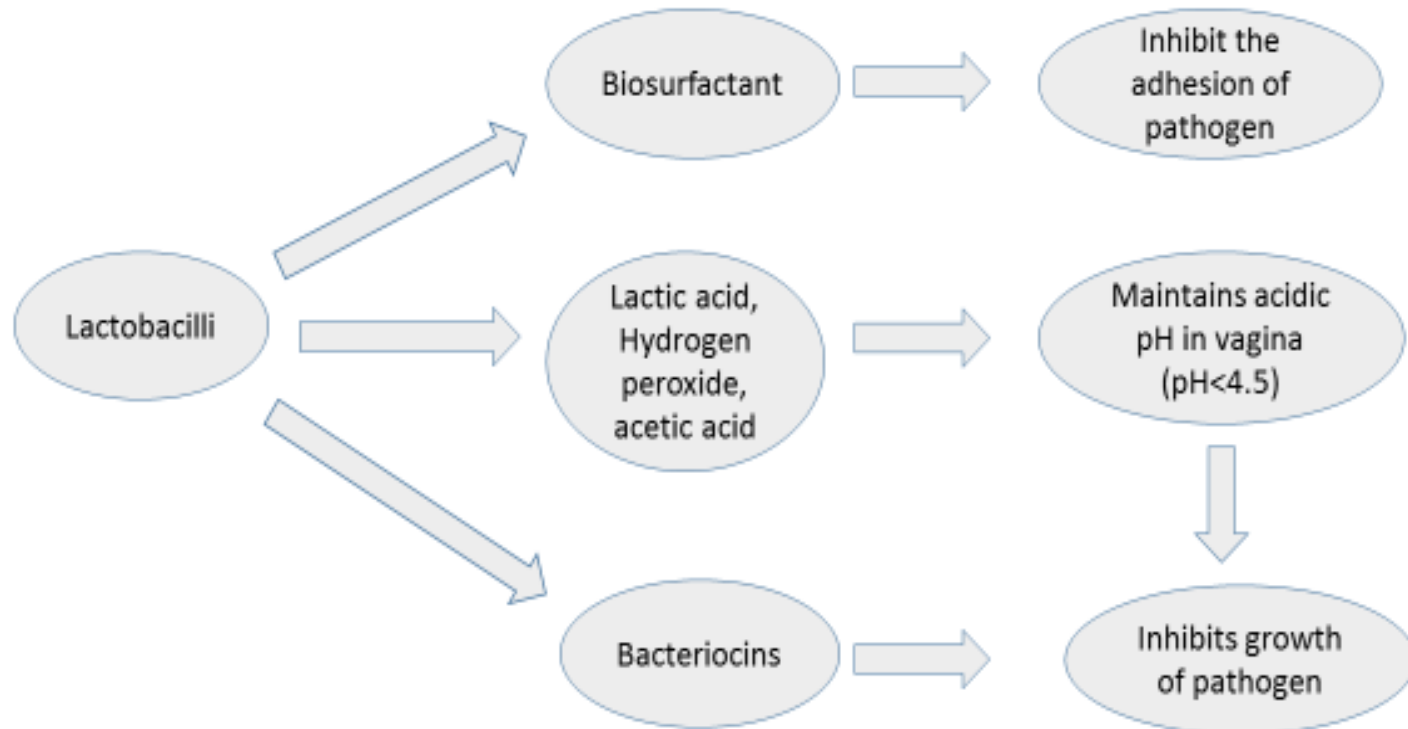


Role Of Probiotics in Bacterial Vaginosis

VAGINAL MICROFLORA

Lactobacilli are the dominant microflora of the vaginal system.



PREVALENCE

- BV is the most common cause of vaginal discharge in young women of reproductive age.
- Prevalence of BV among women in India varies from 20-40% depending upon population studied.



