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

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**Identified Gap(s):** New evidence about treatment for sore nipples, thrush, mastitis, and plugged ducts has been released and is not being identified by those working with new breastfeeding mothers.

**Description of current state:** Mothers are still being prescribed topical products and treatments to address sore nipples, thrush, mastitis, and plugged ducts that are not evidenced based and in fact potential harmful.

**Description of desired/achievable state:** Attendees will be able to identify those topical products and treatments that are currently evidenced based for sore nipples, thrush, mastitis, and plugged ducts.

Objective: Identify at least two evidence-based treatments for sore nipples and engorgement.

Power Point and Lecture and Hands On Practice

Outline:

1. Sore Nipples
	1. Assessment of Nipple Trauma
	2. Past Forms of Nipple Treatment
	3. Main Causes of Nipple Soreness
	4. Problem Focuses Treatments
		1. Topical Applications – What Research Says

Objective: Identify two common inappropriate treatments for sore nipples.

Objective: Define clinical engorgement and normal postpartum breast fullness.

Power Point and Lecture and Hands On Practice

Outline:

1. Engorgement
	* 1. Causes of Engorgement
		2. Difference Between Fullness and Clinical Engorgement
		3. Need for Quick Intervention
		4. Common Treatments
		5. What Research Says
2. Plugged Ducts
	* 1. Causes
		2. Treatments
		3. Prevention
3. Mastitis
	* 1. Causes
		2. Treatments
		3. Prevention
4. Thrush
	* 1. Causes
		2. Bacterial vs. Fungal Infection
		3. Symptoms in mother and baby

Bibliography:

1. Abou-Dakn, M., Fluhr, J. W., Gensch, M., & Wockel, A. (2011). Positive effect of HPA lanolin versus expressed breastmilk on painful and damaged nipples during lactation. Skin Pharmacology and Physiology, 24, 27–35.
2. Ahn, Sukhee, et al. Effects of Breast Massage on Breast Pain, Breast-milk Sodium, and Newborn Suckling in Early Postpartum Mothers. J Korean Acad Nurs. 2011 Aug;41(4):451-459.
3. Allerberger, F. & Wager, M. 2010. Listeriosis: a resurgent foodborne infection. Clinical Microbiology and Infectious Diseases, 16, 16-23.
4. Anderson, J. E., Held, N., & Wright, K. (2004). Raynaud’s phenomenon of the nipple: A treatable cause of painful breastfeeding. Pediatrics, 113, e360–e364.
5. Berens, Pamela, and Wendy Brodribb. "ABM Clinical Protocol# 20: Engorgement, Revised 2016." *Breastfeeding Medicine* 11.4 (2016): 159-163.
6. Berens, Pamela, et al. "ABM Clinical Protocol# 26: Persistent pain with breastfeeding." *Breastfeeding Medicine* 11.2 (2016): 46-53.
7. Blair, A., Cadwell, K., Turner-Maffei, C., & Brimdyr, K. (2003). The relationship between positioning, the breastfeeding dynamic, the latching process and pain in breastfeeding mothers with sore nipples. Breastfeeding Review, 11, 5–10.
8. Bolman, Maya et al. Recapturing the Art of Therapeutic Breast Massage During Breastfeeding. Journal of Human Lactation. August 2013. 29(3). Pp 328-331.
9. Brent N, Rudy SJ, Redd B, Rudy TE, Roth LA. Sore nipples in breast-feeding women: a clinical trial of wound dressings vs conven-tional care. Arch Pediatr Adolesc Med. Nov;152(11):1077-82. 1998.
10. Buck, Miranda L; Eckereder, Gabi and Amir, Lisa H. Low level laser therapy for breastfeeding problems [online]. Breastfeeding Review, Vol. 24, No. 2, Jul 2016: 27-31. Availability: <http://search.informit.com.au/documentSummary;dn=268108267659837;res=IELAPA> ISSN: 0729-2759.
11. Buryk, M., Bloom, D., & Shope, T. (2011). Efficacy of neonatal release of ankyloglossia: A randomized trial. Pediatrics, 128, 280–288.
12. Cadwell K, Turner-Maffei C, Blair A, Brimdyr K, Maja McInerney Z. Pain reduction and treatment of sore nipples in nursing mothers. J Perinat Educ. Winter;13(1):29-35. 2004.
13. Centers for Disease Control and Prevention. Listeriosis. Available from: [www.cdc.gov/listeria/index.html](http://www.cdc.gov/listeria/index.html). Accessed 12/3/2013.
14. Chapman, Donna. Evaluating the Evidence: Is There an Effective Treatment for Breast Engorgement. Journal of Human Lactation. February 2011. 27(1). Pp. 82-83.
15. Chiu, Jin-Yu et al. Effects of Gua-Sha Therapy on Breast Engorgement: A Randomized Controlled Trial. Journal of Nursing Research. March 2010. 18(1). Pp 1-10.
16. Coca, Kelly Pereira, et al. "Efficacy of Low-Level Laser Therapy in Relieving Nipple Pain in Breastfeeding Women: A Triple-Blind, Randomized, Controlled Trial." *Pain Management Nursing* 17.4 (2016): 281-289.
17. Darmangeat, V. (2011). The frequency and resolution of nipple pain when latch is improved in a private practice. Clinical Lactation, 2(3), 22–24.
18. Dennis CL, Jackson K, Watson J. Interventions for treating painful nipples among breastfeeding women. Cochrane Database Syst Rev. Dec 15;(12). 2014.
19. Dennis CL, Schottle N, Hodnett E, McQueen K. An all-purpose nipple ointment versus lanolin in treating painful damaged nipples in breastfeeding women: a randomized controlled trial. Breastfeed Med. Dec;7(6):473-9. 2012.
20. Dodd V, Chalmers C. Comparing the use of hydrogel dressings to lanolin ointment with lactating mothers. J Obstet Gynecol Neo- natal Nurs. Jul-Aug;32(4):486-94. 2003.
21. Harrison D, Reszel J, Bueno M, Sampson M, Shah VS, Taddio A, Larocque C, Turner L. Breastfeeding for procedural pain in infants beyond the neonatal period. Cochrane Database Syst Rev. Oct 28;10. 2016.
22. Jackson, Kimberley T., and Cindy‐Lee Dennis. "Lanolin for the treatment of nipple pain in breastfeeding women: a randomized controlled trial." *Maternal & child nutrition* (2016).
23. Khosravan, Shahla, et al. "The effect of Hollyhock (Althaea officinalis L) leaf compresses combined with warm and cold compress on breast engorgement in lactating women: A randomized clinical trial." *Journal of evidence-based complementary & alternative medicine* 22.1 (2017): 25-30.
24. Mangesi, Lindeka, and Irena Zakarija‐Grkovic. "Treatments for breast engorgement during lactation." *The Cochrane Library* (2016).
25. McClellen, Holly et al. Nipple Pain During Breastfeeding with or without Visible Trauma. Journal of Human Lactaton. 2012; 28(4), pp 511-521.
26. Melli MS, et al. A randomized trial of peppermint gel, lanolin ointment, and placebo gel to prevent nipple crack in primiparous breastfeeding women. Medical Science Monitor, 13:9, CR406-CR411, 2007.
27. Mohammadzadeh, A., Farhat, A., & Esmaeily, H. (2005). The effect of breast milk and lanolin on sore nipples. Saudi Medical Journal, 26, 1231–1234.
28. Morland-Schultz K, Hill PD. Prevention of and therapies for nipple pain: a systematic review. J Obstet Gynecol Neonatal Nurs. July – Aug 2005; 34(4): 428-37.
29. Murimi, M., Dodge, C. M., Pope, J., & Erickson, D. (2010). Factors that influence breastfeeding decisions among Special Supplemental Nutrition Program for Women, Infants, and Children participants from central Louisiana. Journal of the American Dietetic Association, 110, 624–627.
30. O’Sullivan, S., & Keith, M. P. (2011). Raynaud phenomenon of the nipple: A rare finding in rheumatology clinic. Journal of Clinical Rheumatology, 17, 371–372.
31. Page, Tamara et al. The Management of Nipple Pain and/or Trauma Associated with Breastfeeding. Joanna Briggs Institute; Best Practice. 2009; 13940:1-4.
32. Roshan N, Rippers T, Locher C, Hammer KA. Antibacterial activity and chemical characteristics of several Western Australian honeys compared to manuka honey and pasture honey. Arch Microbiol. Oct 26. 2016.
33. Shanazi M, Farshbaf Khalili A, Kamalifard M, Asghari Jafarabadi M, Masoudin K, Esmaeli F. Comparison of the E ects of Lanolin, Peppermint, and Dexpanthenol Creams on Treatment of Traumatic Nipples in Breastfeeding Mothers. J Caring Sci. Dec 1;4(4):297- 307. 2015.
34. Sankanagoudar, Poomima et al. Effect of Therapeutic Non-Thermal Ultrasound on Postpartum Symptomatic Breast Engorgement. Indian Journal of Physiotherapy and Occupational Therapy. 2011. 5(2). Pp 108-113.
35. Sayyah Melli M, Rashidi MR, Delazar A, Madarek E, Kargar Maher MH, Ghasemzadeh A, Sadaghat K, Tahmasebi Z. E ect of peppermint water on prevention of nipple cracks in lactating primiparous women: a randomized controlled trial. Int Breastfeed J. Apr 19;2:7. 2007.
36. Walker, Marsha. Are There Any Cures for Sore Nipples? Clinical Lactation, 4(3), pp. 106-115, 2013.
37. Watson Genna, C. (2013). Supporting sucking skills in breastfeeding infants. Burlington, MA: Jones & Bartlett Learning.
38. Witt, Ann M., et al. "Therapeutic breast massage in lactation for the management of engorgement, plugged ducts, and mastitis." *Journal of Human Lactation* 32.1 (2016): 123-131.
39. Wong, BB et al. The effectiveness of cabbage leaf application (treatment) on pain and hardness in breast engorgement and its effect on the duration of breastfeeding. Joanna Briggs Institute. 2012. 10(20).
40. Wu, M., Chason, R., & Wong, M. (2012). Raynaud’s phenomenon of the nipple. Obstetrics and Gynecology, 119, 447–449.
41. Zanardo V, Giarrizzo D, Maiolo L, Straface G. E cacy of topical application of emu oil on areola skin barrier in breastfeeding women. Journal of Evidence-Based Complementary & Alternative Medicine 2015.
42. Zhou, Yingfeng. Prevention of Breast Engorgement Among Postpartum Women in an Obstetric and Gynecological Hospital: A Best Practice Implementation Project. Joanna Briggs Institute. 2013. 11(6).
43. Zhao, Chungying et al. Six-Step Recanalization Manual Therapy: A Novel Method for Treating Plugged Ducts in Lactating Women. Journal of Human Lactation. 2014, 30(3), pp 324-330.