Breastfeeding and Lactation

The Primary Care Doctors Toolkit to Help Overcome Breastfeeding Challenges

Kendra Gray, DO, OB/GYN  
Banner University Medical Center Phoenix

Cadey Harrel, MD, Family Medicine  
University of Arizona Health Sciences Tucson

Objectives

• Explain the benefits of breastfeeding to expectant mothers
• Identify and help relieve obstacles to breastfeeding initiation and continuation
• Offer guidance support and resources to the maternal child dyad by providing a network of family and professional support for breastfeeding mothers
• Solve common problems that arise during breastfeeding
• Identify osteopathic and complimentary treatment options for breastfeeding difficulties.
• Discuss the common myths about breastfeeding perpetuated by physicians
Disclosures

No financial disclosures that would be a potential conflict of interest with this presentation.

Recommendations

“Exclusive breastfeeding for about the first six months of a baby’s life, followed by breastfeeding in combination with the introduction of complementary foods until at least 12 months of age, and continuation of breastfeeding for as long as mutually desired by mother and baby.”
Recommendations

“Breastfeeding beyond the first year offers considerable benefits to both mother and child, and should continue as long as mutually desired.

Family physicians should have the knowledge to promote, protect, and support breastfeeding.”

Healthy People 2020

<table>
<thead>
<tr>
<th>MICH Marker</th>
<th>2006 Actual</th>
<th>2020 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants EVER BF</td>
<td>74%</td>
<td>81.9%</td>
</tr>
<tr>
<td>BF at 6 months</td>
<td>43.5%</td>
<td>60.6%</td>
</tr>
<tr>
<td>BF at 1 year</td>
<td>22.7%</td>
<td>34.1%</td>
</tr>
<tr>
<td>Exclusive BF at 3 months</td>
<td>33.6%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Exclusive BF at 6 months</td>
<td>14.1%</td>
<td>25.5%</td>
</tr>
</tbody>
</table>

24.2 percent of breastfed newborns born in 2006 received formula supplementation within the first 2 days of life
So many benefits…

- Infant
- Maternal
- Societal
- Environmental

Benefits for Infants

- Decreased rates of:
  - Asthma
  - Diabetes
  - Leukemia
  - Sudden infant death syndrome
- Higher verbal IQ
- Otitis media
  - Reduces risk 23% with ANY breastfeeding
  - Reduces risk 50% if exclusively BF ≥ 3 months
### Benefits for Women

- Breast cancer risk reduced 4.3% per year of breastfeeding
- Ovarian cancer decreased by 21%
- Each year of breastfeeding reduces risk for type 2 DM by 4 to 12% in women without GDM
- Risk of osteoporosis not increased

### Cardiovascular Health

- Parous women who lactated were less likely to have:
  - Obesity
  - Hypertension
  - Diabetes
  - Hyperlipidemia

*Pregnancy may not benefit cardiovascular health but lactation may be beneficial.*
Benefits for Society

*If 90% of US infants were exclusively BF for 6 months*....

- Country would save $13 billion annually
- 911 less infant deaths annually
- Decreased containers, maintenance of cows, transporting formula. Etc.
- Decreased obesity and DM rates

Discontinuation Rates

- In the 1st week after birth - 25%
- Between 1st and 2nd week - 10%
- Between 2nd week and 2mo - 40%
Obstacles to Breastfeeding Initiation and Continuation

- Premies need breastmilk and breastfeeding even more than healthy full term babies
- Many hospital routines make it difficult for mothers and babies to breastfeed successfully
- Frequent pumping to establish supply when separated
- Suck/swallow coordination significantly improved at 34 weeks
Paced Bottle Feeding

Slow the flow…

- Preemie nipples for all

- Baby is sitting more upright
- Caregiver tickles baby's lips with bottle
- Nipple is then put into baby's mouth
- The bottle is held horizontally, which slows the flow significantly
- After 20–30 seconds of feeding, the bottle is tipped downward or removed from baby's mouth to stop the flow of milk (creating a similar pattern as in breastfeeding)

Obstacles to Breastfeeding Initiation

- Lack of prenatal breastfeeding education
- Lack of support from hospital staff
- Lack of social support
- Not recognizing early hunger cues
- Early formula supplementation
- Lack of early skin-skin contact and early breastfeeding
- Media portrayal of bottle feeding as the norm
Prenatal Breastfeeding Education