Hodiwala AB et al. Bacterial vaginosis. Int J Curr Microbol App Sci. 2015;4(6):530-538

COMPLICATIONS

- Recurrent infection leading to pelvic inflammatory disease (PID)
- Post abortion endometritis
- Post hysterectomy cuff cellulitis
- Risk of transmission and acquisition of HIV
- Risk of acquisition of herpes simplex virus type 2 (HSV-2), gonorrhoea, chlamydia, and trichomonas infection. Persistence of HSV may lead to dysplasia of cervix
- Pregnancy complications: second trimester miscarriage, premature rupture of membranes (PROM), preterm birth, endometritis
- Tubal factors leading to infertility

WHAT ARE PRE & PROBIOTICS ?

- Probiotics are live microorganisms which confer a health benefit to the host, when administered in suitable amounts
 - Ex. *Lactobacilli*, *Bifidobacterium*

Prebiotics: a non-digestible food ingredient that beneficially affects the host by selectively stimulating the growth and/or activity of probiotic bacteria.

Ex. Fructose Oligo Saccharide

Probiotics maintains the vaginal pH < 4.5 thereby not allowing a conducive environment for the growth of the pathogenic microbes

Produces lactic acid, acetic acid and hydrogen peroxide also have antimicrobial activity

Lactobacilli competitively block adhesion of pathogens to the vaginal epithelium thus preventing the spread of infection

Production of bacteriocins that can inhibit the growth of pathogens, including some associated with BV, such as *G. vaginalis*.



In vitro studies have shown that *Lactobacillus* strains can significantly disrupt *Gardnerella vaginalis* biofilms and inhibit the growth of pathogens.



FOGSI

Recommends use of PROBIOTICS
containing specific strains of
Lactobacillus for the treatment
of Bacterial Vaginosis[#]

**Lactobacillus prevents growth of BV-associated
bacteria and restores normal vaginal acidic pH by:^{2,3}**

-  Inhibition of pathogen adhesion to vaginal epithelium
-  Production of anti-microbial compound like Hydrogen peroxide, Lactic acid and acetic acid

[#] FOGSI Bacterial Vaginosis Checklist. 2018

² Kumar N et al. Bacterial vaginosis: Etiology and modalities of treatment—A brief note. J Pharm Bioallied Sci. 2011 Oct-Dec; 3(4): 496–503.

³ Machado D et al. Bacterial Vaginosis Biofilms: Challenges to Current Therapies and Emerging Solutions. Front Microbiol. 2016;6:1528.

FOGSI GUIDELINES[#] for the Symptoms, Management & Treatment of BV

Symptoms

- Offensive fishy smell
- White discharge

Approximately 50% patients are asymptomatic

Management

- To avoid vaginal douching
- Avoid use of shower gel
- Avoid use of antiseptic agent or shampoo

Treatment for SCREEN POSITIVE

Asymptomatic (1A)
Pregnant/non pregnant

Asymptomatic with high risk
pregnancy (1A) (preferable to
be treated before 20 weeks)

Women undergoing
some surgical procedure (1A)

Co-treatment with antibiotic and probiotic

- Metronidazole* 400 mg twice daily for 5-7 days (A)
OR
- Metronidazole 2 g single dose (A)
OR
- Intravaginal metronidazole gel (0.75%) once daily for 5 days (A)
OR
- Intravaginal clindamycin cream (2%) once daily for 7 days
- Probiotics: Lactobacilli species like acidophilus, rhamnosus, reuterii, fermentum etc. for 15 days**
- Alcohol to be avoided when patient is on metronidazole

