

Protocol #6

Plugged Ducts



Protocol #6: Plugged Ducts

Plugged or blocked ducts occur when one or more of the collecting ducts within a breast becomes plugged with breast milk and other cellular components. Contributing factors may include breast milk stasis or external pressure applied on specific areas of the mother's breast.

Observation and Assessment

Assess the mother for:

- Unilateral symptoms, localized in one area of the mother's breast.
- Mild tenderness, little or no heat, possible redness of one area of the mother's breast.
- If the plugged duct is close to the skin, there may be a palpable lump in one area of the breast.
- Possible white dot or bleb at the end of the nipple.
- Body temperature < 38.4°C (101°F).
- Gradual onset of symptoms.
- Feeling well otherwise.

Source: Adapted from Lawrence, 2011, and Riordan, 2010.

Possible Contributing Factors or Causes

Plugged ducts may be mother and/or baby related.

Assess the mother for:

- Ineffective removal of breast milk and inadequate drainage of the mother's breast.
- Restricting the frequency and length of breastfeedings.
- Temporarily stopping breastfeeding without expressing for the missed breastfeeds, including separation of mother and baby.
- Engorgement (*Protocol #5: Engorgement*).
- Overabundant breast milk supply (*Protocol #13: Overabundant Breast Milk Supply/Forceful Letdown or Breast Milk Ejection Reflex*).
- External pressure on a specific area of the mother's breast:
 - mother's finger pressing her breast
 - constrictive bra or clothing

- straps on a baby carrier
- always sleeping on the same side
- always holding the baby the same way.

- Positioning difficulties.
- Stress.
- Fatigue.
- History of breast trauma or surgery.
- Use of nipple shield within 1 week of symptoms (Fetherston, 1998).

Source: Adapted from Riordan, 2010; Lauwers & Swisher, 2011.

Assess the baby for:

- An ineffective suck (*Protocol #10: Ineffective Suck*).
- Infrequent, hurried, shortened, or missed breastfeedings, including when the baby is ill.
- Weaning.

Suggestions

1. Assess for possible cause(s) of the plugged duct (see the previous section on "Possible Contributing Factors or Causes").
 - If the mother's breasts are engorged, refer to *Protocol #5: Engorgement*.
 - If the mother has an overabundant breast milk supply, refer to *Protocol #13: Overabundant Breast Milk Supply/Forceful Letdown or Breast Milk Ejection Reflex*.
2. Provide the mother with suggestions for self-care.
 - Rest as much as possible.
 - Eat and drink according to *Eating Well With Canada's Food Guide* (Health Canada, 2007).
 - Support for herself and her household.
 - Help with care of other children.
3. Provide the mother with suggestions for breastfeeding with plugged ducts.

Before breastfeeding, encourage the mother to:

- Understand that most plugged or blocked ducts will resolve in 1–2 days.
- Follow her baby’s early feeding cues, e.g., rapid eye movements under the eyelids, sucking/licking, hands to mouth, increased body movements, and making small sounds.
- Breastfeed frequently, at least 8 times in 24 hours, including once overnight, to mimic the normal breastfeeding pattern until the plugged duct is cleared. The mother should also try to breastfeed if her breasts become uncomfortable or full. The mother should be encouraged to breastfeed before the baby is overly hungry and crying (*Protocol #3: Signs of Effective Breastfeeding*).
- Avoid missed or shortened breastfeeding. Express the breast if breastfeedings are missed or shortened.
- Gently massage the affected area towards her nipple while applying heat to promote removal of breast milk and drainage of the plugged duct. Heat may be applied during massage in a warm shower or bath, or by immersing the breast in a bowl of warm water.
- Apply moist heat and gentle nipple rolling before breastfeeding if there is a white bleb at the end of the nipple. If the bleb does not open with repeated breastfeedings or if it causes breastfeeding to be painful, then the bleb may need to be opened with a sterile needle at a breastfeeding clinic or by a physician. This should provide nipple pain relief and may clear the plugged duct.

During breastfeeding, encourage the mother to:

- Offer the affected side first at each breastfeeding to ensure strong sucking and drainage of the plugged duct.
- Gently massage the affected area towards her nipple and use breast compressions to promote drainage of the plugged duct. Breast massage or compressions may begin with the ducts closest to the nipple or from behind the plug.
- Avoid prolonged finger or hand pressure on the mother’s breast.
- Rotate breastfeeding positions during breastfeedings to promote drainage of all the ducts in the mother’s breast. Assess that the baby is effectively positioned and latched (*Protocol #2: Positioning and Latching*).

- Assess that the baby is effectively sucking and swallowing throughout each breastfeeding (*Protocol #3: Signs of Effective Breastfeeding*).

Between breastfeedings, encourage the mother to:

- Follow self-care practices – try to rest as much as possible, eat a healthy diet, and seek support to minimize stress.
- Avoid placing prolonged pressure on the breasts, e.g., from restrictive clothing, tight or underwire bras, straps on a baby carrier, always sleeping on one side, or always holding the baby the same way.
- Monitor for signs of mastitis, e.g., changes in body temperature, breast pain, and breast redness (*Protocol #7: Mastitis*).