- A prenatal educational program is the most effective intervention to promote initiation of breastfeeding
- A systematic review and meta-analysis found that for every 3-5 women attending a program, one additional mother would initiate and continue breastfeeding for up to 3 months*.
- Should be discussed routinely at prenatal visits

*Guise et al, 2003

Baby Friendly Hospitals

- Have a written breastfeeding policy that is routinely communicated to all health care staff.
- Train all health care staff in skills necessary to implement this policy.
- Inform all pregnant women about the benefits and management of breastfeeding.
- **Help mothers initiate breastfeeding within a half-hour of birth.**
- Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.
- Give newborn infants no food or drink other than breast milk unless medically indicated.
- Practice rooming-in - allow mothers and infants to remain together - 24 hours a day.
- Encourage breastfeeding on demand.
- Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
- Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.
Skin to Skin & the Golden Hour

Obstacles to Breastfeeding

Continuation

- Lack of confidence in breastfeeding
- Nipple pain and ineffective latch
- Perceived insufficient milk supply
- Not recognizing early hunger cues
- Engorgement or mastitis
- Returning to work
- Concerns about public breastfeeding
- Formula marketing
Social Support
Seu filho é aquele você come.
Alcohol and Breastfeeding

• Alcohol appears in the milk in the same concentration as in the blood.
• 0.05% alcohol in blood = 0.05% alcohol in milk
• If you are too impaired to drive, too impaired to care for an infant
• No need to “Pump and Dump”
• Caution with preterm, very young, or ill in any way.

Lack of Confidence in Breastfeeding

• This is the cause of most early discontinuations*
• Earlier postpartum follow-up visits
  – 3-5 days & 7-14 days
  • help with any issues
  • reinforce the importance of continued breastfeeding**
  – Great time to screen for PP Blues and provide reassurance to family/partners

*Ertem et al, 2001; **Guise et al, 2003
Unique Role as Primary Care Physicians

• Opportunity to emphasize breastfeeding education beginning with preconception visits and continuing throughout prenatal care, delivery, postpartum care, and during ongoing care of the family.

• In caring for a mother's immediate and extended family, a family physician should encourage her social support system to support breastfeeding.

But how do we know?
Newborn Stomach Size

DAY ONE
Size of a cherry
5-7 ml / .5 tsp

DAY THREE
Size of a walnut
22 - 27 ml / .75 - 1 oz

ONE WEEK
Size of a plum
45 - 60 ml / 1.5 - 2 oz

ONE MONTH
Size of a large egg
83 - 150 ml / 2.5 - 5 oz

Signs of Effective Breastfeeding

• The baby nurses frequently averaging at least 8-12 feedings per 24-hour period.
• The baby is allowed to determine the length of the feeding, which may be 10 to 20 minutes per breast or longer.
• Baby's swallowing sounds are audible as he is breastfeeding.
• The baby should gain at least 4-7 ounces per week after the fourth day of life.
Signs of Effective Breastfeeding

• The baby will be alert and active, appear healthy, have good color, firm skin, and will be growing in length and head circumference.
• 1 wet DOL 1, 2 wets DOL 2, etc…
• At least 6 clear urinations per day by day 4 Bowel movements that go from **black meconium on day 1** to **seedy yellow by day 5**
• Satisfied and content after feedings

Signs of Effective Breastfeeding

• Noticeable increase in firmness, weight and size of breasts and noticeable increase in milk volume and composition by day 5
• Nipples show no evidence of damage
• Breast fullness relieved by breastfeeding
**Nipple Pain and Ineffective Latch**

- Breastfeeding *should not* be painful
  - 80 to 90 percent of breastfeeding women experience some nipple soreness
  - 26 percent progressing to cracking and extreme nipple pain
- Correct positioning and proper latch evaluation
- **Lactation Consultants**
  - Make the referral!

