Yeast Infections and the Breastfeeding Family:
Helping mothers find relief for symptoms and treatment for the infection preserves the breastfeeding relationship

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We provide articles from our publications from previous years for reference for our Leaders and members. Readers are cautioned to remember that research and medical information change over time

Sudden, severe, unexplained pain in an experienced nursing mother's nipple(s) or breast (s) can be an indication of a yeast infection or thrush. So too can chronic breast or nipple pain in the mother of a newborn. Yet not all nipple pain is caused by a yeast organism. It can be difficult for Leaders to distinguish between the possibility of yeast infection and other causes of nipple pain when mothers call with nipple discomfort.

Because Leaders are not health care providers, we cannot suggest a diagnosis but we can educate mothers about the common causes of nipple pain and appropriate management strategies. We can encourage them to seek the advice of their health care providers for a definitive diagnosis and treatment.

Pain during breastfeeding is a common reason for mothers to wean. By helping mothers seek relief of symptoms and treatment for the yeast, Leaders can help preserve breastfeeding relationships.

Thrush is caused by a yeast fungus, usually *Candida albicans*. There are ten forms of Candida that can affect humans. Fungi are deceptively simple, single-cell microbes. They are opportunistic, taking every available opportunity to colonize, and tenacious in their adaptability. Yeast can survive on dry household or fabric surfaces, waiting for moisture to reactivate. Yeast thrives in warm, moist, dark areas and replicates wildly in the presence of sugars, including those in human milk. Breast or nipple yeast is rarely a problem for the nonlactating women. However, in a breastfeeding woman, the change from a dry to a wet atmosphere can create favorable conditions for yeast overgrowth.

Under the right conditions, yeast can invade almost any body tissue. It is common in the vagina and the mouth. A baby may also have yeast rashes in thc diaper area. Any skin that touches other skin is especially vulnerable: under arms or breasts, between fingers or toes, in the groin area and even in the creases of the eyelid. Skin that is occluded (covered) is also vulnerable as moisture increases. Other common sites for yeast overgrowth are under finger and toenails and beneath dentures. Some families have found yeast infections to be incredibly difficult to eradicate.

Because thrush is not always visible, for years health care providers did not believe it could occur on nipples or in breast ducts, much less systemically throughout the bodies of those susceptible to it. Medical texts contain little information on breast and nipple yeast infections and it is difficult to prove ductal yeast infection through laboratory tests. Physicians, such as William Crook who spoke at LLLI Conferences in the 1980s, began to recognize the damage yeast can do, yet the information was not widely believed. Fortunately, a few studies now document the effects of yeast, although many health care providers are still not convinced.

Leaders can help by providing information for mothers to share with their health care providers about what yeast is, how overgrowth can occur and ways to control overgrowth. *Candidiasis and Breastfeeding (LLLI Lactation Consultant Series, Unit 18,* No. 288-18) by Lisa Amir, Kay Hoover and Chris Mulford provides detailed information about yeast and its treatment as well as an extensive bibliography. An additional page with colored photographs is also available (No. 288-18a).

Predisposing Factors

While yeast can affect healthy people, it tends to proliferate in immunocompromised individuals. It can prove fatal to those who are severely immune-compromised such as transplant recipients, cancer patients or those with AIDS. Pregnancy can also be a factor in yeast overgrowth.

About half of the population carries Candida as a normal part of their skin and intestinal flora. Most exhibit no problems because other normal skin and gut organisms and Candida exist harmoniously and keep each other in balance. When an event occurs that upsets this balance, overgrowth of organisms is likely; the benign yeast turns into a pathogenic (disease-causing) form. Medical slides show hyphal (root-like) growths attaching yeast to and embedding it in various tissues.

After a course of antibiotics, which kills both benign and pathogenic bacteria, a yeast infection is more likely. In some countries, farm-raised animals are fed food laced with antibiotics. This could trigger yeast overgrowth according to Baumslag and Michels

in *A Woman's Guide to Yeast Infections.* Amir found that mothers who had used antibiotics for longer than one month were more susceptible to yeast, even if the use occurred years earlier, for example, long-term use of antibiotics as a treatment for acne.

