Success in Early Postpartum
Causes and Current Evidence Based Practices
for Sore Nipples, Thrush, Edema, Engorgement,
Mastitis and Plugged Ducts

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Remember:
Keep technology in its place.
Use it sparingly, use it wisely.

NIPPLE PAIN!!!!!
- Top reason moms stop breastfeeding
- 34-90% of all mothers
- First 3 weeks, 30% quit
- Esp true for low income and African American women

PAIN IS NOT NEW

Assessment of Nipple Trauma
- Discomfort in the Nipple
  - Tenderness
    - Normal
    - Progesterone
    - 7-14 days postpartum
  - Acute Pain
    - Not normal
    - Sign of trauma/trouble

Past Preparation
- Nipple rolling
- Nipple Scrubbing
- Hoffman’s Maneuver
- Creams and Ointments
- Breast Shells
What Do Mammals Do?

Does everyone have pain?

Interesting Note
- 2014 Cochrane Review showed all women had decreased nipple pain at day 10!
- Meta analysis all mothers had pain peaking on Day 3

Main Causes of Nipple Soreness
- Nipple Damage (Suckle or pump)
- Infection (Fungal/ Bacterial)
- Dermatoses (Eczema/ Dermatitis)
- Raynaud's Phenomenon/ Vasospasm
- Pain/Tongue/ Lip issues in Baby

Assessment of Nipple Trauma
- Treat the problem = Symptoms disappear
- Treat the symptoms = Continued Pain

How many use topical treatments in first week
- 91% in First Week


Buck, 2015
Common Nipple Trauma Treatments

- Hydrogel Pads
- Gel Pads
- Lanolin Creams
- Modified Lanolins
- Peppermint Gel/Water
- Breastmilk
- Warm Water
- Teabags, Vitamin E/A, herbal creams

2014 Cochrane Review stated “applying nothing may be equally or more beneficial in the short-term experience of nipple pain than the application of an ointment such as lanolin.”

2005 Systematic reviews showed no topical agent superior (Morland-Schultz)

What Actually Works?

- Education on proper latch-on
  - Antenatal education (higher cont. of bf)
  - Postpartum education (no Δ in cont. of bf)

(Morland-Schultz)

What Actually Works?

- Antenatal Education - Grade A
- Postnatal Education - Grade B

(Joanna Briggs Inst.)

What Actually Works?

- Most topical therapies - Grade C
  - Not enough evidence to support the use

(Joanna Briggs Inst.)
Warm Water – 2nd Best

• Warm Water Therapy (Page)
• 2 trials showed superiority
• 3 trials demonstrated =
• No trial showed inferiority
• Best Practice- Grade B (JB)
• Improvement in pain (Page)

What Do We All Tell Moms To Use?

Expressed Breast Milk

Expressed Breastmilk

• Combo TX
  • BM PLUS air dry, lanolin or shells
  • improvement complications
• BM PLUS hydrogel
  • improvement complications

(Brent, et al.)

Why are we applying something to the nipple that the nipple is ALREADY bathed in all day long?

Expressed Breastmilk

• Page, 2005
  • Increased pain affect and intensity
  • Warm water, tea bags preferable
• Abou-Dakn, 2011
  • Showed 15% cessation of bf in first 14 days
  • Increased risk of mastitis

Expressed Breastmilk

• Superiority
  • Lanolin
  • No TX
  • Mohammadzadeh, 2005
  • EQUAL
• Warm water, lanolin, tea bags, no TX
  • Morland Schultz, 2005
• Inferiority
  • Compresses
  • Buchko, 1994; Pugh, 1996
  • Clean and Dry (Akkuzu, 2000)
  • Peppermint Water (Sayyah et al., 2007)
  • Lanolin (Coca, 2008; Abou-Dakn, 2011)

• Increased risk of mastitis
Hydrogel
- Infections occurred in lanolin, but not hydrogel group
- RCT, 106 women showed of nipple pain vs. lanolin
- High infection rates with hydrogel so could not be recommended (7 out of 21) (Page, 2005)

Gel Pads – Vegetable based glycerin
- Soothes provided remarkable more pain relief
- Trial showed increased risk of infection
- Challenges- cloth cover, incidences of scab removal, small study

Modified Lanolin Only
- Ultrapurified medical grade, highly purified anhydrous (HPA)
- Free of odor, taste, bleach and preservatives
- Hypoallergenic

Lanolin
- Issues with baby’s gut?
- No conclusive benefit over education
- Vegan concerns
- Problems with additions

Lanolin and infection?
- Lanolin 62% infection rate, as compared to no lanolin at 18%.
- Although not significant, fungal infection may be more frequent than bacterial infection based on effective corresponding treatment.

Sasaki, 2014

Lanolin
- Showed better healing and pain resolution than EBM.

