





TOUCH TO START

For Healthcare professionals use only - not for distribution to the general public



Our science based probiotic supplement specially designed to support breastfeeding women

Key features:

-  Clinically proven to reduce the likelihood of developing mastitis by nearly 60%^{1,2}
-  May reduce breast pain^{1,2}
-  May reduce the need for antibiotic treatment²
-  Safe for mother and infant and effective for mother^{1,2}

Key ingredient:

-  *L. salivarius* PS2, a unique patented probiotic strain isolated from breastmilk.






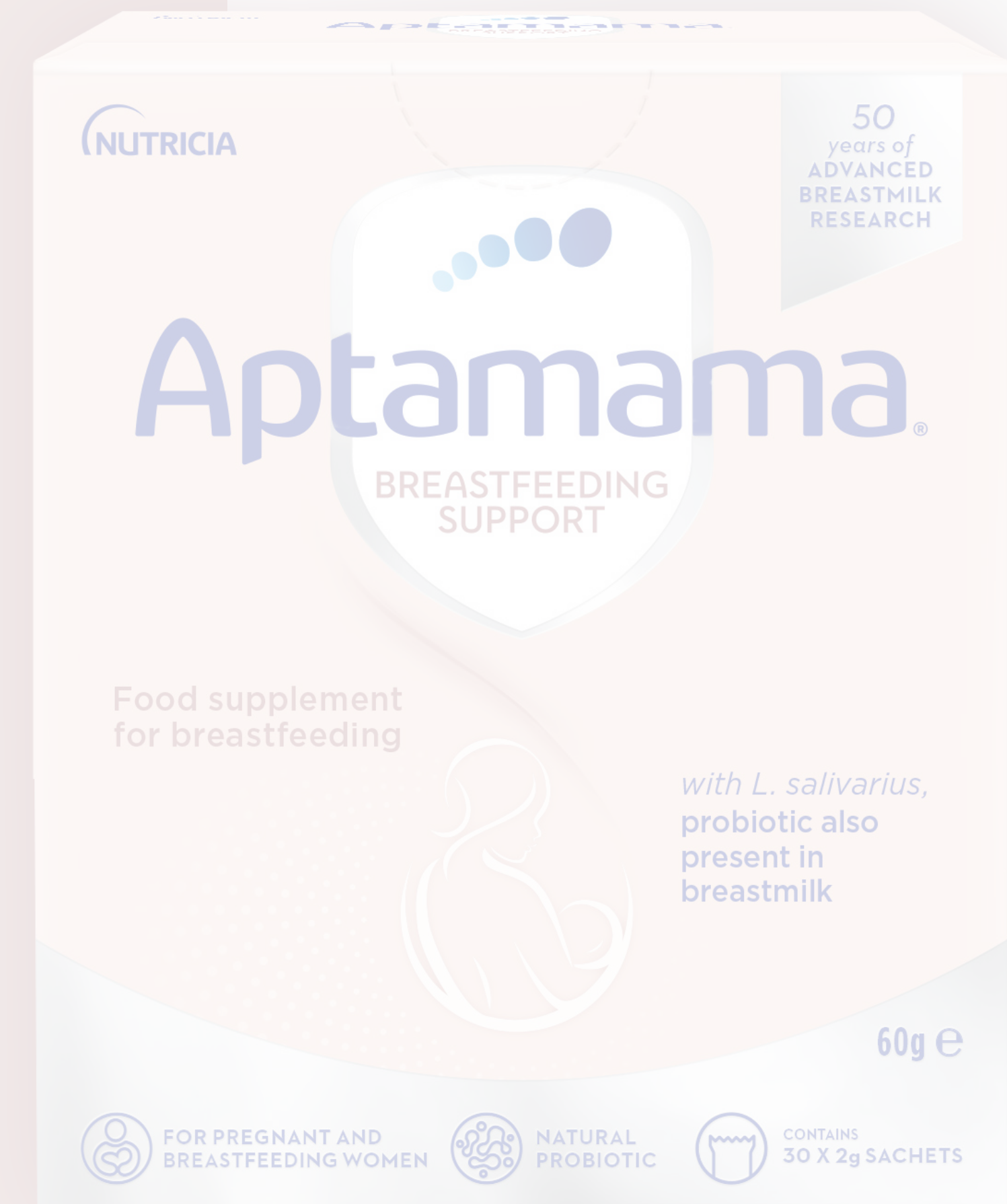
Our science based probiotic supplement specially designed to support breastfeeding women

