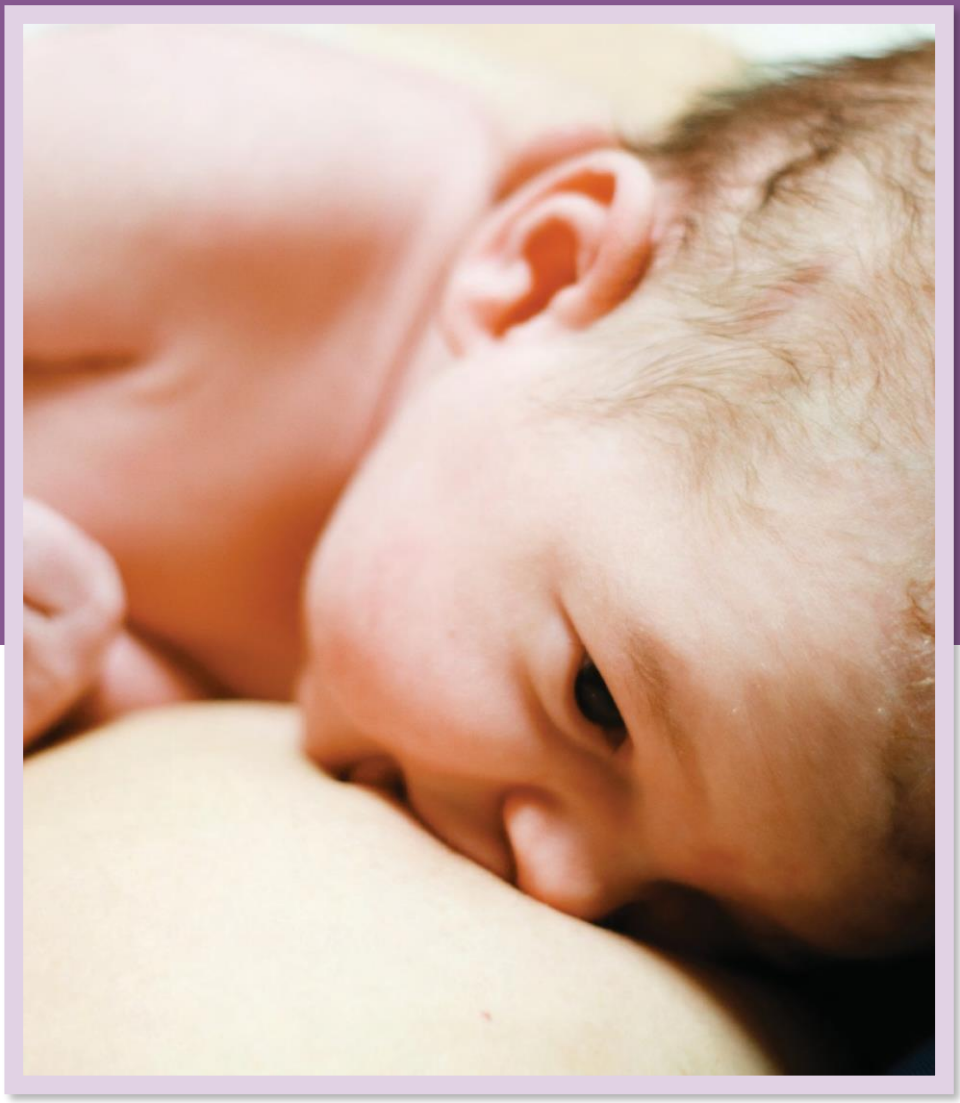
BREASTFEEDING PROTOCOL #4:

Sore Nipples



Toronto Public Health

Background

In 2018, a partnership was formed with the Baby-Friendly Initiative (BFI) Strategy for Ontario to update and revise the Breastfeeding (BF) Protocols for Health Care Providers to create a current and evidence informed resource. With the support of partner organizations and service providers, five BF Protocols were revised and released in 2019 and early 2020. The revised protocols are co-owned by the City of Toronto, and the Toronto East Health Network (TEHN), Baby-Friendly Initiative Strategy for Ontario. Just prior to the COVID-19 Pandemic, funding to support this partnership ended.