Abou-Dakn, et al. 2011
More satisfaction/No real difference

- 186 women
- More women using lanolin reported satisfaction with lanolin
- No clinically relevant differences
- Did not reduce pain or improve outcomes


Nipple Shields

- Used with a practitioner/IBCLC
- Short term use only
- Can reduce pain during healing
- Can increase risk of infection
- Impact milk supply

All Purpose Nipple Cream

- Newman’s All Purpose Nipple Cream (APNO)
- Mupirocin 2% ointment (Bactroban)
- Antibiotic effective against Staphylococcus aureus, MRSA and even Candida albicans
- Betamethasone 0.1% ointment
- Corticosteroid effective against inflammation
- Miconazole powder to a final concentration of 2%
- Antifungal effective against Candida albicans

Let’s Confuse Things

- Recent Systematic Review (Viera, 2013)
  - Lanolin, lanolin with shells, breastmilk, hydrogel, polyethylene film dressings, chlorhexidine with alcohol, and distilled water.
  - Best results were lanolin with shells and breastmilk but results were inconclusive!

All Purpose Nipple Cream

- 2012 Study APNO was not superior to lanolin for TX (Dennis)
From the Kitchen to the Nipple

- Olive Oil – antioxidant/anti-inflammatory (hydrophilic phenols). Ozonated OO (Kim, 2009)
- Honey – Medihoney, all botulism spores removed, used for wound healing (Merckoll, 2009)

From the Kitchen to the Nipple

- Coconut Oil – used for wound healing. Animal studies showed faster wound healing. Active against S. aureus, fungi and virus.
- Green Tea Bags - used for wound healing. Catechins. Helps create a layer of protective skin.

From the Kitchen to the Nipple

- Peppermint Water
  - Peppermint users had a decreased odds of 3.2 of having pain
  - Odds of 0.53 of pain reduction.
  - Peppermint Water
  - More likely to reduce nipple cracks and pain than breastmilk

Dr. Nice’s Breast Gel

**BREAST GEL**
All Natural Moisturising Gel Made from Peppermint Oil
No Artificial Colors/Dyes/Additives
Soothing For both Mummy & Baby!
Moisturises Cracking, Chapping, & Chafing
Apply Refrigerated for a Cool Thin Liquid Layer or
At Room Temperature For A Thicker Gel Coating.
Ingredients: Water (Aqua), Poloxamer 407, Sodium Benzoate and Gluconolactone, Mentha Piperita (Peppermint) Oil

Silver Treatment?

- Silver Caps/Amorini
  - There was a significant and a more rapid resolution of painful symptoms in the Silver Cap group compared with the control group (p<0.05) at Days 7 and 15. (Adriano, 2015)

Inappropriate Treatments

- Non-modified, herbal lanolins
- Black Teabags
- Vitamin E, A
- Products containing alcohol
New Therapies
- LLLT – Low Level Laser Therapy
- Painless Laser TX improves pain accelerates wound healing (Buck)
- Provides relief and prolonging exclusivity (Coca)

(Buck, 2016; Coca, 2016)

Sore Nipples…Remember
- Antenatal Education
- Refer, refer, refer
- Treat the problem, not the symptom

Treat the Problem!
- Latch
  - Correct positioning

Improving the latch of infants four days to 12 months old (average 32 days) resolved breast pain in 65% of cases. (Darmangeat, 2011)

Treat the Problem!
- Sucking
  - Treatment Interventions

Problem Focused Treatment
- Eczema/Dermatitis
  - Removal of irritant
  - Identify and remove allergen
  - Apply corticosteroids
- Vasospasm
  - Application of warm cloths
  - Reduce caffeine and nicotine (vasoconstricting)
  - Use of Nifedipine

Treat the Problem!
- Tongue/Lip Tie
- Frenotomy
- Thrush
  - Treat topically
  - Determine, if, in fact fungal

Ito, 2014; Berry, 2012
Problem Focused Treatment

- High Arched Palate
- Little Data
- Breastfeeding in Supine Position
- Common with Ankyloglossia

Protect Breastfeeding

- Get to an IBCLC or have dyad assessed!
- Have mom seek support of LLL or counselor
- Try laid back breastfeeding when baby is in light sleep
- Breastfeeding on least sore side first
- Damage?– Wash with plain soap and water once a day
- Only use technology when necessary

Remember:
Keep technology in its place.
Use it sparingly, use it wisely.

Shout Out to Marsha Walker

USLCA Journal – Excellent and very thorough!

Engorgement

Quiz: Is engorgement a normal, expected process of lactation.

No!
Fullness yes, engorgement no.

Normal Fullness

- Normal Fullness – Secretory Activation
- First 24-48 hours
- Breast is compressible
- Milk still flows

Polin et al.
Normal Fullness
Lowered sodium and chloride levels (can’t get in)
Increased lactose (can’t get out)
Close of tight paracellular junctions
100 mL first 2 days to 600 mL by day 4

Clinical Engorgement
Symptoms
• MILK STASIS
• Generalized heat and swelling
• Pain
• Hardness of breast with flattened nipple
• Generalized breast tenderness
• Slight fever

Polin et al.