Climate can also play a role in yeast outbreaks. Warm weather, particularly when coupled with high humidity which slows the evaporation of perspiration, is conducive to yeast growth. Rainy or foggy climates can also increase thrush outbreaks. In areas where autumn leaves remain on the ground, yeast infections may be more prevalent. Yeasts and molds proliferate under the same conditions.

The higher levels of estrogen and progesterone during pregnancy encourage yeast colonization as the pH of the vagina changes. Babies born to mothers with vaginal yeast often develop oral thrush when they are ten days to two weeks old from exposure in the birth canal. This can also happen to babies whose mothers are treated with antibiotics at the time of delivery; mothers are sometimes unaware that they have received these antibiotics. Mothers who take oral contraceptives containing estrogen are also more likely to experience yeast infections, according to Baumslag and Michels. The use of corticosteriod drugs also predisposes a woman to yeast infections. Ruth Lawrence in *Breastfeeding: A Guide for the Medical Profession* reports a correlation between long-term steroid use and yeast infections, for example, in those being treated for asthma or severe allergies.

Some other influences on yeast infections according to Baumslag and Michels are sexual transmission, genital abrasions/irritations, immunosuppressive therapy and other deficiencies in the immune system such as those caused by illness, poor nutrition or stress. Infants are particularly prone to yeast infections, especially premature babies and those with PKU.

In breastfeeding women, nipple damage is associated with a higher risk of developing yeast. Marianne Neifert found that 75% of the women with chronic nipple pain at two weeks postpartum cultured positive for Candida. Often yeast and bacterial infections are present simultaneously on nipples that have broken skin. Both mother and baby must be treated to resolve the discomfort.

Amir found more yeast infections in women using nursing pads which keep the nipple warm and moist. Horowitz found that dietary factors, especially consuming dairy products, sugars and artificial sweeteners, contributed to yeast overgrowth. Olds found that nutritional deficiencies of vitamins A, B, C, and K, as well as folic acid and iron contributed to yeast infections. Edman found women who are deficient in zinc are more prone to recurrent yeast infection. Diabetics, because of higher blood sugars, are more likely to be plagued by yeast: indeed, repeated yeast infections may provide the first warning of diabetes. Manning found babies who use pacifiers (soothers, dummies) have more thrush than babies who do not.

Symptoms of Thrush

Pain is the hallmark symptom of yeast. Mothers have described the pain as searing, burning, stabbing, shooting, knifing (particularly hot knifing), itchy-burny, throbbing, flaming, stinging or thrusting, as well as extremely severe, acute, unbearable and excruciating. One mother described to LLL Leader and IBCLC Kay Hoover the feeling that there was ground glass in her nipple. These descriptions make it obvious why immediate measures need to be taken to preserve the breastfeeding relationship. The pain may occur during or after feedings or both. It may persist or subside between feedings.

Although nipples and areola may not show signs of yeast infection, these symptoms may certainly be present:

- Pain.
- Burning.
- Itching.
- Iridescent or shiny appearance.
- Light-skinned mothers' nipples may be red, purple-red or deep, angry pink.
- Dark-skinned mothers' nipples may be darker or red.
- Nipples may be more erect than usual.
- Nipples may be dry and may actually peel during or after a yeast infection.

- Skin may have a rash with tiny, fluid-filled blisters.
- Nipples may have white dots.
- Nipples may appear swollen.
- Mother may have a vaginal yeast infection.
- Sore or cracked nipples have not responded to changes in positioning other comfort measures.
- One or both nipples may be affected.
- Mother may have experienced recurrent breast infections or plugged ducts.

Babies may appear perfectly normal without noticeable symptoms or there may be creamy white patches on their gums, insides of cheeks, palates and tongues which do not scrape off. Their saliva and the insides of their lips may have a pearly, opalescent sheen before a visible outbreak. Their mouths may be sore, causing them to refuse to nurse or to nurse for a moment, then pull off the breast and cry. Clicking sounds may be heard during breastfeeding. They may be extra fussy and gassy. They may have a yeast rash in the diaper area: a vivid red, raised rash with stray bumps around the edges that is not soothed by usual remedies. The skin can crack and ooze clear fluid, or even bleed. Babies who are sensitive to the discomfort of thrush and cannot nurse well may experience poor weight gain during this time.