Work on the Sore Nipples BF protocol was initiated under the above partnership but was not completed due to the COVID-19 Pandemic. Thank you to the revising authors, Susan Gallagher, BScN, RN, and Tracy Petrou, BScN, RN, IBCLC, and external reviewers, Lina Al-Imari, MD, Breastfeeding Medicine, and Donna Brown, BFI Coordinator. Additional thanks to Lead BFI Assessor, Marg La Salle, and Best Start by Health Nexus staff Hiltrud Dawson, Project Lead, and Yolande Lawson.

In 2024, TPH resumed work on this protocol independently with permission from TEHN. TPH has updated information in this protocol with current evidence-based information. All Protocols are available at Breastfeeding Information for Health Professionals – City of Toronto.

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Use of this Protocol

TPH encourages individuals and organizations to use this Protocol to support evidence-informed clinical practice. This Protocol may be copied, printed, or digitally shared for the purpose of educating health care practitioners, provided the authors are acknowledged and content is not altered, nor used or reproduced for commercial gains.

Disclaimer

Every breastfeeding dyad and their circumstances must be assessed on an individual basis. In doing so, health care providers use their own professional judgement and scope of practice, along with the evidence in assessing the care and support that the family needs. At times, consultation with another breastfeeding expert or advice from a medical professional (physician, midwife, or nurse practitioner) will be required.

Contents

Protocol #4: Sore Nipples

Nipple pain is among the most common reasons why parents stop breastfeeding earlier than planned. Effective management and treatment of sore nipples is essential for continued breastfeeding. Many breastfeeding parents may experience nipple pain. With timely assessment, interventions and support, there is a better chance that parents will continue to breastfeed. The time and effort provided in helping parents to achieve better breastfeeding outcomes will contribute to infant health and long-term population health outcomes.

Key Messages

1. Nipple pain is among the most common reasons why parents stop breastfeeding earlier than planned.
2. When evaluating nipple pain, a thorough assessment is required.
3. Sore nipples may have one or more underlying causes; management is dependent on cause.
4. Effective management and treatment of sore nipples is essential for continued breastfeeding.

1. Nipple pain is among the most common reasons why parents stop breastfeeding earlier than planned.

- Nipple pain is a well-known cause of early cessation of breastfeeding (ABM, 2016; Puapornpong et al. 2017).
- Nipple pain is not related to the length and/or frequency of breastfeeding, or to hair and/or skin colour.
- Nipple pain is not prevented by prenatal nipple preparation, nipple exercises or the use of breast shells (Dennis et. al, 2014).
- Limiting the length or frequency of feeds does not prevent nipple pain or damage (Wambach & Spencer, 2021).
- It is not unusual during the first 1-2 weeks of breastfeeding for a breastfeeding parent to have mild nipple pain that often resolves as soon as their milk supply increases (Mohrbacher, 2020).
- Early onset nipple pain is often "mechanical" pain, related to improper infant latch or suck, nipple stretching and compression, or irritation from devices. Sudden-onset nipple pain after breastfeeding comfortably is often a sign of infection from bacteria, yeast, or other organisms (Wambach & Spencer, 2021).
- Direct observation is important to assess the cause of breastfeeding pain.

- The lactating breast and nipple areolar complex are highly vascular. It is not necessary to discontinue breastfeeding to promote healing of a cracked or bleeding nipple (Lawrence & Lawrence, 2022).
- Wound healing time is approximately 8 to 10 days for reepithelization after sustained trauma. (Lawrence & Lawrence, 2022). Rapid healing usually occurs once the problem is corrected (Mohrbacher, 2020).
- If breastfeeding needs to be temporarily interrupted due to nipple pain, health care providers are to:
  - Provide ongoing assessment and support to re-establish breastfeeding at the breast.
  - Educate breastfeeding parents on the importance of, and how to effectively express milk to ensure an adequate breast milk supply. See *Expressing, Collecting and Storing of Human Milk* Protocol.
  - Provide information on appropriate, alternative feeding methods to use until the parent is able to re-establish feedings at the breast. See *Alternative Feeding Methods* Protocol.

2. A thorough assessment is required when evaluating nipple pain.

Assessment of persistent nipple pain begins with a careful history and physical exam of both the breastfeeding parent and infant (ABM, 2016). Health care providers are encouraged to explore all possible causes of nipple soreness.

