# NHS Grampian Guidance For The Management Of Nipple/Breast Candidiasis (Thrush)

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<tr>
<th>Co-ordinators:</th>
<th>Consultation Group:</th>
<th>Approver:</th>
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<tbody>
<tr>
<td>Pamela Cassie, Infant Feeding Coordinator</td>
<td>See Page 8</td>
<td>Medicine Guidelines and Policies Group</td>
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Version 2

Executive Sign-Off

This document has been endorsed by the Director of Pharmacy and Medicines Management

Signature: [Signature]
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NHS Grampian Guidance For The Management Of Nipple/Breast Candidiasis (Thrush)

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**Lead Author/Co-ordinator:**
Pamela Cassie, Infant Feeding Co-ordinator/Kate Buchan, Infant Feeding Advisor

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Policy, Protocol, Procedure or Guideline

**Document application:**
NHS Grampian

**Purpose/description:**
The purpose of this guidance is to ensure that all staff working with lactating women understand how to diagnose and manage both mother and baby with breast/nipple candidiasis, also known as breast “thrush”.

**Group/Individual responsible for this document:**
Grampian Infant Feeding Team

**Policy statement:**
It is the responsibility of all staff to ensure that they are working to the most up to date and relevant policies, protocols procedures.

**Responsibilities for ensuring registration of this document on the NHS Grampian Information/ Document Silo:**
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Physical location of the original of this document:
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Sector: General Managers, Medical Leads and Nursing Leads
Departmental: Clinical Leads
Area: Line Manager

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Responsibilities for review of this document:
Lead Author/Co-ordinator: Grampian Infant Feeding Team/Infant Feeding Co-ordinator

Revision History:

<table>
<thead>
<tr>
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<td>Word nipple and thrush added to title of document to aid in accessing the document in searches.</td>
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<td>Added paediatricians, social workers and volunteer staff.</td>
<td>Page 2 – under for whom is the guidance intended</td>
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<td>As above</td>
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<tr>
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<td>As above</td>
<td>New section.</td>
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<td>Updated signs and symptoms and change to policy of sending swabs to laboratory. Also added microbiological diagnosis.</td>
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<td>Updated information from pharmacist.</td>
<td>Page 5 and 6 – 4.1 – topical treatment of the mother</td>
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<td>Updated information from pharmacy.</td>
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<td>Updated information from pharmacy and additional treatments for various ages including neonate.</td>
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<td>Updated information.</td>
<td>Page 8 – 5.0 – Additional advice to mothers</td>
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* Changes marked should detail the section(s) of the document that have been amended, i.e. page number and section heading.
NHS Grampian Guidance For The Management Of Nipple/Breast Candidiasis (Thrush)

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1. Introduction

The purpose of this guidance is to ensure all staff working with lactating women and their babies understand their role and responsibility to correctly diagnose nipple/breast candidiasis (commonly known as “thrush”) and ensure appropriate simultaneous management for both mother and baby.

For simplicity the term “thrush” refers to nipple/breast candidiasis throughout this document.

1.1 Aims of the guidance

- To facilitate appropriate diagnosis of thrush in breastfeeding mothers and their babies.
- To reduce misdiagnosis of thrush and inappropriate management (e.g. prescription of antifungals) to lactating women and their babies.
- To facilitate appropriate management of thrush in lactating mothers and their babies based on recognised guidance.

1.2 For whom is the guidance intended

The guidance is relevant to all staff involved in the care of lactating women and their babies including, midwives, nurses, health visitors, General Practitioners, Paediatricians, social workers and volunteer staff.

1.3 Patient Groups to Which This Document Applies

- Lactating women.
- Babies who are breastfeeding or receiving breast milk.

1.4 Additional Precautions

- Lactating women expressing breast milk for their baby using a breast pump.
- Babies who are requiring non-nutritive sucking aids to promote development.

1.5 Patient Groups to Which This Document Does Not Apply

- Non-lactating women.
- Babies who are not breastfeeding.
- Babies not receiving breastmilk.
- Premature neonates of less than 30 weeks gestation.
2. **Evidence Base**

This guidance is based on the advice from The National Infant Feeding Network, supported by UNICEF. This can be accessed on: [https://breastfeedingnetwork.org.uk/wp-content/dibm/thrush%20detailed%20information%20and%20breastfeeding.pdf](https://breastfeedingnetwork.org.uk/wp-content/dibm/thrush%20detailed%20information%20and%20breastfeeding.pdf) (accessed 12/02/2019)


3. **Background and Recommendations**

3.1 **What is thrush?**

- Candidiasis or “thrush” represents a fungal infection with associated clinical signs and symptoms (see below) due to yeast from *Candida* species that may affect the mother’s breast and the baby’s oral mucosa.

- *Candida* spp. are present in the gastrointestinal tract of healthy people and may also be found on the mucous membranes and skin. *Candida albicans* is the most common species associated with nipple/breast candidiasis but other *Candida* spp. are also implicated, e.g. *Candida glabrata*.