Fathers may also experience yeast overgrowth and present with or without symptoms. Penile yeast infections are also possible, because yeast can be in semen.

Adults may also contract oral thrush or painful cracks in the corners of the mouth (angular cheilitis) which may resolve with topical antifungal treatment.

Other Causes of Nipple Pain

Before encouraging a mother to see her health care provider for nipple pain possibly caused by yeast, it is helpful to explore the many other reasons for sore nipples. See "Possible Causes of Sore Nipples Other Than Thrush." Since yeast is often diagnosed only after other likely causes have been eliminated, it can be useful for a Leader to help a mother rule out other possible causes of nipple pain.

Skin eczema, dermatitis or inflammation can mimic characteristics of thrush - red, dry, itchy, peeling skin that produces discomfort which can be severe. Causes of eczema on the nipples or breasts include dry skin, very dry air, solids the baby is eating, laundry detergent/soap residue in clothing, ointments or cream (the preparation itself or rubbing to remove it before the baby nurses), bath soap or cleansing gel (the preparation itself or improper rinsing), antibacterial cleanser, powder, hair spray, deodorant, perfume or lotion. Allergic rashes are generally seen on other skin areas along with the breasts and nipples. Excessive perspiration can cause irritation in some mothers.

Avoiding Yeast Overgrowth

Intact skin is the body's first line of defense against yeast and microbes of any kind. Healthy skin is more resistant to any sort of irritation and will heal more quickly and easily if an insult dues occur. In the areola, the bumpy Montgomery glands produce lubrication for the skin, protecting it from drying out and flaking off. Friction also removes or damages beneficial skin layers - a good reason for not rubbing the nipple area.

Poor hygiene contributes to the spread of yeast to areas where it can proliferate. Thorough hand washing after handling the breasts or milk, changing diapers (nappies) and using the toilet are helpful in preventing yeast infection as well as in limiting an outbreak in progress. With the recent popularity in the USA of antibacterial soaps, yeast infections have been noticed around the fingernails of mothers with breast/nipple thrush. If a family has a yeast infection, a non-antibacterial soap may be a better choice. Vaginal douching and the use of spermicidal creams and diaphragms have also been associated with vaginal yeast infections. Poor oral hygiene, especially in those with orthodontic appliances and dentures, may also contribute.

Diet plays a big role. As noted above some vitamin and mineral deficiencies play a part in predisposing those vulnerable to yeast infections. The best diet includes eating a variety of foods in as close to their natural state as possible and avoiding heavy consumption of sugars (natural and artificial), yeasts, alcohol, dairy products, honey, fermented foods (including undistilled

vinegar, cheese, beer and wine), grapes, melons, dried fruits, fruit juices, bread, peanuts, peanut butter, mushrooms and wheat products. Abstaining from excessive amounts of refined carbohydrates is also beneficial.

Wearing synthetic clothing that does not allow the skin to breathe also may be a predisposing condition for yeast. Tight clothing should also be avoided. Pantyhose, non-cotton underwear and snug jeans have been particularly implicated. For those who perspire heavily or are obese, avoiding the above is even more important.

Sharing toys, teats (nipples), pacifiers (soothers, dummies) or teethers encourages the spread of thrush. Boiling or disinfecting these daily during an outbreak and replacing them often will assist in limiting the spread of the organism.

How Thrush Is Identified and Treated

Although there are laboratory tests to positively identify Candida, they are expensive and do not always show accurate results. Thus they are rarely used. Many physicians will treat the suspicious area with an antifungal medication. If it responds, yeast is thought to be the cause. However, yeast is very aggressive and can mutate into forms that are resistant to specific medications, especially those that have been in use for a long time.

If either the mother or baby is diagnosed with yeast, both need to be treated simultaneously. If the mother is tandem nursing, the older child must be treated as well. If the father is symptomatic, visibly or not, he should also receive therapy. Treating only one family member merely allows the yeast to pass back and forth.