Assessment may include:

Initial History – explore any of the following:

Breastfeeding Parent	Infant
• Nipple/breast sensitivity before pregnancy. • Complications during pregnancy, labour, and birth. • Previous breastfeeding experiences/ problems/pain. • When did the current pain start. • History of breast surgery and reason(s) for surgery. • When does pain occur – with latch, during breastfeeding, between feeds, and/or with milk expression. • Location of pain – nipple, breast, or both. • Duration of the pain, timing, intermittent or constant. • Character of pain – burning, itching, sharp, shooting, dull, or aching. • Skin or nipple changes – colour, shape, or appearance. • Triggering factors – heat, cold, light, touch. • Milk supply (engorgement/supply issues). • Pattern of breastfeeding (frequency, duration, one or more breasts). • Expression of breast milk (frequency, hand expression, pump).	• Birth history/trauma. • Gestational age at birth and current age. • Birth weight and current weight. • Behaviour at the breast – fussy, pulling, squirming, biting, coughing, sleepy, or difficulty breathing. • Potential gastrointestinal problems – reflux, bloody or mucousy stools. • Medical conditions. • Assessment and diagnosis of ankyloglossia (tongue tie) or frenotomy. • Dysfunctional suck/teething. • Medications (ABM, 2016). • Use of artificial nipples (Santos et al. 2016).

Breastfeeding Parent	Infant
• Use of breast pads, shells, or shields. • Medical conditions – Raynaud's phenomenon, vasospasm, cold sensitivity, dermatitis, eczema, chronic pain syndromes, candida infections, herpes, breast infection, Paget's disease, history of anxiety or depression. • New pregnancy or menstruation. • Medications. • Allergies. • Past traumatic events (e.g., physical violence, sexual abuse). • Parent's breastfeeding goals.	

Physical Assessment

Breastfeeding Parent	Infant
• Nipple – protruding, flat, inverted. • Nipple and areolar skin integrity – sensitive to touch, presence and location of rash, discolouration, lesions, bruises, blisters, cracks, and bleeding. • Breast – engorgement, masses, tenderness. See *Engorgement* Protocol. *Plugged Ducts* Protocol. *Mastitis* Protocol.	• Oral anatomy (e.g., palate, teething, asymmetry, cleft, ankyloglossia). • Airway – nasal congestion. • Head and neck range of motion (e.g., torticollis). • Muscle tone. • Possible neurological concerns. • Symmetry of head and facial features (e.g., chin).

Breastfeeding Assessment

Breastfeeding Parent	Infant
• Missing or not responding to infant feeding cues (e.g., parent hurries latching or delays feeding). See *Initiation of Breastfeeding* Protocol. • Positioning of infant at breast. See *Positioning and Latching* Protocol. If expressing breast milk observe for the following: • Hand expression technique. See *Expressing, Collecting, and Storage of Human Milk* Protocol. • Breast shield/flange fit. • Breast pump management, e.g., suction.	• Positioning and behaviour at breast. • Effective latch. See *Positioning and Latching* Protocol. • Unlatching. • Effective suck and swallow. See *Signs of Effective Breastfeeding* Protocol.

3. Sore nipples may have one or more underlying cause; management is dependent on cause.

(Chart adapted from Physician toolkit: Breastfeeding reference manual)

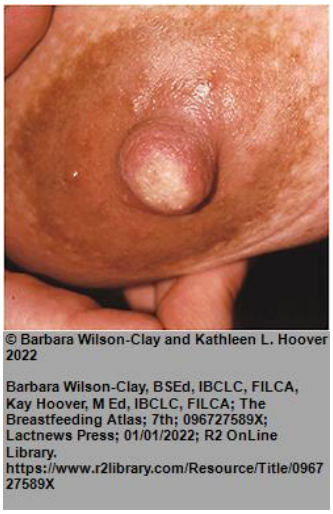
Condition	Signs and Symptoms	Management
Sore nipple  	• Pain during feeding. • Compressed or misshaped after latch. • Abnormally pink, red, or bruised.	• Correct latch (Niazi et al., 2018). See *Positioning and Latching* Protocol. • Correct or alternate breastfeeding position. • Expressed breast milk, nipple creams, or ointments may be applied onto nipple. Regarding the use of nipple creams, or ointments see details outlined in Section 4 – *Effective management and treatment of sore nipples is essential for continued breastfeeding*.
Cracked, bleeding or abraded nipples.  	• Painful latch. • Pain during and/or after feeding. • Broken skin integrity. • Red, bleeding nipples. • Compressed or misshaped nipple after latch. • Purulent discharge and honey coloured exudate.	• Correct position and latch (Niazi et al., 2018). • Observe and ensure proper unlatching technique. See *Positioning and Latching* Protocol. • Ensure wound is kept clean and lightly lubricated by gently cleansing wound with water after every feed (Wambach & Spencer, 2021), limit soap and water cleansing to once or twice a day (Wilson-Clay & Hoover, 2022). • Consider using expressed breast milk, nipple creams or ointments after cleansing to provide light lubrication. • Use warm water compresses – moist wound healing. • Consider using antibiotic/antifungal ointments for infected nipples (commonly recommended, however, no research to support their use) (Dennis et al., 2014). • Breast shells with good ventilation. • Anti-inflammatory medications may help (Wambach & Spencer, 2021).

