NEON PRENATAL PEDIATRIC VISIT (PPV)

Compiled by Dr. Anita Watson 8/2011
AAP STATEMENT

“A prenatal pediatric visit during the third trimester of pregnancy is recommended for all expectant families as an important first step in establishing a child’s medical home.”
GOALS OF PPV

PPV provides an opportunity to:

– Gather basic information
– Provide information and advice
– Identify high-risk situations
– Promote parenting skills.
VALUE OF PPV

In a randomized controlled trial of prenatal pediatric visits among a group of low-income urban families, the PPV was shown to affect important health outcomes:

– Breastfeeding decision

– Satisfaction with the initial physician-parent relationship

– Reduced emergency department use
VALUE OF PPV

PPV is particularly valuable for:

✓ First-time parents
✓ Families in which a long interval exists between births
✓ Families new to NEON
✓ Families with high-risk pregnancies
  • Multiple gestation
  • Anticipated neonatal health problems
  • Prior adverse pregnancy outcome
PPV POINTS OF INTEREST

• Maternal and family history that may affect the infant
• Daycare vs. homecare
• Breast vs. bottle feeding
• Feeding, stooling and voiding
• Circumcision
• Bathing and cord care
PPV POINTS OF INTEREST

• Sleep position/SIDS
• Care seats/Newborn safety (CO, smoke det.)
• When to call the provider
• Routine visit schedule
• Immunization schedule
MATERNAL & FAMILYHX

• Complete family history
• Maternal medications
  • OTC
  • Rx
  • Herbs
  • Vitamins +/-
DAYCARE VS. HOMECARE

Effects of child care:

(-) Children who receive poor-quality care as infants and toddlers have been rated as less compliant and self-regulated as preschoolers

(+) High-quality child care is associated with children displaying

- more complex play
- less hostility
- better peer relationships
- Do better in kindergarten
- Better success in elementary school
  » Better vocabulary skills, receptive language skills, and math skills
DAYCARE VS. HOMECARE

5 signs of great preschools (rated by the National Association for Family Child Care):

1. Children spend plenty of time playing and working with materials or other children
2. Children can access various activities at all times during the day
3. The classroom is adorned with original artwork and projects
4. Teachers work with individual children, small groups and the whole group at different times during the day
5. Children are taught numbers and the alphabet relative to their life experiences
DAYCARE VS. HOMECARE

• Studies looking at injury risk and frequency of occurrence of diseases in daycare settings show there is no significant increase in injury or respiratory illness in a daycare setting when compared homecare.
  - One study showed a rate of injuries in daycare was 2.5 per 100,000 child hours of exposure compared with a rate of 4.88 per 100,000 child hours of exposure in the home environment
  - Another study showed 8.4 respiratory illnesses per child-year with the highest rate in infants under 1 year of age which is similar to homecare rates.
The AAP recommends that babies be breastfed exclusively for the first 6 months.

Following the introduction of solid foods, breastfeeding should continue through the first year of life and beyond, if desired.
BREASTFEEDING VS. FORMULA

Benefits of breastfeeding include a lower risk of:

<table>
<thead>
<tr>
<th>• Ear infections</th>
<th>• Asthma</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Stomach viruses</td>
<td>• Obesity</td>
</tr>
<tr>
<td>• Respiratory infections</td>
<td>• Type 1 &amp; 2 Diabetes</td>
</tr>
<tr>
<td>• Atopic dermatitis</td>
<td>• High cholesterol</td>
</tr>
</tbody>
</table>
BREASTFEEDING VS. FORMULA

• Benefits of formula feeding:
  ✓ More freedom and flexibility for the mother
  ✓ Easier to feed the baby in public
  ✓ Allows the father and other family members to help feed the infant
  ✓ Know how much the baby is getting
  ✓ May need fewer feedings (babies digest formula more slowly than breast milk)
BREASTFEEDING VS. FORMULA

Pacifiers and breastfeeding:

✓ It is recommended to avoid using pacifiers until the infant is one month old to allow for better latching on to breast.

✓ After one month of age, pacifiers can be used. It has been found to help prevent SIDS.
BREASTFEEDING VS. FORMULA

Avoid alcohol, drugs and tobacco while breastfeeding.

- If alcohol is consumed on occasion, avoid breastfeeding for 2 hours after the consumption.