**Perceived Insufficient Milk Supply**

- Occurs in 50% of mothers and is a frequent cause of early discontinuation of breastfeeding
  - Patients may think milk supply is inadequate because of soft breasts after birth
  - Normal physiology is for breast milk to increase over first several days, usually accompanied by breast fullness
- **Breast fullness then lessens after the 2nd week but does not indicate decrease in milk supply**
Challenges

• Low milk supply
  – **Perceived 50%**
  – **Actual 10%**
    • Not pumping or nursing frequently enough
    • Breastfed infants typically do not sleep through the night
    • Risk factors: macromastia, hx breast reduction, breast implants
    • Widely spaced tubular breast with decreased glandular tissue
    • Preterm delivery/retained placenta
    • Progesterone containing contraceptives

Increasing Milk Supply

• Domperidone (Motilium™)
  – Off label UK Canada
  – 30 mg (three 10 mg tablets) 3 times a day. In some situations we go as high as 40 mg 4 times a day
  – FDA pulled from market in 2004 QTc prolongation

• Metoclopramide (Maxeran™, Reglan™)
  – Known to increase milk production
  – Side effects of fatigue, irritability, depression
Increasing Milk Supply

- **Galactogogues:**
  - Oatmeal
  - Fenugreek: 2-3 capsules (580-610 mg each) PO, TID
  - Flax seed
  - Brewer’s yeast
  - Fennel seed
  - Blessed thistle
- **Suggested labs to consider:** HCG, free T4, TSH, Insulin, Testosterone, Prolactin (x2), 25-hydroxyvitamin D

Best Breastfeeding Hacks

**APNO “All Purpose Nipple Ointment”**
Mupirocin ointment 2%: 15 grams
Betamethasone ointment 0.1%: 15 grams
To which is added miconazole powder to a concentration of 2%
miconazole
Total: about 30 grams combined
Apply sparingly after each feeding. Do not wash or wipe off
Diagnosis?

Breast tenderness with reddened sore area that is warm to the touch, flu-like symptoms, generalized body aches, fatigue, chills or fever ≥101 F orally.

Mastitis

- **Pericillin allergy?**
  - Yes
    - Severe?
      - Yes, anaphylaxis
      - Review mastitis supportive care, contact LC on call
    - No, rash
  - No
    - Dicloxacillin 500mg PC QID x 10 days
    - Cephelexin 500mg PO QID x 10 days
    - Clindamycin 300-450 mg PO QID x 10 days
Supportive Care

- Rest, fluids, continued emptying of breast
- Nurse/pump q 2-3 hours
- Counseling
  - Symptoms should improve in 24-48 hours
  - If worsens after 12hrs or persists should be reevaluated
- Pain
  - Acetaminophen 650-100mg q 4-6 hours (max 4mg q day)
  - Ibuprofen 400-600mg q6 hours

Diagnosis?

Nipple fissures, yellow crust, erosions, pustules, rind over nipple that occludes ductal openings.
Bacterial Infection

**Diagnosis?**

*Itching, oozing plaques with excoriations vs tender, burning, fissures with ill defined borders?*
Dermatitis

Irritant Dermatitis
Barrier (Petrolatum, Aquaphor or Zinc Oxide) after each feed, may cover with gauze or nipple shells. Wear cotton bras. If ointment is still visible before the next feeding or pumping, wash off the nipples with water and gentle cleanser (Cetaphil, equivalent generic). **Hydrogels should not be used with any topical ointment or cream.

For severe symptoms, apply high potency steroid – Lidex 0.05% BID x 2-3 days

Contact dermatitis
Remove cause – topical creams, wipes, moisturizers; assess for pattern matching pump flange. Switch to hypo-allergenic detergent. If infant eating solids, rinse nipple after feeds – food in mouth may be allergen.

Apply high potency steroid – Lidex 0.05% ointment – BID x 14 days.

Use Aquaphor between steroid doses until tissue heals. If ointment is still visible before the next feeding or pumping, wash off the nipples with water and Cetaphil cleanser.

For severe itching, consider Cetirizine (Zyrtec), balancing theoretical risk of decreased milk supply.

Diagnosis?

Blister that is sensitive to touch or latch?
Milk Bleb

Soak nipple before and/or after most feedings in warm (not hot) water. Mupirocin per bacterial infection protocol

5-7 days

No improvement? Yes

Unroof bleb with sterile needle after prepping nipple with alcohol wipe. Tx w/ mupirocin x 7 days.

Recurrent/persistent blocked ducts: Consider Leotrin 1200 mg TID-QID
Consider cultures / systemic antibiotics.

Diagnosis?

