


PAINFUL INFLAMMATORY condition of the milk ducts

#1 reason women STOP BREASTFEEDING

Lactational mastitis affects



1 IN 3

breastfeeding mothers<sup>1</sup>

20-35%

of those affected will experience recurrent episodes<sup>2</sup>

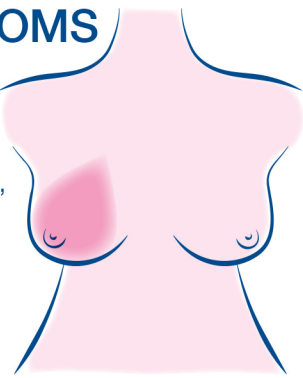
SIGNS & SYMPTOMS

LOCAL

pain, tenderness, erythema, engorgement, swelling, nipple damage, breast lump, nipple discharge

SYSTEMIC

flu-like symptoms – fever, malaise, rigors, nausea, vomiting, lethargy, myalgia



RAPID

disease progression

IMMEDIATE TREATMENT REQUIRED

STANDARD MANAGEMENT APPROACH

SYMPTOM MANAGEMENT

Support continued breastfeeding

- Warm compress before feeding
- Cold compress after feeding
- Massage any breast lumps towards nipple when feeding or expressing
- Maintain hydration
- Rest

Simple analgesia

- Paracetamol or ibuprofen (short-term only)

ANTIBIOTIC THERAPY

- Flucloxacillin or dicloxacillin
- Cephalexin or clindamycin (if penicillin allergy)

High incidence of ANTIBIOTIC RESISTANCE and/or BIOFILM FORMATION

...INSUFFICIENT EVIDENCE

to confirm or refute the effectiveness of antibiotic therapy for the treatment of lactational mastitis<sup>7</sup>

CAUSATIVE & CONTRIBUTING FACTORS

- infection – bacterial, fungal, viral
- poor attachment
- cracked nipples
- blocked milk ducts
- incomplete breast emptying
- ceasing breastfeeding too quickly

Likely infectious agents:

Staphylococcus aureus

Staphylococcus epidermidis

Streptococcus mitis

Candida albicans

Herpes simplex

NEW EVIDENCE: DYSBIOSIS

the primary cause of infectious lactational mastitis<sup>3,4</sup>

Staphylococci seem to be the main aetiological agents of human lactational mastitis.

Staphylococci are the most predominant bacteria found in breast milk.

Women experiencing lactational mastitis appear to have an outgrowth of Staphylococci, particularly *S. epidermidis*.

Lactobacilli and other lactic acid forming bacteria have shown high probiotic potential. They are protective against Staphylococci, and their bacterial count is depleted following Staphylococci outgrowth.

Commensal bacteria found to be helpful in lactational mastitis:

- *Lactobacillus salivarius*  
anti-inflammatory, antimicrobial, immunoregulatory
- *Lactobacillus gasseri*  
antimicrobial, inhibits *S. aureus* growth
- *Lactobacillus fermentum*  
antimicrobial, immunostimulatory
- *Lactobacillus rhamnosus*  
antimicrobial, acts against *S. aureus*

