Gross Motor
  – Hops on 1 foot
  – Throws ball overhand
  – Up & down stairs without holding on

• Fine Motor
  – Uses safety scissors
  – Copies square

• Language
  – 5-6 word sentences
  – Tells stories
  – 100% intelligible

• Social/Emotional
  – Active and aggressive in play
  – Better at sharing, taking turns

• Cognitive
  – Identifies basic colors
  – Can match things that are the same
  – Knows fantasy vs reality
    • Active imaginations

• Adaptive
  – Start to dress themselves
Five Year Milestones

• Gross Motor
  – Learning to skip

• Fine Motor
  – **Draws triangle**
  – Draws person with head, body, arms, legs

• Language
  – 14,000 words
  – Advanced grammar (future tense)

• Social/Emotional
  – Understands rules
  – Likes to please others & have friends

• Cognitive
  – Knows address and phone number
  – Counts to 10

• Adaptive
  – Basic concepts of time
  – Dress and undress self
The Problems…

I need silence! If you're not totally quiet, you might make me miss!

The Potty Training of Tiger Woods
The Solution…

- Set Limits & Be Consistent