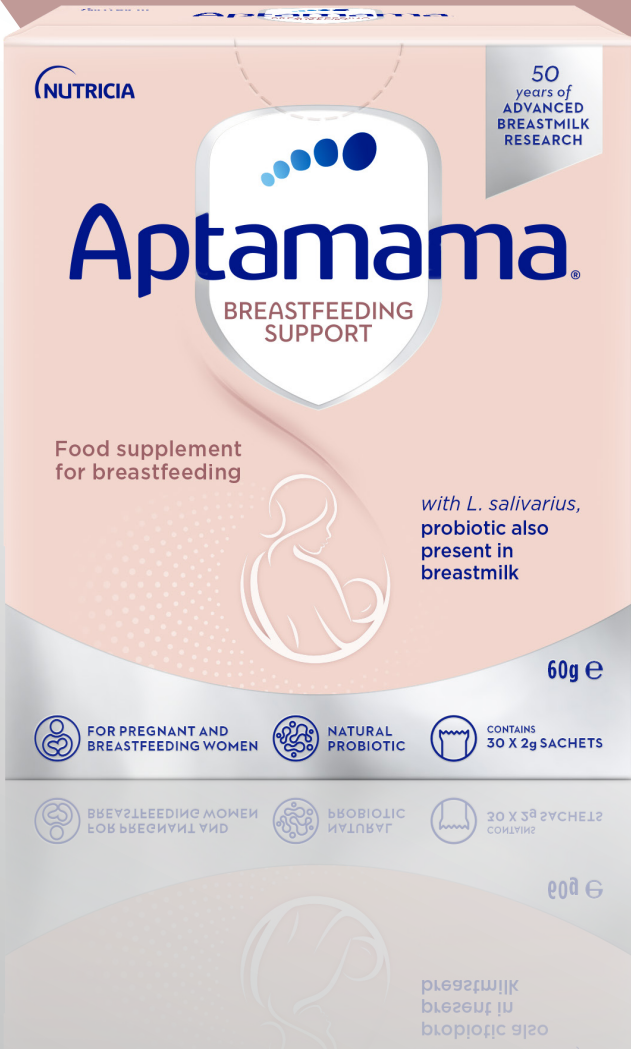
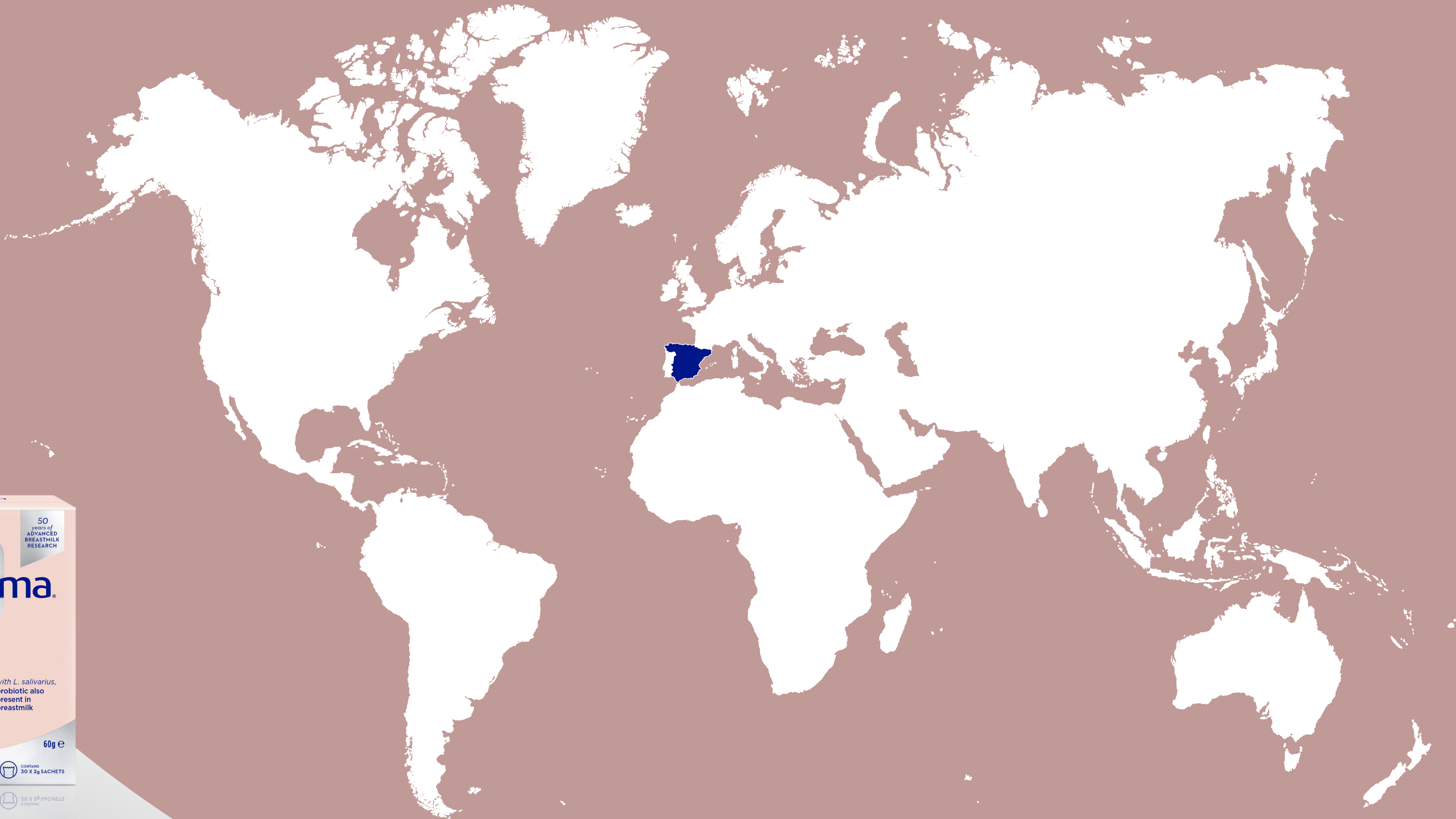
Key features:

- Clinically proven to reduce the likelihood of developing mastitis by nearly 60%^{1,2}
- May reduce breast pain^{1,2}
- May reduce the need for antibiotic treatment²
- Safe for mother and infant and effective for mother^{1,2}

Key ingredient:

-  **Lactobacillus salivarius PS2** is a natural probiotic found in breastmilk.
1. Fernández et al. Prevention of Infectious Mastitis by Oral Administration of Lactobacillus salivarius PS2 During Late Pregnancy. Clin Infect Dis. 2016; 62(5):568-73.
 2. Jiménez et al. Lactobacillus salivarius PS2 Supplementation during Pregnancy and Lactation Prevents Mastitis: A Randomised Controlled Trial. Microorganisms 2021; 9, 1933.







PREVALENCE MASTITIS & BREASTFEEDING ISSUES

- Human milk is the best source of nutrition for all infants, breastfeeding has numerous short and long-term benefits for both infant and mother
- Breastfeeding issues are a common phenomenon and mastitis is a key barrier to continue breastfeeding
- The common current practice is antibiotic treatment, which negatively impacts the maternal microbiota and alters the mother-to-infant microbiota transmission

Mastitis is an inflammatory condition of the breast, which may or may not be accompanied by infection.¹



Mastitis: a dysbiosis of the human milk microbiota

A depletion of beneficial commensal bacteria²

(e.g. *Lactococcus*,
Lactobacillus)

Rapid growth of opportunistic pathogenic bacteria²

(e.g. *Staphylococcus*, *Streptococcus*,
Corynebacterium)

The incidence of mastitis is estimated to be between 10-33%³ of breastfeeding mothers