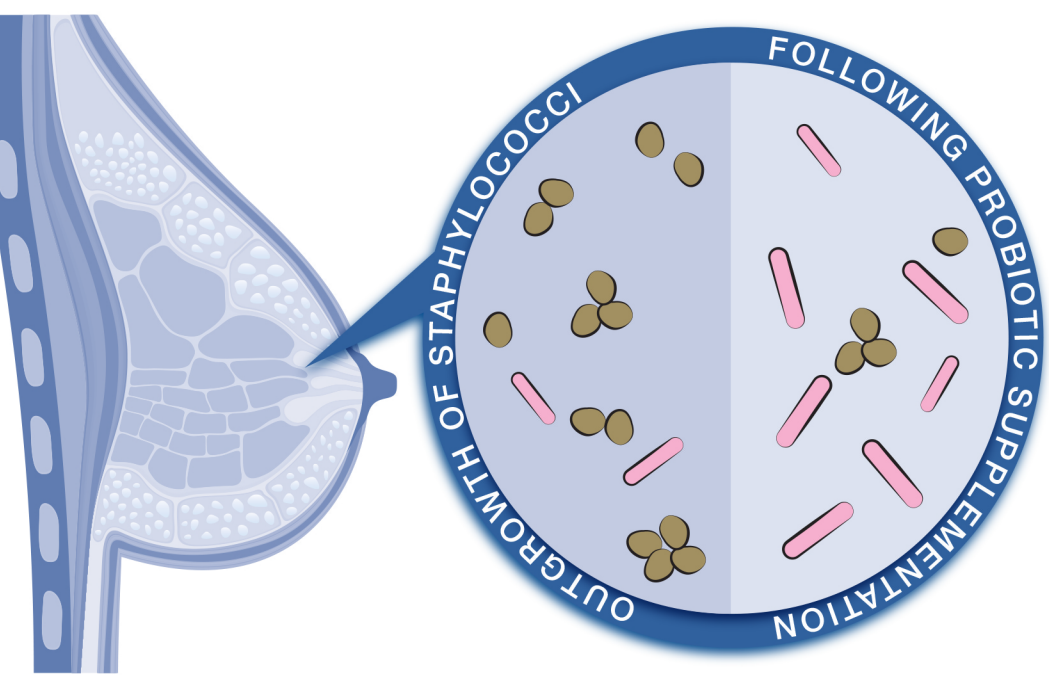
BACTERIA IN HUMAN BREAST MILK

Orally administered probiotics have proven to be an effective alternative to antibiotics in the treatment of mastitis.

Specific probiotic species are able to modulate the human milk microbiome by decreasing total bacterial count and replacing mastitis-causing bacteria with *Lactobacillus* spp.

Some probiotics have been shown to impact both innate and acquired immunity, and induce pro- and anti-inflammatory cytokines and chemokines.

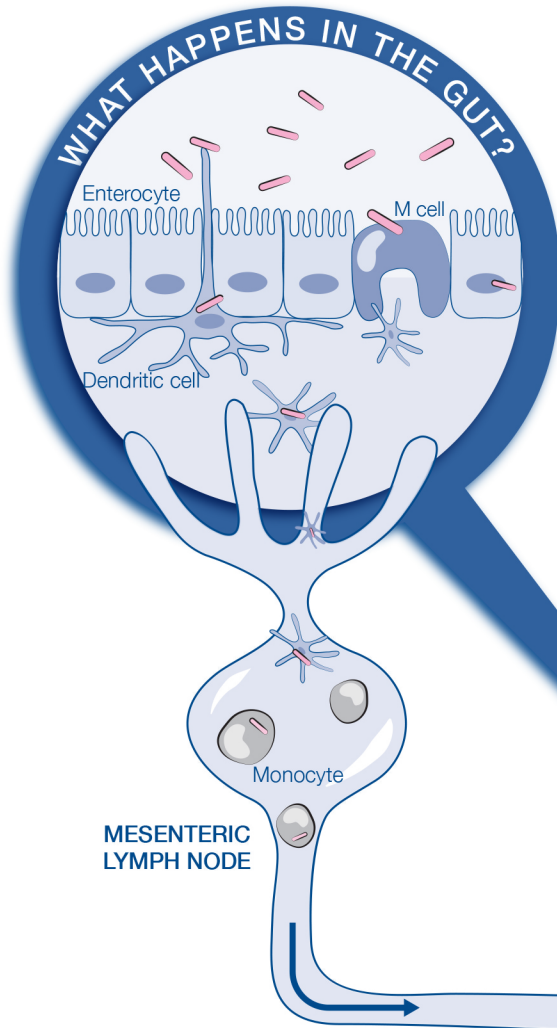
In particular, *L. salivarius*, *L. fermentum*, *L. gasseri* and *L. rhamnosus* have demonstrated an ability to competitively inhibit *S. aureus*.<sup>1,5,6</sup>