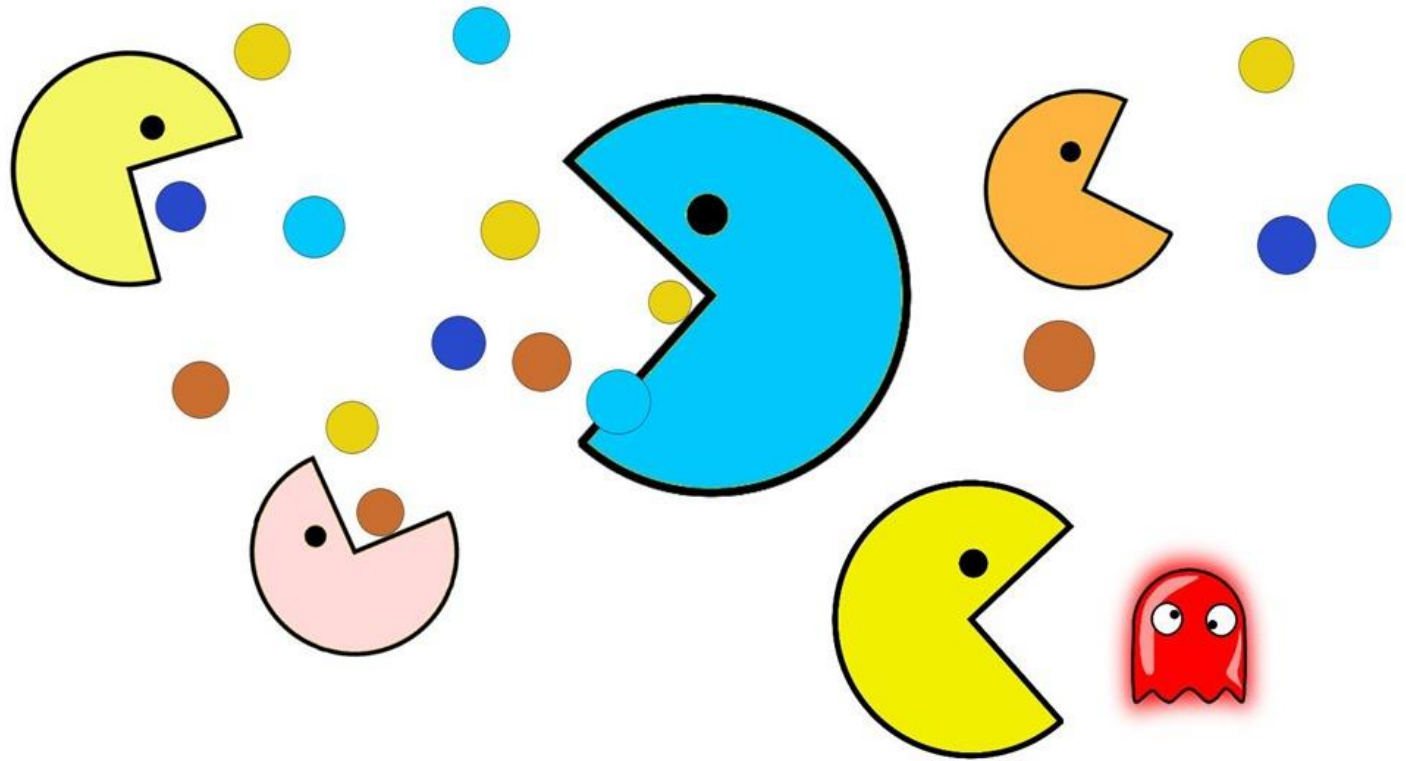
* Treatment of recurrence: Co-treatment with antibiotics and probiotics but probiotics is preferred (BASHH: British Association for sexual health and HIV 2012)

FOGSI Bacterial Vaginosis Checklist. 2018

PRE & PROBIOTICS + ANTIBIOTICS

- Combining probiotics with antimicrobials in management of Vaginal infections provides,
 - High cure rates,
 - Low recurrence and
 - Quick re-establishment of an healthy vaginal microflora.

Recine et al.. Arch Gynecol Obstet. 2016;293:101–107
Marcone et al. Int J Gynaecol Obstet. 2010;110:223–226
Bodean O et al. J Med Life. 2013 Dec 15; 6(4): 434–436.



 Probiotic  Prebiotic  Bad Bacteria

Thank you...!!!