- Thrush is a most painful condition and can lead to the mother stopping breastfeeding or expressing breast milk prematurely. The infection usually starts after a period of pain-free lactation and risk factors include: recent broad spectrum antibiotics (in either the mother or baby); a history of maternal vaginal thrush; diabetes; anaemia; long term steroid medication; high glucose diet; use of pacifiers, e.g. dummy and damp nursing pads or bras adjacent to the skin for long periods.

- Ductal thrush (also known as Deep Breast Thrush) is very rare, especially in the first 6 weeks after birth and other causes of breast pain should be ruled out before finalising a diagnosis. Thrush of the nipple is more common and should be treated appropriately. In all cases of nipple/breast thrush it is important to address the underlying risk factors(s) and simultaneously treat mother and baby to prevent re-infection.

3.2 **Clinical signs and symptoms of thrush in lactating women**

May include:

- Sudden onset of breast and/or burning nipple pain in **both** breasts after a history of pain free lactation – pain is severe and can last for an hour after every breastfeed or expression of breast milk.
- Itching or burning sensation of the skin over nipples and areola especially after feeds.
- Itchy nipples which are extremely sensitive to touch, even with loose clothing.
- Nipples are sensitive to the cold.
- Non-healing cracked nipples.
- Persistent loss of colour in the nipple /areola (or they may appear red and shiny).
- Nipple pain that does not respond to improved attachment, application of heat, nipple shields or alternative methods of milk removal.

There is no reliable clinical definition of thrush and it relies on clinical judgement to make a diagnosis. The importance of excluding other causes of breast pain is paramount since most breast pain is related to breastfeeding itself. Often there may be several simultaneous causes of breast pain. Clinicians must carefully consider all causes of breast pain, e.g. previously nipple vasospasm or damage was misdiagnosed as “thrush”.

Mastitis due to infection by the bacterium Staphylococcus aureus is usually clinically differentiated from thrush on the basis of inflammation, e.g. pain/redness and systemic symptoms, e.g. fever.

**Microbiological diagnosis**

The diagnosis of breast/nipple thrush is made clinically and conventional microbiological culturing of milk or a swab from the nipple is usually not recommended. Human milk contains lactoferrin which inhibits the growth of Candida spp. Standard bacteriological culture is unreliable in detecting Candida spp and cultures may be negative when thrush is clinically present. Likewise, a positive culture could represent colonisation.

Where there is no clinical response to treatment or there is suspicion of secondary bacterial infection consideration should be given to submitting a swab from the affected area (nipple) and infant’s mouth (e.g. tongue) to the microbiology laboratory for fungal/bacterial culture and susceptibility testing.

Specimens should be collected using a sterile charcoal media swab moistened in sterile saline and placed in a black swan tube leak proof container and transported in a sealed bag.

### 3.3 Reasons to check positioning and attachment rather than diagnose thrush

- Pain in only one breast, or worse in one breast.
- Never having had pain free lactation.
- Pain during the breastfeed or expressing.
- Nipples which are shaped oddly after breastfeeds.
- Nipples which are white at the tip after breastfeeds or expressing.
- Pain is different at different times of the day.

### 3.4 Other causes of nipple pain

- Poor positioning and attachment are the most common causes of breast pain.
- Uncoordinated suckling in the baby.
- Tongue-tie in the baby.
- Raynaud’s syndrome (associated with history of poor circulation and pain made worse when cold).
- Eczema, including reactions to breast pads or creams.
- Unresolved engorgement.
- White spot or galactocele – produces pin-point pain.
- Bacterial infection, e.g. mastitis (may be present at the same time as thrush).
• Breast pump funnel too small when expressing
• Breast pump suction too high when expressing.
• Using breast pump for long periods per expression.

3.5 Signs of thrush in the baby

• Creamy white patches in baby’s mouth, e.g. posterior tongue or on their inner cheeks.
• Baby’s tongue/lips may have a white/red gloss.
• Refusal to breastfeed.
• Poor weight gain.
• Other gastrointestinal symptoms such as abdominal pain, windy, fretful.
• Baby may have nappy rash.

4. Treatment of Thrush

It is imperative to address the underlying risk factors of the infection to prevent recurrence and ensure both mother and baby are treated simultaneously to prevent re-infection.

4.1 Topical treatment of the mother

• It is important to differentiate between thrush due to infection with the yeast *Candida* spp. and mastitis due to the bacterium *S. aureus*. The following treatment under this guidance is only applicable to infection with *Candida* spp.

• Wash breasts before breastfeeding or expressing.

• **Miconazole 2% cream** is the first choice of antifungal cream to treat thrush in a lactating mother. Apply sparingly to the nipple and areola after each feed until 7 days following resolution of symptoms (total duration approximately 8 - 21 days) and until treatment completed for the baby. It is important that treatment is continued for 7 days after symptoms resolve to prevent recurrence. Any unabsorbed cream should be carefully wiped off prior to the next feed. The manufacturer advises caution for the use of miconazole in breastfeeding women.