Mastitis is a key barrier to continue breastfeeding





PREVALENCE MASTITIS & BREASTFEEDING ISSUES

- Human milk is the best source of nutrition for all infants, breastfeeding has numerous short and long-term benefits for both infant and mother
- Breastfeeding issues are a common phenomenon and mastitis is a key barrier to continue breastfeeding
- The common current practice is antibiotic treatment, which negatively impacts the maternal microbiota and alters the mother-to-infant microbiota transmission

1. WHO, Mastitis: causes and management, 2000.

2. Patel et al. 2017

3. Tang et al., 2014; WHO, 2000

Mastitis is an inflammatory condition of the breast, which may or may not be accompanied by infection.¹



Mastitis: a dysbiosis of the human milk microbiota

A depletion of beneficial commensal bacteria²

(e.g. *Lactococcus*,
Lactobacillus)

Rapid growth of opportunistic pathogenic bacteria²

(e.g. *Staphylococcus*, *Streptococcus*,
Corynebacterium)

The incidence of mastitis is estimated to be between 10-33%³ of breastfeeding mothers

Mastitis is a key barrier to continue breastfeeding

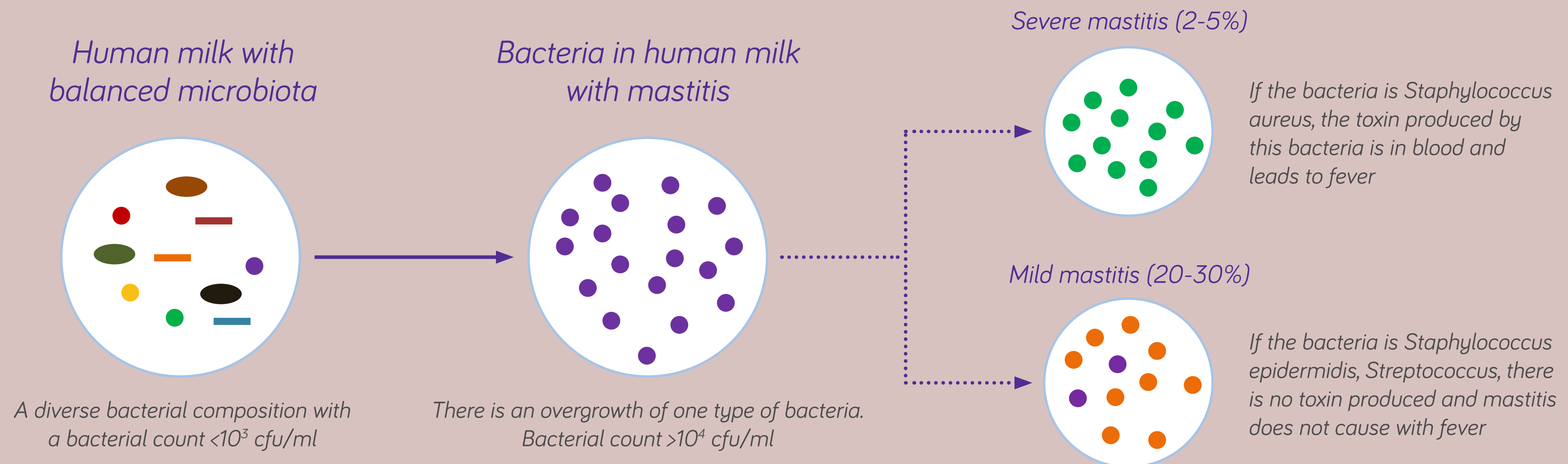




L. SALIVARIUS INFOGRAPHIC

- A balanced mammary microbiota is an important foundation for breast health and breastfeeding¹
- The microbiome of the breast (just like in the gut) can shift after birth and harmful bacteria may grow. When there is too much of the harmful bacteria present, the milk ducts can become blocked and cause inflammation and mastitis¹

The balanced mammary microbiota of lactating women has a high bacterial diversity and low concentrations of bacteria