Relief should be noted within 36 hours of treatment; if not, the health care provider needs to be told so another drug can be prescribed. If no resolution is found after using a particular antifungal treatment, another could be tried before ruling out yeast. Since there are many strains of yeast and some drugs work better than others on particular strains, a change in medication may be indicated if no relief is felt by the mother.

Because yeast can cause nipple soreness before there are visible symptoms, some health care practitioners are reluctant to prescribe medications. Those who do prescribe are sometimes not familiar enough with nipple or breast yeast to be aware of currently recommended dosages. Most sources agree that topical yeast treatments should continue for ten days to two weeks after the last of the symptoms disappear to prevent a reoccurrence.

Medications for yeast can be topical (external) or systemic (internal); generally topical drugs are tried first. If one or more of these has been tried or the yeast overgrowth is inside the breasts, the physician may prescribe a more powerful systemic drug.

Fluconazole will cure a vaginal yeast infection with a single oral dose. It is the contention of many breastfeeding professionals that this dosage is not adequate to resolve ductal yeast, which produces pain deep in the breast. Thomas Hale in *Medications and Mother's Milk* states that to resolve some yeast infections, many clinicians recommend that treatment should last for two weeks or more, depending on the severity.

Gas (wind) is a common side-effect of yeast treatment. Some theorize that this is a result of gas released by dying yeast organisms rather than an effect of the medication.

Nystatin oral suspension is often the first medication a physician will try for treating an infant with thrush or oral yeast. Nystatin oral suspension must come in contact with the yeast organism to kill it. When treating a baby's mouth, first pour the medication into a small cup, dip a cotton swab in it and paint the baby's mouth - the whole mouth, every nook and cranny. Each time more medication is needed, use a clean swab. Do not dip the swab into the medication bottle itself.

Thrush that does not respond quickly may be a fast-growing form. Yeast is capable of replicating itself every 30 minutes! Leaders may suggest that the mother ask her baby's doctor for permission to use half as much of the nystatin oral suspension, usually used four times a day, and apply it to the baby's mouth twice as often as originally suggested. The amount of medication used is the same over a 24-hour period, but often more effective in smaller, more frequent doses. A mother can ask about doing the same for the medication used on her nipples.

Care for Yeast Infections

If yeast is suspected, the health care provider should be seen for a diagnosis. If the mother and baby are under the care of separate doctors, the mother will need to ensure that she and her baby are simultaneously treated. Even if only the mother or baby shows symptoms of yeast, it is vital that both be treated. The mother's partner and/or tandem nursing child may also be included and involve yet another physician.

Very painful nipples can be protected from contact with clothing by wearing hard plastic shells in the bra between feedings. The shells come in contact with leaking milk and need to be cleaned frequently. Using crushed ice on the nipples before breastfeeding will often numb them enough to make nursing bearable. Beginning the feeding on the least sore side may also assist in the mother's comfort. Taking mild over-the-counter pain medication (whatever the mother finds effective when she has a bad headache) can also be useful.

Hand-expressing to encourage the milk-ejection reflex before latching the baby on may also help. Meticulous care in latch-on and positioning will help as can shorter but more frequent nursing times. Carefully breaking the suction with a clean finger (and washing it well afterward!) before detaching the baby can minimize discomfort as well. Some mothers wet their finger in their mouths before using it to detach the baby; this is never a good idea.

Some mothers find they cannot tolerate the baby nursing until their nipple pain has decreased. Using an automatic electric breast pump set on the minimum suction and feeding the baby the expressed milk with a cup, spoon, dropper, syringe or finger-feeding with a tube device may save a breastfeeding relationship. Abrupt weaning is never recommended, especially when there is already pain. Allowing the baby to take a few sips of water after nursing can help wash the milk from his mouth, making it less hospitable to yeast growth.

Babies who have a yeast diaper rash should be washed gently and thoroughly rinsed with each diaper change. Using soap may be too harsh. The diaper area should be cleansed from front to back.