Potential Underlying Cause	Signs and Symptoms	Management
Infant Ankyloglossia (tongue tie)  © Barbara Wilson-Clay and Kathleen L. Hoover 2022 Barbara Wilson-Clay, BSEd, IBCLC, FILCA, Kay Hoover, M Ed, IBCLC, FILCA; The Breastfeeding Atlas; 7th; 096727589X; Lactnews Press; 01/01/2022; R2 OnLine Library. https://www.r2library.com/Resource/Title/096727589X	• Ongoing nipple pain and damage. • Infant has restricted tongue movement due to tight frenulum.	• Assess breastfeeding and correct latch, if possible. • Refer to health care provider with experience in tongue tie assessment and treatment.
Engorgement  © Barbara Wilson-Clay and Kathleen L. Hoover 2022 Barbara Wilson-Clay, BSEd, IBCLC, FILCA, Kay Hoover, M Ed, IBCLC, FILCA; The Breastfeeding Atlas; 7th; 096727589X; Lactnews Press; 01/01/2022; R2 OnLine Library. https://www.r2library.com/Resource/Title/096727589X	• Breasts and/or areolae that feel hard beginning 3-6 days after birth or at other times when a mother's breasts are not effectively emptied. • Breast tightness, pain, may appear flushed. • Infant struggles to latch effectively.	• Assess for possible cause(s) of engorgement. • Assess for breast and areola fullness, hand express to soften areola. • Assess and correct position and latch. • See *Engorgement* Protocol.
Persistent cracks and fissures with a possible bacterial or fungal infection  © Barbara Wilson-Clay and Kathleen L. Hoover 2022 Barbara Wilson-Clay, BSEd, IBCLC, FILCA, Kay Hoover, M Ed, IBCLC, FILCA; The Breastfeeding Atlas; 7th; 096727589X; Lactnews Press; 01/01/2022; R2 OnLine Library. https://www.r2library.com/Resource/Title/096727589X	• Cracks not healing with corrected position and latch. • Weeping, yellow crusted lesions.	• Reassess latch and position. • Ensure wound is kept clean by gently cleansing wound with water after every feed. (Wambach & Spencer, 2021) and limit soap and water cleansing to once or twice a day (Wilson-Clay & Hoover, 2022). • Refer to HCP for antibiotic and/or antifungal.

Potential Underlying Cause	Signs and Symptoms	Management
Nipple bleb/sebaceous cyst  	• White or yellow painful dot on the nipple. • Can occur in association with plugged ducts.	Before breastfeeding: • Apply warm moist compresses. • Gently massage affected area. • Sterile lancing by a qualified HCP may be required if the bleb/cyst does not resolve. Additionally: • Correct position and latch. • Frequent breastfeeding. • Anti-inflammatory and topical steroid medications may assist in resolution of a bleb/cyst. • See *Plugged Ducts* Protocol.
Eczema/Contact Dermatitis  	• Blisters, weeping, crust formation. • Dryness, scaling, flaky skin.	• Inquire about sensitivity or allergy to lanolin, detergent/bleach, soap, shampoos, or spray deodorants (Wilson-Clay & Hoover, 2022). • Remove potential irritant. • Air dry. • Refer to health care provider for medicated emollient.