L. SALIVARIUS INFOGRAPHIC

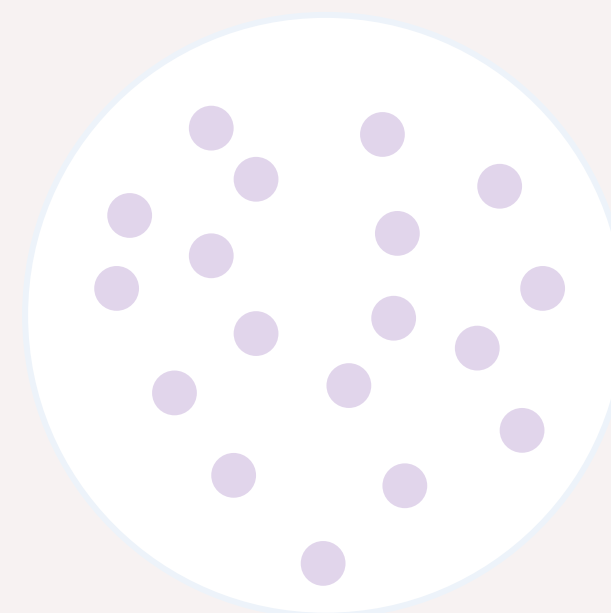
- A balanced mammary microbiota is an important foundation for breast health and breastfeeding¹
- The microbiome of the breast (just like in the gut) can shift after birth and harmful bacteria may grow. When there is too much of the harmful bacteria present, the milk ducts can become blocked and cause inflammation and mastitis¹

The balanced mammary microbiota of lactating women has a high bacterial diversity and low concentrations of bacteria

Human milk with
balanced microbiota



Bacteria in human milk
with mastitis



Severe mastitis (2-5%)



If the bacteria is *Staphylococcus aureus*, the toxin produced by this bacteria is in blood and leads to fever

Mild mastitis (20-30%)



If the bacteria is *Staphylococcus epidermidis*, *Streptococcus*, there is no toxin produced and mastitis does not cause with fever

× type of bacteria.
fu/ml

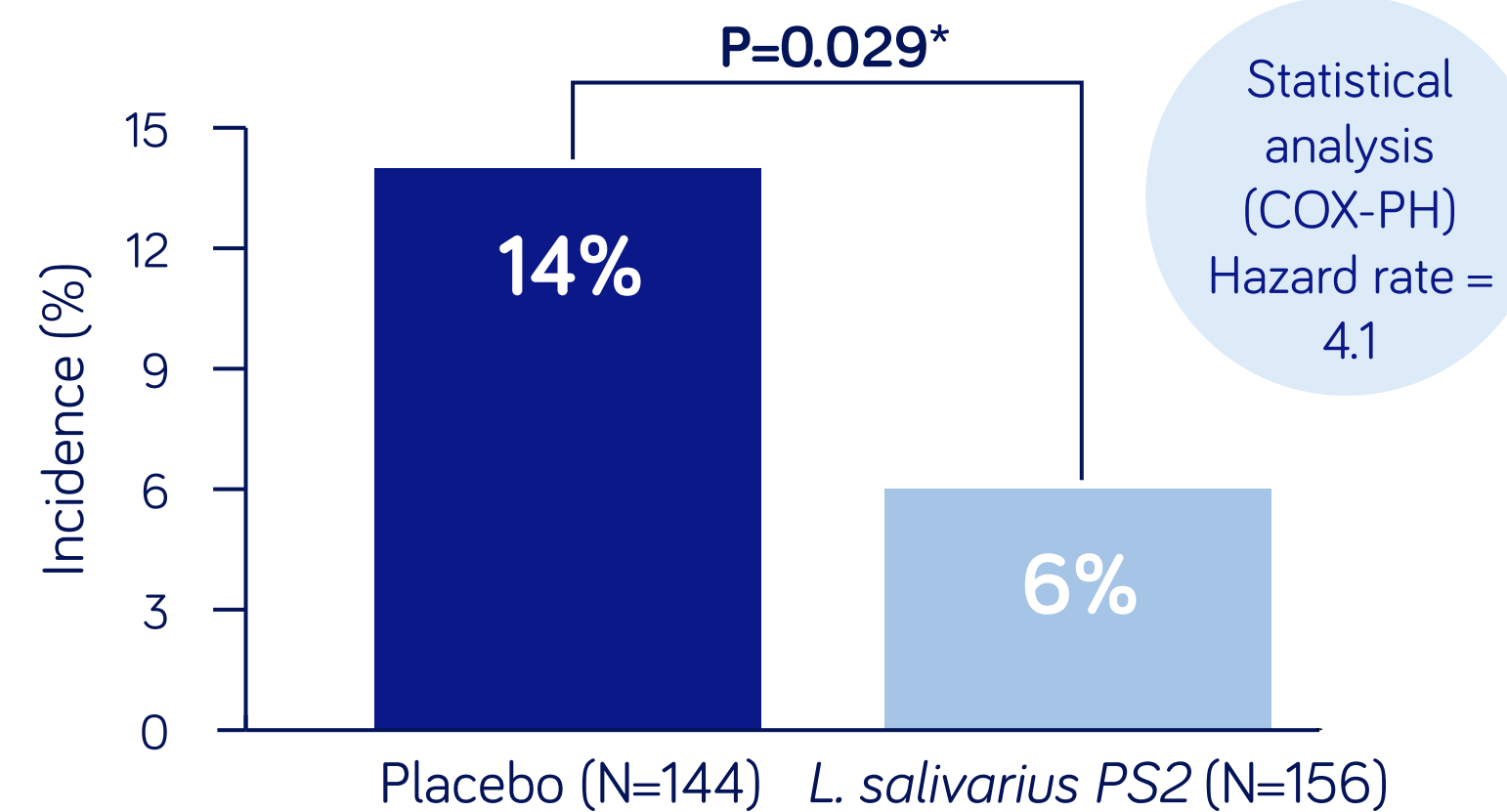
1. Heikkilä and Saris, 2003; Ojo-Okunola, Nicol, du Toit, 2018; Patel et al., 2014