Commercial diaper wipes may contain ingredients that further irritate damaged skin. The skin where the rash is may crack and peel; this is usually dead skin and not a concern. Leaving a baby without a diaper whenever possible can speed healing. When diapers are used, it is preferable not to use those with a plastic or rubber coating or wrap: instead, choose a covering that allows the skin to breathe.

Vaginal yeast infections generally need to be treated. Medications are now available without a prescription in some countries but the directions and duration of use must be followed carefully. Wearing cotton underwear and avoiding tight or synthetic clothing is helpful: it may be best to wear no panties at night. Practicing good toilet hygiene and wiping from front to back are important. Vaginal yeast infections that do not respond to over-the-counter creams may need a stronger prescription-strength medication or there may be other infections present. Leaders are encouraged to suggest that the mother see her heath care provider.

Recurrent vaginal yeast infections may be caused by reinfection from the mother's partner. If infections persist, the mother's partner should also be checked for yeast.

Destroying Yeast

To kill yeast on surfaces other than skin, immersion in very hot water (50°C or 122°F) will work in minutes. A bleach solution (10% bleach and 90% water) will also kill yeast as well as discolor fabric and irritate skin. Boiling is preferred where possible. Laundered wet, all-cotton underwear may be microwaved on high for five minutes to kill yeast. Exposure to sunshine also kills yeast; hanging clothing outside to dry during an outbreak may be helpful. Freezing does **not** kill yeast. Prudence suggests that milk expressed at this time should not be stored for feeding after the yeast infection has cleared.

If a dishwasher is used, the hottest water setting should be selected. If pump parts, bottles, teats (nipples), pacifiers (soothers, dummies), teethers and other items in contact with the baby's mouth or milk are handwashed, dipping these into a 10% bleach solution before thoroughly rinsing will prevent the spread of yeast. Rubber gloves can be worn to protect hands from the bleach solution. If there is yeast on the hands, the gloves should be replaced frequently.

Anything that comes in contact with the mother's breasts, the baby's bottom or other affected areas on the baby, mother and other family members should be washed or disinfected daily. This includes breast shells, breast pads, bras, drip- catching cloths, pump parts, teats (nipples), pacifiers (soothers, dummies), teethers, toothbrushes, toys, clothing, underwear and diapers. Yeast can live on towels and washcloths so they should be used once and then washed in very hot water and dried in the sun if possible. Some families have found that during a yeast outbreak using paper rather than cloth napkins, towels and breast pads is helpful as well as using disposable utensils and cups.

Using distilled vinegar (heat treated to remove mold spores) and water solution to add to baths, final rinses of washing machines and directly on affected or at risk skin can also be effective. The resulting pH change makes it less congenial to yeast.

When Yeast Recurs

When yeast infections that have been treated and eliminated return, Leaders can help mothers discover the cause of the reinfection. This can be a painstaking process of detection requiring creativity and ingenuity on the parts of both the Leader and the mother. The cause could be an untreated family member - sibling or partner - or an untreated part of a family member - around finger or toenails, corners of the mouth or under the arms. Household pets and farm animals may harbor yeast. Dishes and utensils may not have been disinfected. Personal hygiene items such as makeup, toothbrushes and deodorants should be discarded after treatment and replaced with new. See "Points to Consider for Recurrent Yeast."

While yeast overgrowth can be a frustrating and painful experience, a Leader's knowledge and resources can greatly assist a mother. By helping her become aware of the signs and symptoms, the Leader can encourage a mother to consult her health care provider and begin treatment as soon as possible in order to avoid a long period of painful breastfeeding or untimely weaning.

Red Flags for Suspecting Thrush

- Chronic pain that won't resolve when new mother is positioning and latching on correctly
- Sudden onset of painful nursing for an experienced nursing mother
- Hearing the words "burning, itching, shooting, stabbing"
- Mother has a vaginal yeast infection
- Baby has a bright red diaper rash and/or white cottony patches in his mouth
- Nipples are so sore mother cannot tolerate clothes touching them

Signs of Thrush

Mother

- Nipples and/or areola may appear:

Perfectly normal
Darker or red on a dark-skinned mother
Red, deep pink or purple-red on a light-skinned mother
White dots on nipple
Very dry, flaking or peeling
Shiny
Swollen
Rashlike
Cheesy in the skin folds
Cracked or fissured and don't heal as expected

- Vaginitis (especially recurrent)
- Mastitis (especially recurrent)
- Yeast elsewhere on the body:

Under breasts
Finger/toenail beds
Between fingers or toes
Under arms
Groin area
Behind knees
Elbow creases
Eyelid creases
Corners of mouth

- Nursing a baby with oral thrush

Baby

- Refuses to nurse
- Nurses and pulls off
- Gassy (windy) and cranky
- Makes clicking sound when nursing
- Yeast present in other places on body
- Red diaper rash that does not respond to soothing remedies
- Mouth

Perfectly normal
White patches that do not rub off
Pearly look to saliva

Possible Causes of Sore Nipples Other Than Thrush

Common Causes

- Poor positioning and/or latch on
- Baby's lips sucked in instead of flanged out
- Baby's suck has been compromised by use of artificial teats (including pacifiers)
- Breast and/or baby's head not well supported to assist nursing in early days
- Baby slips down after a good latch and nurses on just the nipple
- Transitional or cross-cradle hold used beyond a week or two
- Mother pushing on breast with finger to create an airway for the baby moves the nipple out of proper alignment in the baby's mouth and makes it vulnerable to damage
- Underside of breast not properly supported and its weight pushes down on baby's lower lip and misaligns the nipple in the baby's mouth
- Leaking milk trapped next to nipple skin (for example, wearing wet nursing pads) breaks down the skin and makes it more vulnerable to damage.

Baby Causes

- Baby removed from the breast without breaking the suction first
- Baby tugging, twisting or pulling at breast
- Baby "fiddling" with nipple
- Baby, (particularly one who is teething) has bitten or damaged nipple
- Baby bites or clamps down on the nipple (can be caused by teething)
- Baby has rough edge on tooth which irritates the breast/nipple

Baby's Physical Causes

- Baby has short tongue or frenulum
- Baby has palatal anomaly (high, grooved, bubble palate)
- Baby has a long tongue
- Baby has bony protrusions on alveolar ridges (edge of teeth sockets) or palate that rub nipple
- Baby has neurological challenges that interfere with normal suck
- Baby has breathing difficulties that interrupt normal suck mechanism
- Changes in baby's saliva during teething
- Baby has stuffy nose that affects his suck/swallow/breathe sequence
- Mucus from baby's stuffy nose has irritated breast nipple area
- Food traces in baby's mouth may cause allergic rash or irritation once solids have been started
- Baby has oral virus (such as coxsackie virus A16 also known as hand, foot and mouth disease)

Maternal Causes

- Plugged duct/mastitis
- Engorgement
- Maternal nipple anomalies (such as inverted, dimpled, deeply fissured)
- Dry nipple/areolar skin (possibly too few Montgomery glands)
- Chapped nipple or areolar skin
- Skin tag(s) on the nipple
- Wart formed/forming on nipple area
- Mother has scratched itchy or dry nipple and damaged it
- Breast or nipple area surgery (even when mother was an infant)
- Overactive milk ejection reflex (can be painful for some mothers)
- Skin damaged by rough washcloth or too much rubbing when washing or drying
- Sleeping on stomach which could cause the breasts to be squashed
- Trauma to breast or nipple (child's elbow in breast, being hit by a ball, mop handle, etc.)
- Using a poorly designed breast pump
- Using a breast pump on too high a pressure setting
- Not releasing suction frequently enough on a manual-release breast pump

Additional Causes

- Seam of bra rests on nipple and irritates it (especially new bra)
- Lace trim on bra irritates nipple