Potential Underlying Cause	Signs and Symptoms	Management
Candidiasis  © Barbara Wilson-Clay and Kathleen L. Hoover 2022 Barbara Wilson-Clay, BSEd, IBCLC, FILCA, Kay Hoover, M Ed, IBCLC, FILCA; The Breastfeeding Atlas; 7th; 096727589X; Lactnews Press; 01/01/2022; R2 OnLine Library. https://www.r2library.com/Resource/Title/096727589X  © Barbara Wilson-Clay and Kathleen L. Hoover 2022 Barbara Wilson-Clay, BSEd, IBCLC, FILCA, Kay Hoover, M Ed, IBCLC, FILCA; The Breastfeeding Atlas; 7th; 096727589X; Lactnews Press; 01/01/2022; R2 OnLine Library. https://www.r2library.com/Resource/Title/096727589X	• Sudden onset of pain. • Shooting breast pain. • Burning, itchy sensation on nipple, areola and in breast. • Pink and shiny nipple and areola. • Dry/flaky areola. • May coincide with thrush in infant's mouth or fungal diaper rash (Wilson-Clay & Hoover, 2022).	• Refer breastfeeding parent and infant as appropriate for further medical assessment. • Treat with antifungal medication and ointment to nipple and areola. • Treat both breastfeeding parent and infant simultaneously if warranted (Wambach & Spencer, 2021). • Treatment of the infant does not mandate treatment of the asymptomatic parent (Campbell et al., 2022). • See *Candidiasis (Thrush)* Protocol.
Paget's Disease (Type of breast cancer) (Wilson-Clay & Hoover, 2022).	• Looks like nipple eczema and can be mistaken for Candidiasis. • Bloody nipple discharge, erythema, and moist crusty scaling of the nipples. • Nipple ulceration and a palpable mass in the breast. • Usually only one breast is affected.	• If no response to a treatment plan as outlined above, further investigation by an appropriate health care provider is required. A biopsy may be recommended.

Potential Underlying Cause	Signs and Symptoms	Management
Herpes Simplex (Transmission during breastfeeding is more likely to occur from direct contact with a herpetic lesion on the breast (Wambach & Spencer, 2021).  	• Small, clustered, or solitary tender vesicle that can burst and leave ulcers on the breast.	• Prevent contact between lesions and the infant. • Good hand hygiene is necessary to avoid spread of virus. • Avoid breastfeeding or feeding expressed breast milk to infants from an infected breast/nipple until lesions are healed. • The infant may continue to feed on the unaffected side. • Refer to health care provider for an oral antiviral therapy.
Herpes Zoster (Chickenpox/Shingles) (Reactivation of the varicella-zoster virus which causes chickenpox or shingles)	• Presents as a vesicular rash with clear fluid, may or may not involve the breast.	• Breastfeeding can continue. Prevent contact between lesions and the infant until skin lesions are fully crusted (Wambach & Spencer, 2021). • See herpes simplex management above.
Damage from breast pumps or improper flange size  	• Soft tissue injuries/ bruising around nipple or areola. • Notable nipple blisters.	• Explore how and why they are using the breast pump. • Encourage hand expression until damage heals. • Teach correct pumping technique, including appropriate suction strength and flange sizing. • For more information see *Expression, Collection and Storage of Human Milk* Protocol.

Potential Underlying Cause	Signs and Symptoms	Management
Vasospasm  © Barbara Wilson-Clay and Kathleen L. Hoover 2022 Barbara Wilson-Clay, BSEd, IBCLC, FILCA, Kay Hoover, M Ed, IBCLC, FILCA; The Breastfeeding Atlas; 7th; 096727589X; Lactnews Press; 01/01/2022; R2 OnLine Library. https://www.r2library.com/Resource/Title/096727589X	• Shooting, burning or spasming pain associated with blanching and colour change (purple or red) of the nipple (Berens et al., 2016; Campbell et al., 2022). • The onset of symptoms may be sudden (Campbell et al., 2022). • Parent's may have a history of Raynaud phenomenon (Campbell et al., 2022).	• Assess and correct position and latch. • Keep the breast warm, apply warm compresses immediately after breastfeeding or when the parent experiences breast pain (Berens et al., 2016, Campbell et al., 2022). • Avoid cold exposure. • Limit products that can cause vasoconstriction such as caffeine and nicotine (Lawrence & Lawrence, 2022). • Medications such as nifedipine may be prescribed by a health care provider for severe cases (Berens et al., 2016; Campbell et al., 2022).
Breast milk oversupply	• Persistent breast fullness with milk leakage that leads to ineffective latching. • May be combined with a forceful letdown or breast milk ejection reflex. • Infant is unable to latch correctly. • Infant spitting up excessively after breastfeeding, coming off the mother's breast several times during a breastfeeding with mother's milk spraying.	• Assess for possible cause(s) of an overabundant breast milk supply. • Assess and correct position and latch. • Teach appropriate use of breast milk expression. • Avoid excessive breast milk expression which can lead to overstimulation of milk production. • See *Overabundant Breast Milk Supply/Forceful Letdown or Breast Milk Ejection Reflex* Protocol.
Breast Allodynia/Functional Pain	• Sensation of pain in response to a stimulus which would normally not elicit pain (e.g., pain to light touch like clothing brushing against the nipple causing excruciating pain) (Berens et al., 2016). • Can occur in isolation or in the context of other pain disorders.	• Explore history of chronic pain disorders (Berens et al., 2016). • Refer to health care provider for further assessment and treatment. • Psychological therapy may benefit individuals presenting with breast allodynia in setting of other chronic pain syndromes (Berens et al., 2016).