• Topical miconazole is systemically absorbed (minimally) and prescribers must ensure there are no contraindicating drug interactions before prescribing.

  N.B. miconazole oromucosal gel should not be prescribed for the mother’s nipples. It is not pharmacologically designed to penetrate the skin on the nipple and is therefore unlikely to be effective.

• If the nipples are very red and inflamed a mild steroid cream, miconazole 2% with hydrocortisone 1% (Daktacort cream) can be used to facilitate healing.

• Clotrimazole 1% cream has an increased association with allergic reactions when used for breast thrush and should be avoided.

If pain continues despite topical treatment then systemic treatment may be required - see below.
4.2 Systemic treatment of the mother

- Fluconazole is not licensed in the UK for use in lactating women, however there is growing evidence that it is a safe and effective form of treatment and its use enables women to continue breastfeeding or expressing. Due to the severity of the pain in deep breast (ductal) thrush, few women are able to continue breastfeeding or expressing without treatment, and are therefore forced to stop earlier than they would have liked.

- The World Health Organisation classifies fluconazole as being compatible with breastfeeding – indicating that there are no known or theoretical contraindications for its use and it is considered safe for the mother to take and continue to breastfeed. **However, due to the off-label status, practitioners are required to take additional liability for its use.**

- Fluconazole is given as a loading dose of 400mg followed by 100-200mg daily for at least 10 - 14 days or until pain has resolved. The levels of fluconazole excreted in breast milk are lower than the licensed neonatal dose.

- Topical treatment for both mother and baby should continue throughout the course of oral therapy.

- Analgesia for breast pain can be given as required. All analgesia can be considered except codeine based products, please see the Breastfeeding Network for further information.

- Persistent or systemic/ductal thrush may require longer treatment and should be reviewed after 14 days.

4.3 Treatment of the baby

- **Nystatin and Miconazole oral gel are both unlicensed in neonates but may be used in accordance with dosing regimens in the BNFC (below). Practitioners are required to take additional liability for their use.**

- **Topical miconazole is systemically absorbed (minimally) and prescribers must ensure there are no contraindicating drug interactions before prescribing.**

Neonate (under 1 month)

- **Miconazole oral gel** *Unlicensed.* Smear 1mL 2-4 times per day using a clean finger around the inside of the mouth and tongue after feeds. Continue treatment for 7 days after lesions have healed/symptoms resolved (and while mother is undergoing treatment).

- **Nystatin oral suspension** *Unlicensed.* Apply 1mL (100,000 units) 4 times daily after feeds. The included dropper should be used to measure the dose and then transfer the dose to a teaspoon. This prevents the dropper contaminating the whole bottle when replaced. Treatment is usually for 7 days, continued for 48 hours after lesions have resolved (and while mother is undergoing treatment).
Age 1 month to less than 4 months

*Miconazole oral gel  Unlicensed. Smear 1.25mL 4 times per day using a clean finger around the inside of the mouth and tongue after feeds. Continue treatment for 7 days after lesions have healed/symptoms resolved (and while mother is undergoing treatment).

*Nystatin oral suspension  Licensed. Follow dosing regimen for neonates (above).

Age 4 to 23 months

*Miconazole oral gel  Licensed.  First line.  Follow dosing regimen for age 1 month to less than 4 months (above).

*Nystatin oral suspension  Licensed.  Second line.  Follow dosing regimen for neonates (above).

*Nystatin is fungistatic whereas miconazole is fungicidal with miconazole shown to be clinically more effective at eradicating oral thrush.  Therefore miconazole should be used first line either off license or from age 4 months (unless potential drug interactions contraindicate use).

• Due to the increased risk of choking, miconazole oral gel should never be given off a teaspoon, from an oral syringe, or in large quantities.

5. Additional Advice for Mothers

• Continuing to breastfeed or express breast milk whilst you have thrush will not harm your baby.
• Ensure hands are washed before and after applying treatment and following nappy changing.
• Change your breast pads regularly.
• Wash underwear, clothing that comes in contact with the breasts and towels in as hot a wash as possible.  Use a separate towel for each affected person.
• Anecdotally reducing sugar and yeast products in the diet helps.
• If your symptoms do not start to improve after 7 days of treatment, consult a healthcare professional as the cause of your pain may not be thrush.
• Discard any breastmilk stored or frozen whilst symptomatic.

6. References


• National Infant Feeding Network


• Toxnet Toxicology Data Network https://toxnet.nlm.nih.gov/newtoxnet/lactmed.htm (accessed 9/6/19)

Distribution list

The policy will be distributed to all NHS Grampian staff via:

• NHS Grampian SharePoint

The policy will be advertised to all NHS Grampian staff via:

• NHS Grampian Team Brief, Up Front and global email
• Public Health Nursing Children and Young People Community Nursing Page via the Intranet.

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