

## GASTROINTESTINAL TRACT INFECTIONS

### Oral Candidiasis

Candida is a yeast which is part of the normal commensal flora of the human gastrointestinal tract. Comorbidities increasing the risk of candidal infections include diabetes mellitus, severe anaemia, haematinic deficiencies, and immunocompromise (chemotherapy, radiotherapy, HIV infection, and AIDS). Other risk factors include poor dental hygiene, local trauma, smoking, the use of broad-spectrum antibiotics or inhaled or oral corticosteroids, and malnutrition.

Oral candidiasis is uncommon in people other than infants, denture wearers, and the elderly. **In otherwise healthy people, it may be the first presentation of an undiagnosed risk factor (e.g., diabetes mellitus, HIV).**

#### When to refer a patient or seek specialist advice:

##### Refer or admit the child or adult if there is:

- Evidence of systemic illness or widespread infection (with difficulty/pain on swallowing, retrosternal pain).
- Have a lower threshold for admission in people who are markedly immunocompromised.

##### For children: Refer to a paediatrician or seek specialist advice if:

- There is extensive or severe oral candidiasis.
- The child does not respond adequately to at least 2 weeks of topical treatment (miconazole and/or nystatin).
- The child has recurrent episodes of oral candidal infection, or there is suspicion of immunocompromise.

##### For adults: Consider referral or seeking specialist advice if:

- The adult has recurrent episodes of oral candidiasis.
- The adult has breakthrough candidal infection whilst receiving preventive treatment (which may indicate candidal resistance).
- There is doubt about the diagnosis.

#### Treatment – Children and adults:

##### Give appropriate lifestyle advice to aid healing and prevent recurrence. In particular:

- Advise on good dental hygiene.
- Offer advice on smoking cessation.
- Advise parent/carer to sterilise dummy.
- Steam sterilise all feeding equipment for 2 cycles or boil for 10 minutes.
- If using an inhaled corticosteroid, advise on:
  - Good inhaler technique; rinsing the mouth with water (or cleaning the teeth) after inhalation; using a spacer device; and stepping down the dose when appropriate.
- If the person wears dentures, advise them to:
  - Leave the dentures out for at least 6 hours in each 24-hour period to promote healing of the gums.
  - Clean dentures by brushing and soaking in a disinfectant solution (any solution marketed to sterilize baby's bottles, providing the dentures contain no metal, can be used).
  - Allow dentures to air-dry after disinfection — also kills adherent Candida.
  - Brush the mucosal surface regularly with a soft brush.
  - See a dentist to correct ill-fitting dentures.
- If the person has diabetes, review diabetic control, and manage accordingly.
- Patient information on oral thrush and thrush in lactating women can be found via [CKS](#) and the [NHS website Breastfeeding and thrush](#). If a breastfed baby has thrush, but mum does not, the mother should get **topical** treatment for herself with miconazole **cream** (not miconazole oral gel), *which should be sparingly spread on and around the mother's nipples after feeds*.

##### If the patient can be managed in primary care:

- Exclude risk factors for oral candidiasis as detailed above.

- If the patient is on treatment that may cause immunosuppression, there are additional considerations including potential Medicine interactions and there should be a low threshold to seek advice from the patient's specialist team.

If infection is mild and localised:

- Prescribe topical antifungal – topical azoles are more effective than topical nystatin.
- For children: Refer to a paediatrician or seek specialist advice if the child does not respond adequately to at least 2 weeks of treatment with topical miconazole and/or nystatin.

If infection is extensive or severe either:

- If >16 years old, prescribe oral fluconazole (see prescribing information below) or seek specialist advice.
- **Follow up people who have extensive or severe oral candidiasis (requiring oral fluconazole) after 14 days.**
- **For children**, refer to a paediatrician or seek specialist advice: Oral fluconazole is not recommended for use without seeking specialist advice as it is extensively absorbed and has the potential for adverse effects.

**See treatment considerations in children:**

- See the local [Treatment consideration in children](#) document.
- Information regarding infants and breastfeeding:
  - [Thrush | Recent Illness or Concern | Healthier Together](#)
  - [Nystatin for Candida infections - Medicines For Children](#)
  - [Miconazole for oral thrush info. Miconazole cream - Patient](#)

**Topical treatment options:**

Medicine <sup>1</sup>	Dosage	Duration	Comments
<b>First Choice</b>			
Miconazole <sup>2</sup> oral gel 20mg/g (24mg/ml) <i>(Off label when used in children younger than 4 months)</i>	<p><u>Neonate:</u> 1ml two to four times a day, to be smeared around the inside of the mouth after feeds.</p> <p><u>Child 1-23 months:</u> 1.25ml four times a day, to be smeared around the inside of the mouth after feeds/meals.</p> <p><u>Child 2-17 years:</u> 2.5ml four times a day after meals, retain near oral lesions before swallowing.</p> <p><u>Adult:</u> 2.5ml four times a day after meals.</p>	Treatment should be continued for at least 7 days after the symptoms have cleared and for no longer than 14 days.	For adults and children 2-17 years: dental prostheses and orthodontic appliances should be removed at night and brushed with gel. <sup>3</sup>
<b>If first choice ineffective or contraindicated</b>			
Nystatin oral suspension 100,00units/ml	<u>Children and adults:</u> Apply 1ml (100,000 units) four times a day after feeds or meals.	7 days and continued for 48 hours after symptoms have resolved.	
<p><sup>1</sup> See <a href="#">BNF</a> for appropriate use and dosing in specific populations, like hepatic impairment or renal impairment, and in <b>pregnancy and breastfeeding</b>.</p> <p><sup>2</sup> Do not prescribe if taking a statin or withhold statin. Be aware of Medicine interaction with warfarin (<a href="#">MHRA</a>) and sulphonylureas.</p> <p><sup>3</sup> Advice from <a href="#">Miconazole   Medicines   BNFC   NICE</a></p>			

**Oral treatment:**

Medicine <sup>1</sup>	Dosage	Duration
<b>For severe/extensive, unresponsive symptoms (after topical treatment has been tried)</b>		
Fluconazole <sup>2</sup>	<u>Adults &gt;16 years (including immunocompromised):</u> Initially 200 mg for 1 dose, to be given on first day, then 100 mg once daily	For 7–21 days 7 days may be sufficient in some cases. Follow up people who have extensive or severe oral candidiasis (requiring oral fluconazole) after 14 days.
<p><sup>1</sup> See <a href="#">BNF</a> for appropriate use and dosing in specific populations, for example, hepatic impairment or renal impairment, and in pregnancy and breastfeeding.</p> <p><sup>2</sup> <b>Do not prescribe in pregnancy.</b> Check Medicine interactions and contraindications when prescribing oral fluconazole using BNFC or Summary of Product Characteristics</p>		

Accessibility checked. Contains tables which may not be accessible to screen readers.