Potential Underlying Cause	Signs and Symptoms	Management
Biting (Wilson-Clay & Hoover, 2022) (Associated with growth and development during infancy)	• Cuts or tears in nipple skin. • Teeth marks, tears, bruising on areola.	• Keep bite wounds clean. • Assess and correct position and latch. • See *Breastfeeding the Older Child* Protocol.

Other breast occurrences that may contribute to sore nipples include plugged ducts, mastitis, or flat/inverted nipples. Refer to appropriate breastfeeding protocol for assessment, management, and treatment.

Section	Description
Plugged Ducts	See Plugged Ducts Protocol.
Mastitis (breast infections)	See *Mastitis* Protocol.
Flat or Inverted Nipples	See *Flat or Inverted Nipples* Protocol.

4. Effective management and treatment of sore nipples is essential for continued breastfeeding.

- Management is dependent on the cause of the nipple pain (Puapornpong et al., 2017).
- The best management of nipple trauma is prevention with education. Anticipatory guidance and learning about basic breastfeeding and chestfeeding management helps parents become knowledgeable about feeding techniques and promote effective positioning and latching (Campbell et al., 2022). See *Positioning and Latching* Protocol.
- Limiting the length or frequency of feeds does not prevent nipple pain or damage, because the quality of the feed is most likely the cause of the pain (Wambach & Spencer, 2021).
- It often helps to put an infant skin-to-skin on the breastfeeding parent's chest to allow infant to self-attach. See Biological Nurturing in *Positioning and Latching* Protocol.
- Before breastfeeding encourage the parent to ensure that the letdown or breast milk ejection reflex is initiated.
- If the latch is painful, encourage the parent to unlatch the infant and start over. See *Positioning and Latching* Protocol.
- To date, after comparing applications of expressed breast milk, lanolin, petroleum jelly, peppermint oil, glycerin gel, ointments, tea bags, antibiotics, antifungals, warm water compresses, hydrogel dressings, polyethylene film, nipple shields or breast shells, systematic reviews of evidence have yet to determine a definitive method for the management of sore nipples (Dennis et al., 2014).
- Parents need to make an informed decision about whether to use nipple creams or ointments as there is limited scientific evidence to establish standardized dosages and application or determine the efficacy and possible side effects for both the breastfeeding parent and infant, which may include sensitivities and allergies.

Below is a table that compares various preventative and treatment strategies for sore nipples:

Comparison of Intervention Strategies for the Prevention and Treatment of Sore Nipples

(Chart adapted from Topics in pain management. Lucas et al., 2016 Vol 32, No. 3)

Prevention	Pros	Cons	Other information
Prenatal Education	• Provided at a time when families are less stressed and ready to learn.	• Unable to implement knowledge until infant breastfeeds.	
Postnatal Education	• To be effective, needs to occur soon after birth before breast trauma.	• May be challenging to deliver due to competing needs of the breastfeeding parent at the time.	• Individualized lactation support is key to supporting parents and breastfeeding infants (Campbell et. al, 2019). • Continued follow up is required with referrals to health care provider with breastfeeding expertise as appropriate.
Good hand hygiene, including drying hands	• Decreases risk of transmitting organisms.		• Anything that touches the breast or infant's mouth should also be kept clean.