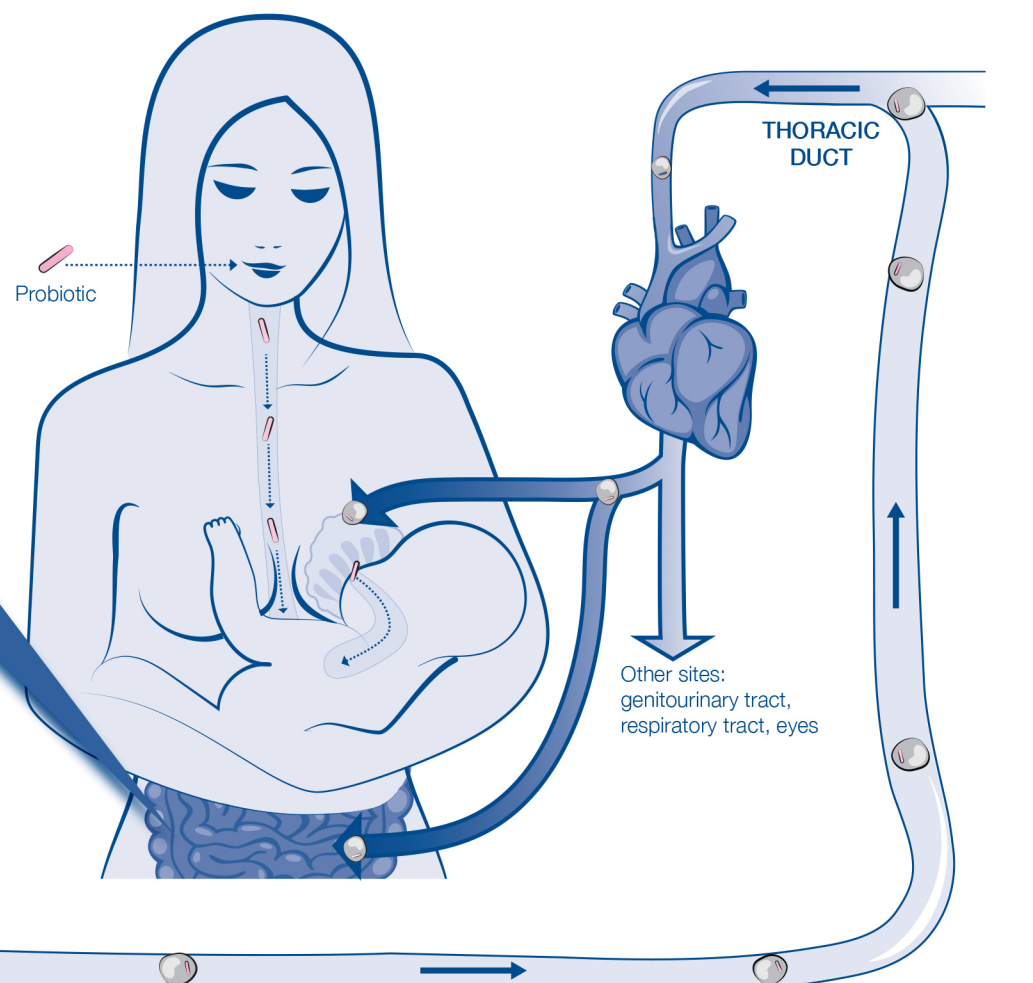


ENTERO-MAMMARY PATHWAY

The translocation of bacteria: GUT ► DENDRITIC CELL ► MONOCYTE ► TARGET TISSUE

WHAT HAPPENS IN THE GUT?





Other sites: genitourinary tract, respiratory tract, eyes

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