

***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 or darker 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, most babies well latched on will not have their noses touching the breast). It is not always easy, though, to change the latch of the older baby. For videos showing how to latch on a baby, go to www.mamadearest.ca/en/info/articles_dr_newman.htm.

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

1. **Gentian violet** (look under that title at the website below or see handout: #6 *Using Gentian Violet*). Use once a day for four to seven days. If pain is gone after four days, stop gentian violet. If better, but not gone after four days, continue for seven days. Stop after 7 days no matter what. If not better at all at four days, stop the gentian violet, continue with the ointment as below and call or email. Gentian violet comes as a 1% solution in water. It also *usually* dissolved in 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. Apparently some pharmacists will dissolve it in glycerine instead of alcohol, if you wish. 2% gentian violet *should not* be used.

Plus:

2. **APNO (All Purpose 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 just more than 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, but compounding pharmacies almost always have it on hand). I believe clotrimazole is not as good as miconazole. Using powder gives a better concentration of antifungal agent (miconazole or clotrimazole) and the concentrations of the mupirocin and betamethasone remain higher. Sometimes we will add ibuprofen powder to a final concentration of 2%.

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. I used to use nystatin ointment or miconazole cream (15 grams) as part of the mixture, and these work well enough, but I believe the use of powdered miconazole (or even 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). Use the ointment until you are pain free and then decrease frequency over a week or two until stopped. (See Handout #3b *Treatments for Sore Nipples and Sore Breasts* under “all purpose nipple ointment”). If you are not having less pain after 3 or 4 days of use, or if you need to be using it for longer than two or three weeks to keep pain free, **get help or advice**.

3. **Grapefruit seed extract** (*not* grape seed extract, **ACTIVE INGREDIENT MUST BE “CITRICIDAL”**), 250 mg (usually 2 tablets) three or four times a day orally (taken by the mother), seems to work well in many cases. If preferred the liquid extract can be taken orally, 5 drops in water three times per day (though this is not as effective). Oral GSE 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 two 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) can be used instead. 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 #20, *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. If used, fluconazole should be *added* to treatment of the nipples, not used alone. Fluconazole takes three or four days to start working, though occasionally, in some situations, it has taken 10 days to even start working. If you have had *no relief at all* 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 (GSE)

Grapefruit seed extract (ACTIVE INGREDIENT MUST BE "CITRICIDAL") should be used in conjunction with the APNO (All Purpose Nipple Ointment). Apply the *diluted* liquid grapefruit seed extract on the nipples, and then follow with the ointment (always after the feeding).

Apply solution directly on the nipples. It does not need to be refrigerated. It may be covered and used until solution is finished.

- ◆ Mix very well five to 10 drops in 30 ml (1 ounce) of water (preferably, but not necessarily, distilled).
- ◆ 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".
- ◆ If using Gentian Violet, do not use GSE on that particular feed but use after all other feeds.
- ◆ Should be used in conjunction with oral GSE, either tablets, capsules, or liquid extract (see above)
- ◆ Use until pain is gone and then wean down slowly over the period of at least a week.
- ◆ **If pain is *not* significantly improving after two to three days, increase the dose by 5 drops per 30 ml (ounce) of water. Can continue increasing until 25 drops per 30 ml of water.**
- ◆ **If flaking, drying, or whiteness appears on the skin, substitute vitamin E oil or pure olive oil for APNO 1-3x/day.**
- ◆ Laundry can be treated as well: add 15-20 drops in the rinse cycle of all wash loads

If not using Gentian Violet, it may be helpful to treat baby with acidophilus by rolling a wet finger in acidophilus powder (break open a capsule), and let baby suck on the finger right before a feeding. Use 2x first day, 2x second day only. Mother may want to ingest Acidophilus as well, 3x/day for 1-2 weeks.

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

Handout C: *Candida Protocol*
Jack Newman, MD, FRCPC. © 2005
Revised: January 2005

**This handout may be copied and distributed without further permission,
on the condition that it is not used in any context in which the WHO code on the marketing of
breastmilk substitutes is violated**