- Smoking increases the infant’s risk of:
  - respiratory problems (lung, URI, otitis media)
  - SIDS

- Side effects of illicit drug use in breastfed infants:
  - Seizures
  - Vomiting
  - Poor feeding
  - Tremors
**BREASTFEEDING VS. FORMULA**

Breastfeeding is not advised if the mother

- Has been infected with HIV or has AIDS
- Is taking antiretroviral medications
- Has untreated, active TB
- Is infected with human T-cell lymphotropic virus type I or type II
- Is taking cancer chemotherapy agents
- Is undergoing radiation therapies
BREASTFEEDING VS. FORMULA

Vitamin Supplementation:

• Vitamin and mineral supplements are not necessary for the average health, full-term breastfed baby during the first year.

• Breast milk is all that the baby needs for at least the first 6 months of life.
BREASTFEEDING VS. FORMULA

Vitamin Supplementation:

• Calcium: breastfed babies do not need additional calcium over what they get in breastmilk in the first 6 months and calcium rich foods in the second 6 months of life.
Breastfeeding vs. Formula

AAP statement on FLUORIDE:

- “Fluoride should not be administered in infants during the first 6 months after birth, whether they are breast- or formula-fed. During the period from 6 months to 3 years, breastfed infants (and formula-fed infants) require fluoride supplementation only if the water supply is severely deficient in fluoride (<0.3 ppm).”
BREASTFEEDING VS. FORMULA

• Iron: anemia is uncommon in breastfed babies for the following reasons:
  
  – Healthy, full-term babies have enough iron stores in their bodies to last for at least the first 6 months.
  
  – Breastfed babies do not lose iron in their bowels; cow’s milk can irritate the intestinal lining resulting in a tiny amount of bleeding and loss or iron.
  
  – Iron in breastmilk is better absorbed than that from other sources. The vitamin C and high lactose levels in breastmilk aid in iron absorption.
# Breastfeeding vs. Formula

<table>
<thead>
<tr>
<th>Iron Source</th>
<th>Percentage of Iron absorbed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastmilk</td>
<td>50-70%</td>
</tr>
<tr>
<td>Iron-fortified cow milk formula</td>
<td>3-12%</td>
</tr>
<tr>
<td>Iron fortified soy formula</td>
<td>&lt;1-7%</td>
</tr>
<tr>
<td>Iron fortified cereals</td>
<td>4-10%</td>
</tr>
<tr>
<td>Cow’s milk</td>
<td>10%</td>
</tr>
</tbody>
</table>
BREASTFEEDING VS. FORMULA

Which babies need iron supplementation:

- Premature infants, since infants get the majority of their iron stores in the last trimester

- Babies born to mothers with poorly controlled diabetes

- Babies who are fed cow’s milk during the 1\textsuperscript{st} year of life.

✓ Babies born to mothers who are anemic during pregnancy are no more likely to be iron deficient than those born to mothers who are not anemic during pregnancy.
BREASTFEEDING VS. FORMULA

• The original recommendations for iron-fortified food were based on a formula-fed baby’s need for them and the fact that breastmilk contains less iron that formula.

• After the knowledge that iron in breastmilk is better absorbed than formula, additional iron is not recommended in healthy, term infants.
## BREASTFEEDING VS. FORMULA

<table>
<thead>
<tr>
<th>Age</th>
<th>Hgb</th>
<th>Hct</th>
<th>Serum ferritin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn</td>
<td>13.5-24</td>
<td>42-68</td>
<td>Not available</td>
</tr>
<tr>
<td>1 week</td>
<td>10-20</td>
<td>31-67</td>
<td>Not available</td>
</tr>
<tr>
<td>1-2 months</td>
<td>10-18</td>
<td>28-55</td>
<td>Not available</td>
</tr>
<tr>
<td>2-6 months</td>
<td>9.5-14</td>
<td>28-42</td>
<td>Not available</td>
</tr>
<tr>
<td>6-12 months</td>
<td>10.5-14</td>
<td>33-42</td>
<td>15 (min); 30 (average)</td>
</tr>
<tr>
<td>1-2 years</td>
<td>11.0-13</td>
<td>32.9-41</td>
<td>30 average</td>
</tr>
<tr>
<td>2-5 years</td>
<td>11.1-13</td>
<td>34-40</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Values from CDC
# BREASTFEEDING VS. FORMULA

<table>
<thead>
<tr>
<th>Iron deficiency in infants</th>
<th>Hemoglobin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>4-6 months</td>
<td>&lt;10.5</td>
</tr>
<tr>
<td>9 months</td>
<td>&lt;10.0</td>
</tr>
</tbody>
</table>

From Journal of Nutrition
Mothers who are vegetarians:

- Breastfeeding mothers should supplement their diet with iron, zinc and Vitamin B12
BREASTFEEDING VS. FORMULA

Vitamin D supplementation

Babies rarely need Vit. D supplementation unless:

– Limited sunlight exposure – if infant is inside all day, resides in urban setting, live in areas of the U.S. where there is not much sunlight, is completely covered and kept out of the sun or if high-SPF sunscreen is applied

– Skin is intermediate and dark-toned – unknown exactly how much sunlight exposure is needed.

