

## ***Candida Protocol***

It is important to get the best latch possible when you have sore nipples. Even if the cause of sore nipples is *Candida*, improving the latch can decrease the pain. Note that with the “ideal” latch, the baby covers more of the areola (brown part of the breast) with his lower lip than the upper lip. Note also that the baby's nose does not usually touch the breast (except when the mother's breasts are very large, and even then). It is not always easy, though, to change the latch of the older baby.

Start with *local* treatment (applied on the nipple) with:

1. **Gentian violet** (look under that title at the website below). Once a day for 4 to 7 days. If pain is gone after 4 days, stop gentian violet. If better, but not gone after four days, continue for 7 days. Stop after 7 days no matter what. If not better at all at 4 days, stop the gentian violet, continue with the ointment as below and call. Gentian violet comes as a 1% solution in water. It also *always* contains 10% alcohol, as gentian violet is not soluble in pure water. This amount of alcohol is negligible as the baby will only get a drop of gentian violet. 2% gentian violet *should* not be used.

**Plus:**

2. **Nipple ointment** as below:

mupirocin 2% ointment (15 grams)  
betamethasone 0.1% ointment (15 grams)

To which is added miconazole powder so that the final concentration is 2% miconazole. This combination gives a total volume of approximately 30 grams. Clotrimazole powder to a final concentration of 2% may be substituted if miconazole powder is unavailable, but both exist (the pharmacist may have to order it in). I believe clotrimazole is not as good as miconazole, but I have no proof of that. Using powder gives a better concentration of antifungal agent (miconazole or clotrimazole) and the concentrations of the mupirocin and betamethasone remain higher.

The combination is applied sparingly after each feeding (except the feeding when the mother uses gentian violet). “Sparingly” means that the nipple and areola will shine but you won’t be able to see the ointment. Do **not** wash or wipe it off, even if the pharmacist asks you to. In Canada, Kenacomb (easier to find) or Viaderm KC (less expensive) ointments (not cream) can be substituted for the above combination, but are distinctly inferior. I used to use nystatin ointment or miconazole cream (15 grams) as part of the mixture, and these work well, but I believe the use of powdered miconazole (or clotrimazole powder) gives better results. These ointments can be used for **any cause** of nipple soreness (“all purpose nipple ointments”), not just for *Candida* (yeast). The ointment is used until pain free and then decrease frequency over a week or two until stopped. (See *Treatments for Problems 1* under “all purpose nipple ointment” at the website below).

3. Grapefruit seed extract (**not** grape seed extract), 250 mg three times a day orally (taken by the mother), seems to work well in many cases. It can be used before trying fluconazole, instead of fluconazole or in addition to fluconazole in resistant cases. See below for information on grapefruit seed extract used directly on the nipples.

4. If pain continues and it is sure the problem is *Candida*, or at least reasonably sure, *add* fluconazole 400 mg loading, then 100 mg twice daily for at least 2 weeks, **until the mother is pain free for a week**. The nipple ointment should be continued and the gentian violet can be repeated. If fluconazole is too expensive, ketoconazole 400 mg loading, then 200 mg twice daily for same period of time (or grapefruit seed extract can be used). If *Candida* is resistant, itraconazole, same dose and time period as fluconazole, can be used and has worked, though *Candida* actually is less sensitive to itraconazole, generally, than it is to fluconazole. (See handout *Fluconazole*). Fluconazole is apparently now available as a generic product (therefore less expensive). Fluconazole should not be used as a first line treatment or if nystatin alone does not work (which it usually doesn't). Before using fluconazole, nipple pain should be treated aggressively with good latch, gentian violet, all purpose nipple ointment and grapefruit seed extract. Fluconazole takes 3 or 4 days to start working, though occasionally, in some situations, it has taken 10 days to even start working. If you have had no relief with 10 days of fluconazole, it is very unlikely it will work, and you should stop taking it.

5. For deep breast pain, ibuprofen 400 mg every four hours may be used until definitive treatment is working (maximum daily dose is 2400 mg/day).

### **Grapefruit Seed Extract**

**Grapefruit seed extract can be used while using the all purpose nipple ointment. Apply the diluted liquid grapefruit seed extract on the nipples, then the ointment (both after the feeding).**

Directly on the nipples:

Mix five to 10 drops in 30 ml (1 ounce) of water. Use cotton swab or Q-tip to apply on both nipples and areolas *after* the feeding. Let dry a few seconds. Then apply "all purpose nipple ointment". Use until pain is gone.

**Questions?** (416) 813-5757 (option 3) or [drjacknewman@sympatico.ca](mailto:drjacknewman@sympatico.ca) or my book **Dr. Jack Newman's Guide to Breastfeeding** (called **The Ultimate Breastfeeding Book of Answers** in the USA)

<http://www.mamadearest.ca>

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