STUDY FINDINGS^{1,2}

58%

PS2 significantly reduces the incidence of mastitis, 58% less likely to develop mastitis²



*Log-rank test

In total 29 subjects reported mastitis
Probiotic group n=9 Placebo group n=20

In case of mastitis there seems to be a more pronounced reduction in breast pain and less use of antibiotics in the probiotic (PS2) group¹

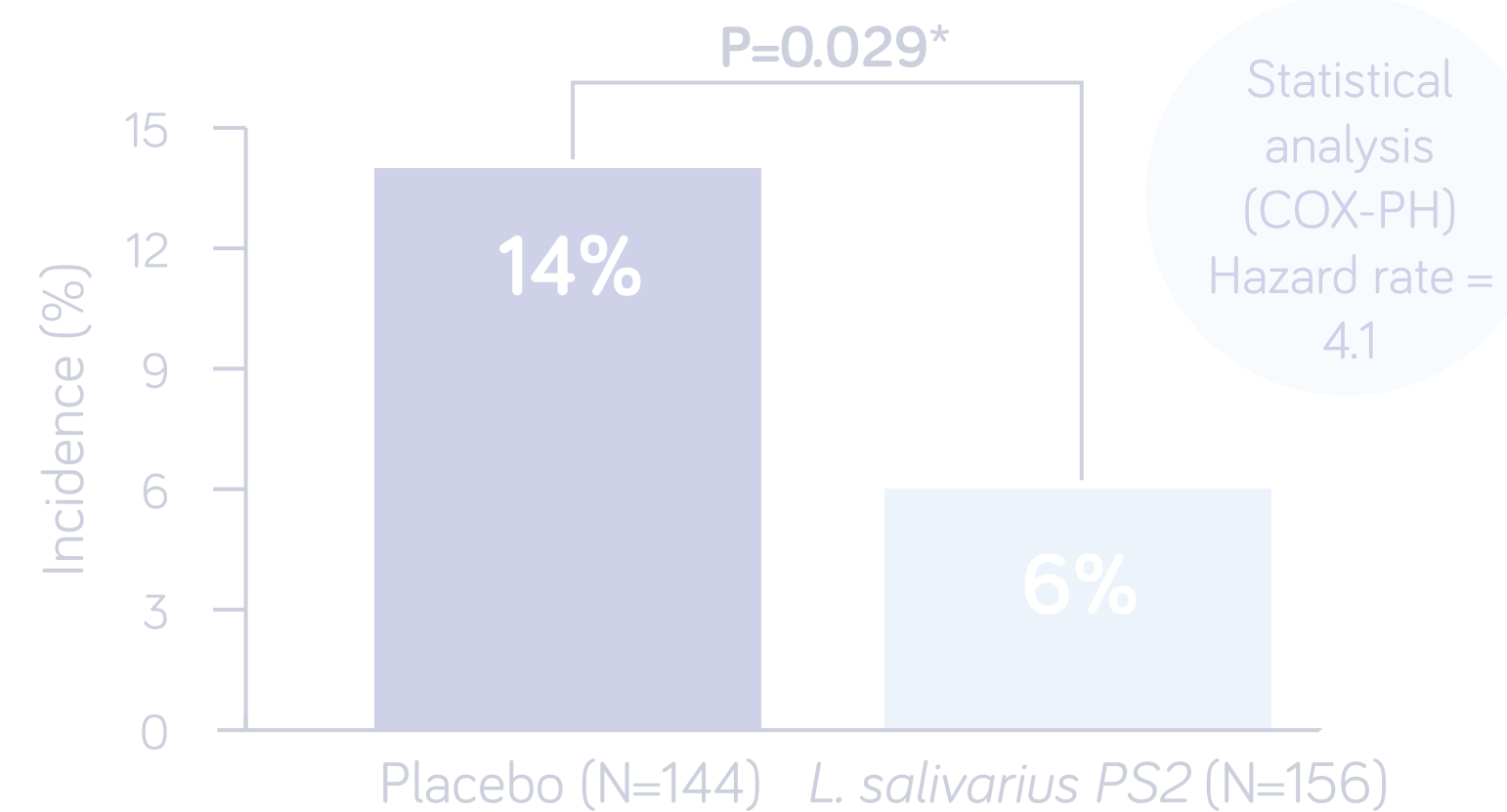
No safety concerns with regard to the occurrence of adverse events



STUDY FINDINGS^{1,2}

58%

PS2 significantly reduces the incidence of mastitis, 58% less likely to develop mastitis²



*Log-rank test

In case of mastitis there seems to be a **more pronounced reduction** in breast pain and less use of antibiotics in the probiotic (PS2) group¹

No safety concerns with regard to the occurrence of adverse events

1. Fernández, et al. 2016

2. Jiménez, et al. 2021





REDUCING THE INCIDENCE OF MASTITIS IS BETTER THAN CURE WHEN IT COMES TO MASTITIS MANAGEMENT

One step ahead: Early intervention with *Lactobacillus salivarius* PS2 could maintain breastfeeding for longer

1.

Mastitis is characterized by a dysbiosis of the lactating breast microbiota:

- Beneficial bacteria (i.e. Lactococcus and Lactobacillus) levels in the breastmilk are reduced
- Potentially harmful bacteria (such as Staphylococcus and Streptococcus) are increased

Mastitis can be a painful and debilitating condition which, if untreated, can lead to **stopping breastfeeding prematurely**.

2.

The reduction of incidence of mastitis could help realize the WHO target of increasing exclusive breastfeeding rates to at least 70% around the world by 2030. Also, the reduction of incidence of mastitis of mastitis is clearly preferable to treatment, which often involves the use of antibiotics (with negative consequences for mother and infant).

3.

Probiotics may help to reduce the incidence of mastitis; their exact mechanism is not yet known. The *Lactobacillus salivarius* is a strain from the **Danone culture collection**. The composition of the mastitis product with the *L. salivarius* is **IP protected** (WO2015093963). Per unit/stick (2g): cell count/probiotics 1.0×10^9 cfu

4.

This probiotic *L. salivarius* PS2 has been shown to reduce staphylococcal bacteria counts in the breastmilk of women with mastitis. **Two clinical studies** have shown the ability of *L. Salivarius* PS2 to **reduce the incidence of mastitis** when taken orally, by healthy mothers during late pregnancy and/or early lactation.