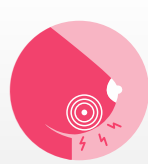


# MASTITIS: A SIGNIFICANT THREAT TO BREASTFEEDING

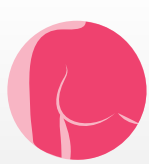


Mastitis is **inflammation** of breast tissue **with or without infection** occurring predominantly during breastfeeding.<sup>1</sup>

Incidence rates can be **up to 33%** of lactating women, with **74-95%** of cases occurring **in the first 12 weeks**<sup>1</sup>



Infectious mastitis mostly involves pathogens such as *S.aureus*<sup>1</sup>



Non-infectious mastitis is usually due to inflammation<sup>1</sup>

## BREAST INFLAMMATION RESULTS IN THE SIGNS AND SYMPTOMS OF MASTITIS<sup>1</sup>



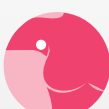
Redness, swelling and pain in one or both breasts



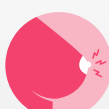
Fever and chills



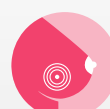
Nipple discharge



Enlarged lymph nodes in the armpits



Pain or burning sensation while breast-feeding



Breast lump

## MASTITIS CAN BE PREDISPOSED BY MULTIPLE FACTORS INCLUDING MILK STASIS AND INFECTION<sup>1</sup>

- Women aged 21 – 35 years
- Primiparity
- Trauma to the breast
- Poor nutrition



Fissured and painful nipples



Blockage of milk ducts



Ineffective suckling



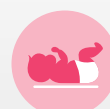
Overabundant milk supply



Breast engorgement soon after delivery



Restriction of the frequency or duration of feeds



Poor attachment of infant at the breast

## COMPLICATIONS OF UNTREATED MASTITIS<sup>2</sup>

Mastitis and breast abscesses can occasionally be fatal if inadequately treated, especially in women who are immunocompromised



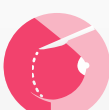
Tissue destruction resulting in an abscess



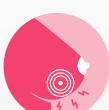
Cessation of breastfeeding



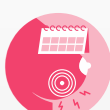
Significant breast scarring



Functional mastectomy (a breast that is unable to effectively lactate secondary to tissue destruction)



Increased risk for subsequent skin infections at extramammary sites due to *S.aureus* mastitis



Chronic inflammation and disfigurement of the breast due to recurrent mastitis

## PROPER PREVENTION AND MANAGEMENT OF MASTITIS ARE CRUCIAL TO MAINTAINING BREASTFEEDING

## DYSBIOSIS OF HUMAN MILK MICROBIOTA COULD BE RELATED TO THE ONSET OF MASTITIS<sup>3</sup>



A diverse microbiota may be observed in Human milk that include *Pseudomonas*, *Streptococcus*, *Staphylococcus*, *Bifidobacterium*, *Lactobacillus*, *Propionibacterium*, *Enterococcus*, etc.



The occasional proliferation of some specific bacterial population such as *Staphylococcus spp.* may lead to dysbiosis.



Dysbiosis in the mammary gland might progress to mastitis.

## THE PROGRESSION OF EARLY-STAGE INFLAMMATION TO MASTITIS CAN BE PREVENTED BY THE FOLLOWING MEASURES<sup>1,4</sup>

### CONTROL INFECTIONS

by facilitating breastfeeding and bonding, early skin-to-skin contact of the mother with the infant and frequent handwashing by mother and healthcare workers.



### PAY ATTENTION TO EARLY SIGNS OF STASIS

and difficulties with breast feeding. Treat breast engorgement, blocked duct, and nipple soreness promptly. Avoid using a pacifier and feeding bottle.

The administration of some strains of *Lactobacillus* to lactating women might help to prevent mastitis.<sup>4</sup>



## IF MASTITIS OCCURS DESPITE ALL EFFORTS AT PREVENTION, IT MUST BE TREATED PROMPTLY AND ADEQUATELY.

### References

1. World Health Organization. (2000). Mastitis : causes and management. World Health Organization. <https://apps.who.int/iris/handle/10665/66230>
2. Boakes, E., Woods, A., Johnson, N. and Kadoglou, N., 2018. Breast infection: a review of diagnosis and management practices. *European journal of breast health*, 14(3), 136-143.
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4. Fernández, L., Cárdenas, N., Arroyo, R., Manzano, S., Jiménez, E., Martín, V., & Rodríguez, J. M. (2016). Prevention of infectious mastitis by oral administration of *Lactobacillus salivarius* ps2 during late pregnancy. *Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America*, 62(5), 568-573. <https://doi.org/10.1093/cid/civ974>