- Bra too tight or too small in cup size
- Change in laundry products (soaps, detergents, fabric softeners, bleaches or other cleaning boosters)
- Laundry product residue (clothing not adequately rinsed during laundering)
- Irritation from soaps, gels, powders, sprays, scented products or perfume
- Change in mother's personal hygiene items (especially aerosol deodorant)
- Finish or dyes in fabric (wash before wearing)
- Allergic reactions to ointments, creams or other preparations the mother may have used to self-treat her symptoms or the rubbing/washing used to remove them before breastfeeding her baby
- Use of products containing alcohol
- Damage from too vigorous nipple rolling or Hoffman maneuvers (stretches area where nipple attaches to the areola)
- Nerve damage to nipple (from trauma or incision)
- Psoriasis
- Paget's disease (a cancer which looks like eczema but is characterized by bloody nipple discharge). Emphasize the need for the mother to see her doctor immediately.
- Vasospasm of the nipple
- Herpes
- Impetigo
- Burns (including brush-type burns, for example, a toddler with toy in hand rubs it over the nipple)
- Damage from pets (cat scratches, bird pecks, dog pawing, etc.)
- Milk bleb or blister

Causes that Mimic Yeast Infection

- Dermatitis
- Eczema
- Inflammation
- Raynaud's disease (vasoconstriction of extremities due to cold or emotional stress)
- Fibromyalgia (chronic pain in muscles and soft-tissue surrounding joints)

Points to Consider with Recurrent Yeast

1. Avoid sugar, including fruit and artificial sweeteners, anything with yeast including breads, anything fermented, like wine and vinegar, and dairy products, except yogurt with live cultures. Cut back on high carbohydrate foods.
2. Set your dishwasher to heat the water hot enough to kill yeast on glasses, dishes and utensils for oral yeast in family members using these dishes. If you handwash, dip the dishes and utensils in a bleach solution first.
3. Eliminate the use of Natural B vitamins such as Brewer's Yeast for a time.
4. Brush your tongue as well as your teeth.

5. Replace toothbrushes regularly. Boil or soak in a 10% bleach solution after each bout of thrush.
6. Disinfect dental or orthodontic appliances each and every time they are removed from the mouth.
7. Discard roll-on or solid deodorant after the initial yeast outbreak has cleared.
8. Use regular, rather than antibacterial soap. Killing bacteria can make yeast overgrowth more likely.
9. Check for yeast growing in or under/around finger or toenails, under arms or breasts, in the groin or baby's diaper area. Does baby suck thumb, finger or knuckles? Check them carefully. Wash baby's hands frequently. Also check the finger and toenail beds and where skin touches skin for the entire family.
10. Take precautions to avoid the spread of yeast with family underwear, bras and towels.
11. Wear pantyhose with a cotton crotch, cut the crotch out of the panty or wear thigh-high hose.
12. Avoid synthetic underwear and tight jeans.
13. Change quickly out of sweaty exercise clothes or wet swimsuits.
14. Notice any correlation between your menstrual cycle and thrush reoccurence, particularly a few days before menses starts.
15. Ask your partner to be checked for a yeast infection.
16. Wash your hands every time you use the toilet, handle your breasts or milk, put your fingers in your own or your baby's mouth, change diapers (nappies).
17. Treat every single thing possible that you put in your mouth or your children put in theirs to kill yeast.
18. Disinfect inhalers or breathing treatment machines for asthma or other conditions between uses.
19. Replace makeup after clearing up a yeast infestation. Yeast can live on lipsticks, lip and eye liners, eye shadows, mascaras, foundations and powders. Disinfect or replace makeup applicators.
20. Check everyone in the family for cracks in the corner of the mouth.
21. Have a veterinarian check animals for yeast. Pets with fur can harbor yeast, particularly in their ears. Feathered pets can have yeast overgrowths, too.

Avoiding Sugar in the Diet

Yeast feeds on sugar, so those who suffer recurrent yeast infections may wish to try to avoid sugar in their diets. This can be difficult because those with yeast infections often **crave** sugar.

Check labels of all processed foods carefully. Sugar and other sweeteners can be listed as corn syrup, corn syrup solids, sugar, malodextrose, dextrose, fructose, levulose and maltose. Honey, molasses, raw and brown sugar as well as artificial sweeteners such as calcium saccharin (Sweet 'n Low), aspartame (Nutra-Sweet) or acesulfame potassium (Sunett) or those made from kiwis (Ki-Sweet) also feed yeast.

LLLI cookbooks contain lots of recipes with little or no sugar.