*Palpable lump or knot that gradually develops, with localized pain and may decrease in size with milk removal.*
Blocked Duct

1. Enthema, fever, systemic symptoms? Yes → Mastitis protocol
   No →
2. Pump type, flange fit prevents complete emptying? Yes → New flange, different pump as indicated.
   No →
3. Infant jaw alignment, suck exam, cranial symmetry, spinal alignment affecting drainage? Yes → Stretching exercises for torticollis, consider OT/PT/Speech referral
   No →

Diagnosis?

Shooting pain, blanching/deep purple color changes after feeding, prior nipple trauma with persistent pain despite intact skin? History of Raynaud's, migraines or cold sensitivity?
Diagnosis?

_Shooting burning pain, like there is a hot knife or ground glass in her breast… Previously treated for dermatitis._

_Vasospasm_
Candida

- Support the patient’s body by cradling it with your forearm
- Support the head and palpate for motion with the ipsilateral hand
- Support the sacrum and palpate for motion with 2 or 3 fingers of the contralateral hand
- Grasp the cranium with fingers evenly splayed, appreciate subtle release of muscles

Consider cranial/sacral and other gentle myofascial techniques
Tongue Tie

- Normal tongue position
- Tongue-tie

Trauma to Nipple from Shallow Latch
- “Lipstick-ing” of nipples
- Smacking or clicking sounds
- Excessive gas
- Poor weight gain

Bad Advice Drs. Give…On Pain

- APNO for ANY sort of breast pain/wound without fixing the problem
- If it hurts just pump and bottle feed
- All nipple pain = thrush
- Must stop breastfeeding for mastitis
Bad Advice Drs. Give…On Nutrition

• Stop breastfeeding for a suspected milk protein allergy.
• Suggesting breastmilk just doesn't “fill up” babies..
• Lack of antenatal education about normal breastfeeding physiology (colostrum is enough to feed baby, feed on demand to make more milk, formula not needed).
• Telling a mother that she isn't making enough milk and to supplement without thorough history and evaluation

Bad Advice Drs. Give…On Sleep

• Suggesting formula at bedtime so baby sleeps better
• Suggesting adding cereal to breastmilk <6 months of age because “breastmilk just doesn't fill her up…”
• Expecting breastfed infants to “sleep through” the night
• Stating infant sleeping through the night as a result of not getting enough milk/baby needing more calories
Bad Advice Drs. Give…On Weaning

• Encouraging weaning for “milk allergy”
• Encouraging weaning because baby is 12 months old
• Encouraging weaning due to pregnancy
• Suggesting that baby is self – weaning at a young age

Bad Advice Drs. Give…

• Any misinformation on medication safety in breastfeeding.
• Not allowing for breastfeeding during reasonable procedures, vaccines, etc.
• Lack of acceptance of ankyloglossia as a true and correctable medical condition affecting breastfeeding.
Depression

• Sertraline (Zoloft) is best treatment in lactation
  – Better outcomes when women are treated
  – Occasional decreased in 3rd trimester od SSRI sue to risk of infant withdrawal syndrome, however breastfeeding may mitigate this
“Pump & Dump” – NOT Indicated

- After general anesthesia
- After CT Scans
- After EtOH
- After Massage
- After lidocaine

- Controversial...
  - THC
  - Methotrexate
One last point…

Contraindications

- Infant galactosaemia
- Maternal active, untreated tuberculosis, T-cell lymphotrophic virus type 1 or 11,
- Mother with certain chemotherapeutic agents
- Mother is abusing drugs
- Mother has herpes simplex lesions on a breast (the baby may feed from the other breast if free from lesions)
- Mother is HIV positive
A Special Thanks…

Mary Catherine Harrel, MD

Toolkit/Resources/References

- Nursing Mother’s Counsel: 650-327-MILK (6455)
- La Leche League International: 1-877-452-5324 (1-877-4 LA LECHE)
- Women, Infants, and Children (WIC): 650-573-2168, 800-994-WOMAN, a toll-free number with trained lactation specialists who can answer any question regarding breastfeeding
- U.S. Office on Women’s Health breastfeeding facts and resources
- U.S. National Library of Medicine Drugs and Lactation Database (LactMed), information on drugs and breastfeeding
- https://www.youtube.com/watch?v=YbrgHoN_6Q&feature=youtu.be
- US Dept of Health and Human Services 1-800-994-9662 in English and Spanish
- International Lactation Consultant Association, 2005
- Jack Newman: http://www.breastfeedinginc.ca/
- http://www.drmilk.org/
Questions?