– Mother is Vit. D deficient – inquire about mom’s sunlight exposure, consumption of vit D foods or supplements.
BREASTFEEDING VS. FORMULA

Vitamin D supplementation

Recommended intake:

• For infants and children/adolescents – 400 IU/day

• The amount of Vit. D in human milk is small in mothers who are not Vit. D deficient; however, the Vit. D in human milk is in a form that is very easily used by the baby and therefore adequate for most infants when combined with a small amount of sun exposure.

• Two hours is the required minimum weekly amount of sunlight for infants if only the face is exposed, or 30 minutes if the upper and lower extremities are exposed. - (WHO)

• It is not necessary to expose the infant to sunlight every single day, as the body stores Vit. D for future use.
BREASTFEEDING VS. FORMULA

Effects of medicines on breastfed babies:

• The National Library of medicine offers an online tool for learning about the effects of medicines on breastfed babies:

## Handling and Storage of Breastmilk

<table>
<thead>
<tr>
<th>Storage Place</th>
<th>Temperature</th>
<th>How long</th>
<th>Things to know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countertop, Table</td>
<td>60F-85F</td>
<td>3-4 hrs best; 6-8 hrs if cleanly expressed milk</td>
<td>Milk only good 1-2 hours after infant finishes feeding</td>
</tr>
<tr>
<td>Small cooler w/blue-ice pack</td>
<td>59F</td>
<td>24 hours</td>
<td>Keep ice packs w/milk at all times; limit opening</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>&lt;40F</td>
<td>Up to 72 hrs best; 5-6 days if cleanly expressed milk</td>
<td>Store milk in the back of the main body of the refrigerator</td>
</tr>
<tr>
<td>Freezer</td>
<td>&lt;0F</td>
<td>Up to 6 months is best; 12 months is OK</td>
<td>Store in back of the freezer</td>
</tr>
</tbody>
</table>
• Evidence demonstrates potential medical benefits of newborn male circumcision; however, these data are not sufficient to recommend routine neonatal circumcision.
CIRCUMCISION

Benefits:

✓ Decrease in UTI: increase risk of UTI in uncircumcised males infants

✓ Decrease in penile cancer: it is rare, but there is a small increased risk in uncircumcised males

✓ Decrease in penile inflammation
  • e.g., balanitis and inflammation of the foreskin
CIRCUMCISION

Risks:

- Bleeding (0.2-0.6%)
- Infection
- Recurrent phimosis
- Wound separation
- Concealed penis
- Unsatisfactory cosmetics
- Skin bridges

- Urinary retention
- Meatitis
- Meatal stenosis
- Cordee
- Inclusion cysts
- Retained devices
- Risk to general anesthesia (if done after newborn period)
SLEEP POSITION

• Supine sleeping position lowers the risk of Sudden Infant Death Syndrome especially when combined with:
  • Pacifier (after age 1 month)
  • No blankets, pillows or stuff animals in bed
  • Positioned in own bed (crib, bassinet, and not parents; bed)
WHEN TO CALL PROVIDER

⚠️ It is preferred that mothers of newborns call in the speak with a nurse or provider regarding any concerns.

⚠️ Other reasons:

• Fever (temps 100.5 or greater – rectal preferred)
• Feeding issues including vomiting, change in bowel movements
• Unusual cry
• Irritability
• Lethargy
• Rash
• Cough
Routine Visits

The visits tabulated below are scheduled for complete physicals, which include obtaining history, determining growth/development, giving immunizations and offering guidance:

- Within first 1-2 weeks after discharge
- 2 months of age
- 4 months of age
- 6 months of age
- 9 months of age
- 12 months of age
- 15 months of age
- 18 months of age
- 2 years old and yearly thereafter.
IMMUNIZATION SCHEDULE

CDC link for all you need to know about immunization schedules:

http://www.cdc.gov/vaccines/recs/schedules/default.htm