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Bibliography

LLL Resources

Amir, L., Hoover, K., Mulford, C. Candidiasis and breastfeeding. *LLLI Lactation Consultant Series, Unit 18.* Garden City Park, New York: Avery Publishing, 1995.

Meintz-Maher, S. *An Overview of Solutions to Breastfeeding and Sucking Problems.* Schaumburg, Illinois: LLLI, 1988.

Mohrbacher, N., Stock, J. BREASTFEEDING ANSWER BOOK. Schaumburg, Illinois: LLLI, 1997.

THE WOMANLY ART OF BREASTFEEDING 6th edition. Schaumburg, Illinois: LLLI, 1997.

Books

Baumslag, N., Michels, D, *A Woman's Guide to Yeast Infections.* New York: Pocket Books, 1992.

Brewster, D. *You Can Breastfeed Your Baby...Even in Special Situations.* Emmaus, Pennsylvania: Rodale Press, 1979.

Crook, W. *The Yeast Connection* 2nd edition. Jackson, Tennessee: Professional Books, 1985.

Feigin, R., Cherry, J. (Eds). *Textbook of Pediatric Infectious Diseases.* Philadelphia: Saunders, 1992.

Hale, T. *Medications and Mother's Milk,* 6th edition. Amarillo, Texas: Pharmasoft Medical Publishing, 1997.

Lawrence, R. *Breastfeeding: A Guide for the Medical Profession,* 4th edition. St. Louis: C.V. Mosby Company, 1994.

Neifert, M., Neville, M. *Lactation: Physiology Nutrition and Breastfeeding.* New York: Putnam Press, 1983.

Odds, F. *Candida and Candidosis: A Review and Bibliography* 2nd edition. London: Bailliere Tindall, 1988.

Riordan, J., Auerbach, K. *Breastfeeding and Human Lactation.* Boston: Jones and Bartlett, 1993.

Articles

Amir, L. Candida and the lactating breast: predisposing factors. *J Hum Lact* 1991; 7:177-81.

Amir, L. Eczema of the nipple and breast: a case report. *J Human Lact* 1993; 9:173-75.

Brackett, V. Eczema of the nipple/areola area. *J Human Lact* 1988; 4:167-69.

Casto, D. Pharmacology forum: many suitable antifungal agents exist for treating thrush in children. *Infectious Diseases in Children* May 1995: 8(5):22, 34.

Edman, J. et al. Zinc status in women with recurrent vulvo-vaginal candidiasis. *Am J Obstet Gynecol* 1986; 155:1082-85.

Hancock, K., Spangler. A. There's a fungus among us. *J Hum Lact* 1993; 9(3):179-80.

Hoover, K. Nipple thrush. Unpublished data from 1995 ILCA Conference presentation shared by personal communication.

Horowitz, B. et al. Sugar chromatography studies in recurrent candida valvovaginitis. *J Reprod Med* 1984; 29:441-43.

Johnstone, H. Candidiasis in the breastfeeding mother and infant. *JOGNN* Mar-Apr 1990:19:2, 171-73.

Manning, D., et al. Candida in mouth or on dummy? *Arch Dis Child* 1985; 60:381-82.

Ollila, P. et al. Risk factors for colonization and candida in children. *Acta Odontol Scand* 1997; 55(1):9-13.

Ploude, F. Personal communication, 1995.

Rashid, S. et al. Survival of candida albicans on fabrics after laundering. *Br J Verer Dis* 1984. 60:270.

Samaranayake, L. Nutritional factors and oral candidosis. *J Oral Pathol* 1986; 15:61-65.

Sobel, J. Epidemiology and pathogenesis of recurrent vulvo-vaginal candidiasis. *Am J Obstet Gynecol* 1985; 152:824-935.

Tanguay, K. et al. Nipple candidiasis among breastfeeding mothers: case- control study of predisposing factors. *Can Fam Physician* 1944; 40:1407-13.

Wilkin, S. et al. A macrophage defect in women with recurrent candida vaginitis and its reversal in vitro by prostaglandin inhibitors. *Am J Obstet Gynecol* 1986; 155:790-95.

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