If the baby is unable to breastfeed effectively, encourage the mother to:

- Gently express each breast after each time the baby is unable to breastfeed effectively. If breastfeeding is stopped for any length of time the mother will need to express each breast at least 8 times in 24 hours, including overnight, until the plugged duct has cleared. The mother should also express if her breasts become uncomfortable or full (*Protocol #19: Expressing and Storing Breast Milk*).
- Breastfeed the baby with the expressed breast milk using an alternative method, e.g., cup, spoon, syringe, or finger feeding (*Protocol #17: Indications for Supplementation or Cessation of Breastfeeding*).
- Consult a breastfeeding expert or attend a breastfeeding clinic for further assessment as soon as possible.

Recurrent plugged ducts:

- Review possible underlying factors.
 - Try lecithin, either from dietary sources or as a supplement. Contact a Registered Dietitian to discuss dietary sources of lecithin or any other change in diet, such as reducing saturated fat.
- Although there are no scientifically established dosages for use of lecithin in breastfeeding, supplements may be suggested by breastfeeding experts (see *General Principles* regarding lecithin).

General Principles

Continue to breastfeed frequently to promote effective removal of breast milk from the mother's breasts. Most plugged ducts will resolve within 1–2 days.

Support maternal self-care, i.e., rest and diet according to *Eating Well With Canada's Food Guide* (Health Canada, 2007).

Plugged ducts result from local accumulation of breast milk and cellular components in the mother's breast, with inflammation in the surrounding tissue. As there is breast tissue with lactiferous ducts located in the underarm, a plugged duct may also develop in this area.

A bleb or breast milk blister, a white dot or bump on the mother's nipple, is accumulation of breast milk solids that block the breast milk from flowing. It may be painful when the baby latches onto the mother's breast. If there is no pain, no treatment is needed.

There is no specific cause of plugged ducts (Riordan, 2010) but this condition occurs more often in women with an abundant breast milk supply and when their breasts are not adequately emptied. Plugged ducts are observed to occur more frequently in the winter months (Riordan, 2010). This may be related to the cold weather or to constricting clothing. Breast trauma or surgery may have damaged the ducts, interfering with their ability to transport breast milk (Lauwers, 2011).

- Fetherston observed that thicker breast milk may be a predictor of plugged ducts (Fetherston, 1998).
- Some practitioners report that mothers may find it less painful to massage or knead close to the nipple and in front of the plug (Campbell, 2006), rather than push the plug forward.

Antibiotic treatment is not recommended for plugged ducts unless they develop into mastitis. Mastitis is differentiated from plugged ducts by these symptoms: Fever of $>38.4^{\circ}\text{C}$ (101°F), flu-like symptoms, intense pain/redness in the mother's breast, and sudden onset of symptoms (Lawrence, 2011) (see also *Protocol #7: Mastitis*).

Lecithin – It has been suggested by some breastfeeding experts that lecithin may help resolve recurrent plugged ducts if the mother takes lecithin either in her diet or as a supplement. Lecithin is present naturally in breast human milk. It also occurs in the body as an emulsifier for bile salts. It is found

in many foods. A Registered Dietitian can suggest dietary sources of lecithin. However, dietetic texts do not make specific recommendations of lecithin for breastfeeding women. Although there are reports of clinical observations of the successful use of lecithin for plugged ducts with no apparent side effects, at this time there is not enough scientific information about the safety of various supplements and natural products to recommend their general use during breastfeeding. Although the use of lecithin is suggested in many texts (Lauwers, 2011; Riordan, 2010; Humphrey, 2003) and continues to be referenced by Dr. Ruth Lawrence (Lawrence, 2011), no clinical research could be found related to the use of lecithin for plugged ducts. There is not sufficient evidence to determine recommendations of efficacy, dosages, side effects, or risks for either the mother or baby. However, the following are frequently cited in the lactation texts: 1 tablespoon of lecithin, by spoon or in food 3–4 times/day (Lawrence, 2011) or 1–2 capsules (1200 mg) 3–4 times a day (Lauwers, 2011). Breastfeeding women should approach the use of natural health products with caution and always consult with their health care provider with breastfeeding expertise (*Protocol #16: Drugs and Breastfeeding*) for further discussion of natural products.

Ultrasound – References are found that suggest the use of ultrasound for recurrent plugged ducts. However, there is limited published evidence to support this intervention. An early Cochrane review reported equal effects of placebo and ultrasound (Snowden et al., 2001). Although reference was found to a poster abstract of a small retrospective study comparing therapeutic ultrasound as an adjunct to traditional interventions to traditional interventions alone for plugged ducts (Smillie, 2003), the study has not been published in a peer review journal. The study did observe a benefit from the use of ultrasound, but one of the authors later reported that the study clinic staff decreased use of ultrasound because the women viewed ultrasound as stressful and not empowering (Campbell, 2006).

Poorly managed plugged ducts can develop into mastitis (*Protocol #7: Mastitis*).

- Recurrent plugged ducts may be associated with breast cancer. Pregnancy associated breast cancer (PABC) occurs in a small percentage of women in the first year postpartum. It is important to refer

the mother to her primary health care provider to evaluate for possible breast cancer if there is recurrent mastitis or a plugged duct in the same area, febrile mastitis-like symptoms that are unresolved after antibiotic treatment, or a mass not decreasing after 72 hours of optimized

breastfeeding management (Petok, 1995 in Lawrence, 2011). It is recommended that the breast be emptied prior to a diagnostic procedure (Lawrence, 2011).

- Plugged ducts usually resolve with continued unrestricted breastfeeding.

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