Early Intervention	Pros	Cons	Other information
Expressed breast milk applied to the wound/ sore area on the nipple	• Easily available. • Has antiviral and antibacterial properties that can promote healing and decrease response to inflammation (Spencer et al., 2022). • Can also be used as a preventative measure before and after breastfeeds to lubricate and prevent sore nipples (Mohrbacher, 2020).	• Limited research. • Mixed evidence on the effectiveness of expressed breast milk on healing nipple cracks and wounds.	• Application of expressed breast milk onto nipples before and after feedings may be most appropriate for preventative measures (Mohrbacher, 2020). • Some experts suggest expressed breast milk's natural properties help to decrease inflammation, stimulate immune function and growth, and development of tissue. (Lawrence & Lawrence, 2022). • It is no longer recommended to use

			expressed breast milk followed by air drying, as this may worsen nipple trauma. (Lawrence & Lawrence, 2022) Instead, it is more beneficial to ensure that nipple cracks, abrasions, and wounds are kept clean and lightly lubricated (Wilson-Clay & Hoover, 2022). • Not recommended when soreness is due to suspected yeast infection as expressed breast milk may encourage the growth of Candida albicans.

Follow product instructions and/or consult with a health care provider regarding safe usage for the following.			
Intervention	**Pros**	**Cons**	**Other information**
Lanolin	• Easily available. • Fairly inexpensive. • May promote epithelial regrowth (Niazi et al., 2018). • Maintains injured tissue moisture (Niazi et al, 2018). • May reduce pain.	• Can cause allergic contact dermatitis in some individuals (Campbell et al., 2022). • Contraindicated for the breastfeeding parent allergic to wool.	• Jackson, 2017 found there was no significant effect on wound healing. • Dennis et al., 2014 suggested that applying nothing or just expressed breast milk may be equally or more beneficial in the short-term experience of nipple pain than the application of an ointment such as lanolin.
Vitamin E		• Unfamiliar taste on the nipple. • Can lead to fussiness or breast refusal. • Skin reactions. • Elevated vitamin levels in infant (Mohrbacher, 2020).	• Topical application of vitamin E was once a commonly recommended treatment for painful nipples. • *No longer recommended* due to skin reactions and elevated vitamin E levels in babies (Mohrbacher, 2020).

Intervention	Pros	Cons	Other information
Hydrogel Dressings	• Moist saline dressing. • Cool and soothing. • Promotes epithelial regrowth. • May reduce pain.	• May increase risk of infection if appropriate hand hygiene and routine wound care (i.e., cleansing of wound(s), handling of dressings) are not followed (Wilson-Clay & Hoover, 2022).	• Should be discarded after 24 hours or when beginning to appear cloudy from fluid accumulation (Wilson-Clay & Hoover, 2022).
Saline Soaks	• May promote healing of nipple cracks/fissures.	• Can lead to dry nipple tissue (Lawrence & Lawrence, 2022).	• Although the evidence is not definite some parents may prefer to use a saline solution which can be purchased at a pharmacy or made at home (1/4 - 1/2 teaspoon of salt in one cup of boiled water that has been cooled.)
Extra Virgin Olive Oil	• Anti-inflammatory effect. • Cool and soothing.	• Possibility of skin reaction (Mohrbacher, 2020).	
Virgin Coconut Oil	• Anti-inflammatory effect. • More effective against staph aureus than olive oil (Walker, 2023).	• Possibility of skin reaction (Mohrbacher, 2020). • Studies are lacking regarding use of coconut oil (Walker, 2023).	
Dry wound healing (air drying, sunlight, sun lamp, hair dryer)		• Depletes the skin of moisture leading to cracks (Walker, 2023).	• *No longer recommended.* Moist wound healing is a more favourable treatment method that hastens healing and promotes growth of new tissue (Walker, 2023).

Treatment for Acute Nipple Pain and Trauma	Pros	Cons	Other
Breast shell/shield	• Provides a space between nipple and clothing, allowing nipple to heal.	• Not comfortable for some. • May indent areola and cause. blockage of ducts and bruising of tissue (Wilson-Clay & Hoover, 2022). • Increased risk of infection related to poor hygiene and cleaning of shell (Wilson-Clay & Hoover, 2022).	
Nipple shields	• May provide a layer of protection from infant sucking.	• Evidence is weak to support the use of a nipple shield in prevention and/or reduction of pain. • Can lead to further breast-feeding issues.	• Requires assessment and ongoing follow up by trained health care professional. • See *Breast Refusal or Difficulty Achieving or Maintaining a Latch* Protocol and *Flat or Inverted Nipples* Protocol.
Occlusive dressings	• Promotes epithelial regrowth.	• Removal of dressing is painful. • May increase nipple trauma.	• Most effective with infrequent dressing changes. This is difficult to maintain when breastfeeding or expressing breast milk.
Silver Cap  © Barbara Wilson-Clay and Kathleen L. Hoover 2022 Barbara Wilson-Clay, BSEd, IBCLC, FILCA, Kay Hoover, M Ed, IBCLC, FILCA; The Breastfeeding Atlas; 7th; 096727589X; Lactnews Press; 01/01/2022; R2 OnLine Library. https://www.r2library.com/Resource/Title/096727589X	• Ancient treatment with antimicrobial properties. • Promotes epithelial regrowth. • May reduce pain. • Washable and reusable (Wilson-Clay & Hoover, 2022).	• Limited research • Contraindicated for breastfeeding parents allergic to metal. • May be expensive (Mohrbacher, 2020).	