Clinical Engorgement
Causes
• Inadequate transfer
• Bad latch
• Nursing strike
• Baby missing a feeding

Why We Intervene Quickly
• Risk of cellular damage to lactocyte
• Increased risk of cessation
• Breast infection
• Damage to external tissue, causing pain
• Prevents successful initiation

Breastfeeding Atlas

Current Treatments
• Cold Packs
• Cabbage Leaves
• Ultrasound
• Oxytocin
• Warm Compresses
• Acupuncture
• ***Water Soaks

Cochrane Review
8 Studies with 744 women
• No one treatment was recommended.
• Ultrasound, cabbage leaves and subcutaneous oxytocin – did not result in more rapid resolution
• Acupuncture had greater improvement in days following and also reduction in abscess
• Cold packs – does not cause harm, may be associated with improvement, though results varied.

(Mangesi, 2010) (Chapman 2011)
Cabbage Leaves

- 4 Studies – 1 RCT, 2 RCT, 1 experimental
- 2 - slight less engorgement
- 1 - hot and cold compresses were more effective
- 1 - cold gel packs better

Cabbage Leaves - Listeria monocytogenes

- Linked with listeria outbreaks
- Once placed on warm breast inside bra, listeria can grow
- Keep cabbage 35°F - 40°F
- Can be fatal in a newborn

Russian Massage

- Bolman, 2013
- Russian Expression and Massage since 1930s
- Goals include:
  - Improved circulation of blood
  - Improved lymphatic drainage
  - Results in reduced swelling

Breast Massage - General

Techniques:
- Rolling between hands
- Kneading with back of fists
- Cupping and sliding
- “Dancing Fingers” (piano playing)

Witt (2016) found helpful to resolve engorgement and help with pain from plugged ducts and mastitis

Gua Sha and Korean Massage

- Ahn 2011
- Two 30 minutes massage for ten days postpartum
- Acupressure type treatment of repeated scraping over lubricated skin
  - Decrease in pain
  - Increase in newborn suckling post massage
  - Decrease in breastmilk sodium

Gua Sha

- Chiu 2010
- Increases circulation
  - Group 1 - Scrapped 4 points in two cycles
  - Control had massage and hot packs
- Study group experienced:
  - Lowered breast temp
  - Less engorgement
  - Less pain at 30 minutes
Edematized Breasts
- Symptoms
  - Swelling in breast tissue or areolar space with pitting edema
- Causes
  - Excess IV fluids
  - Inability to process postpartum fluids for variety of medical reasons

Edematized Breasts
- Treatment
  - Avoid pumping at first
  - Reverse pressure softening
  - Flower hold
  - Feed baby often to avoid engorgement
  - Hand massage

Engorged Breasts...Remember
- Determine what is going on!
- **TX with movement** – massage, acupressure, gua sha
- **TX to stimulate MER** – warm water compresses, warm water soaks, and tx above
- Best treatment is PREVENTION!

My Entire Breast Hurts!
- What is it?

Typical Model of Diagnosis
- Mastitis
  - Inflammation
  - Fever
  - Flu-like symptoms
- Plugged Ducts
  - Small hardened area
  - No fever
- Thrush
  - Not reddened
  - Not hardened
  - Burning, chafing, pain
Candida Albicans

- Jury is hung
- Is it Candida or is it Bacterial?

Studies from Eglash, Graves, Hale

Staph vs. Candida

- CASTLE (Candida and Staphylococcus Transmission: Longitudinal Evaluation) study
- Maternal nasal, nipple, and breastmilk samples
- Infant oral and nasal swabs
- Used molecular microbiological techniques in nipple swabs but not milk specimens

Staph vs. Candida

- Candida DOES play a role in nipple and breast pain
- Burning nipple pain is common in breastfeeding women
- Can be a variety of other causes so must make differential diagnosis

Castle Study

Staph vs. Candida

- Oral antibiotics effective for those who fail other therapies
- Pain associated with S. aureus and coagulase-negative Staphylococcus
- Initial office visit get a breastmilk culture.

Chronic Breast Pain

- (Witt)Women who had CTX with mechanical correction, lactation support, and topical ointments OTX seems to help
- Women with chronic breast pain who fail to respond to CTX are likely to have more severe nipple and breast pain on history and exam.
- They are less likely to have significant improvement in nipple tenderness on latch correction at the initial office visit (CTX conservative therapy/OTX Oral antibiotics) and more likely to grow S. aureus on.
Moral of the Story

• If it hurts, refer them for assessment and labs!

Would you nurse him in a park?
Would you nurse him in the dark?
Would you nurse him inside a yurt?
Would you nurse when your breasts hurt?

I would nurse him in a park.
I would nurse him in the dark.
I would nurse him in a teepee.
Tender breasts would never stop me.

I will nurse her with sore nips
I will nurse with great nursing tips.
I will nurse with joy and glee.
I will nurse, MOM, that’s me!!!

Questions?
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Want to learn more???
Take the
20 Hour Lactation Course
www.motherjourney.com