Treatment for acute nipple pain and trauma	Pros	Cons	Other
Peppermint gel/oil	• Antimicrobial properties.	• No standardized preparation for breastfeeding.	• Gel may be more effective than peppermint water or oil for nipple fissures. • Menthol is found in peppermint oil/gel in small doses and is safe for babies to ingest, has soothing effect (Campbell et al., 2022).

Treatment of Infected Nipples	Pros	Cons	Other
Oral Antibiotics	• Resolves pain by decreasing inflammation.	• Can cause overgrowth of yeast.	• Used to treat bacterial infections.
Non-steroidal ointment	• Effective for dermatitis of the nipple.	• May need to be removed before feedings to decrease infant exposure.	
Oral fluconazole therapy	• Resolves pain by decreasing inflammation.	• May be difficult to culture candidiasis, leading to further medical concerns, e.g., mastitis.	• Used to treat Candida infections. • Frequently used when topical antifungals fail to eliminate the infection (Walker, 2023). • Do not use in combination with domperidone or erythromycin due to concern of prolonged QT intervals (Berens et al., 2016).

Treatment of Infected Nipples	Pros	Cons	Other
All Purpose Nipple Ointment (APNO)	• Recommended by many HCP.	• Potential for overuse leading to bacterial resistance (Wilson-Clay & Hoover, 2022).	• Contains an antibiotic to combat bacterial infection, steroid to decrease inflammation and antifungal to combat Candida infection (Campbell et al., 2022). • Dermatologists rarely use a cream with multiple active ingredients because it is difficult to determine the source of a negative reaction. • No difference in healing outcomes was found with use at one week and 12 weeks (Dennis, 2012).
Medihoney	• A bactericidal against multiple strains of bacteria that has the ability to penetrate biofilm formation on bacterial colonies (Walker, 2023). • Antimicrobial properties covering a broad spectrum of fungi and bacteria (Walker, 2023). • Has been used successfully as a dressing for wounds (Walker, 2023). • Has antifungal properties and may be used to treat fungal infections (Walker, 2023).	• Limited research, especially on safety of its use on nipples while breastfeeding.	• Medihoney is treated to eliminate botulism spores (Walker, 2023). • Do not substitute Medihoney with store bought honey. Medihoney is a medical grade product and is sterile. Store bought honey should not be used with infants under one as it may cause infant botulism a rare, serious disease.

The majority of breastfeeding parents may experience nipple pain. With timely assessment, interventions and support, there is a better chance that parents will continue to breastfeed. The time and effort provided in helping parents to achieve better breastfeeding outcomes will contribute to infant health and long-term population health outcomes (Lucas et al., 2016).

Currently there is not enough evidence to recommend any specific type of treatment for painful nipples among breastfeeding parents. It was identified that regardless of the treatment used, nipple pain reduced to mild levels approximately 7 to 10 days after giving birth, for most breastfeeding parents (Dennis et al., 2014).

In conclusion, more scientific studies are needed on assessment and management of sore nipples (ABM, 2016).

Key Resources

The following key resources may assist you or your clients with sore nipples:

Academy of Breastfeeding Medicine
ABM Clinical Protocol #26 Persistent Pain with Breastfeeding

Baby-Friendly Newfoundland & Labrador

- The Physician's Toolkit Breastfeeding Quick Reference Guide (2016)
- The Physician's Toolkit Breastfeeding Reference Manual (2016)

LactMed - Drugs and Lactation Management Database
Topics in Pain Management, 2016, Vol. 32, No 3 Clinical Assessment and Management of Breastfeeding Pain

Toronto Public Health Breastfeeding Protocols for Health Care Providers

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