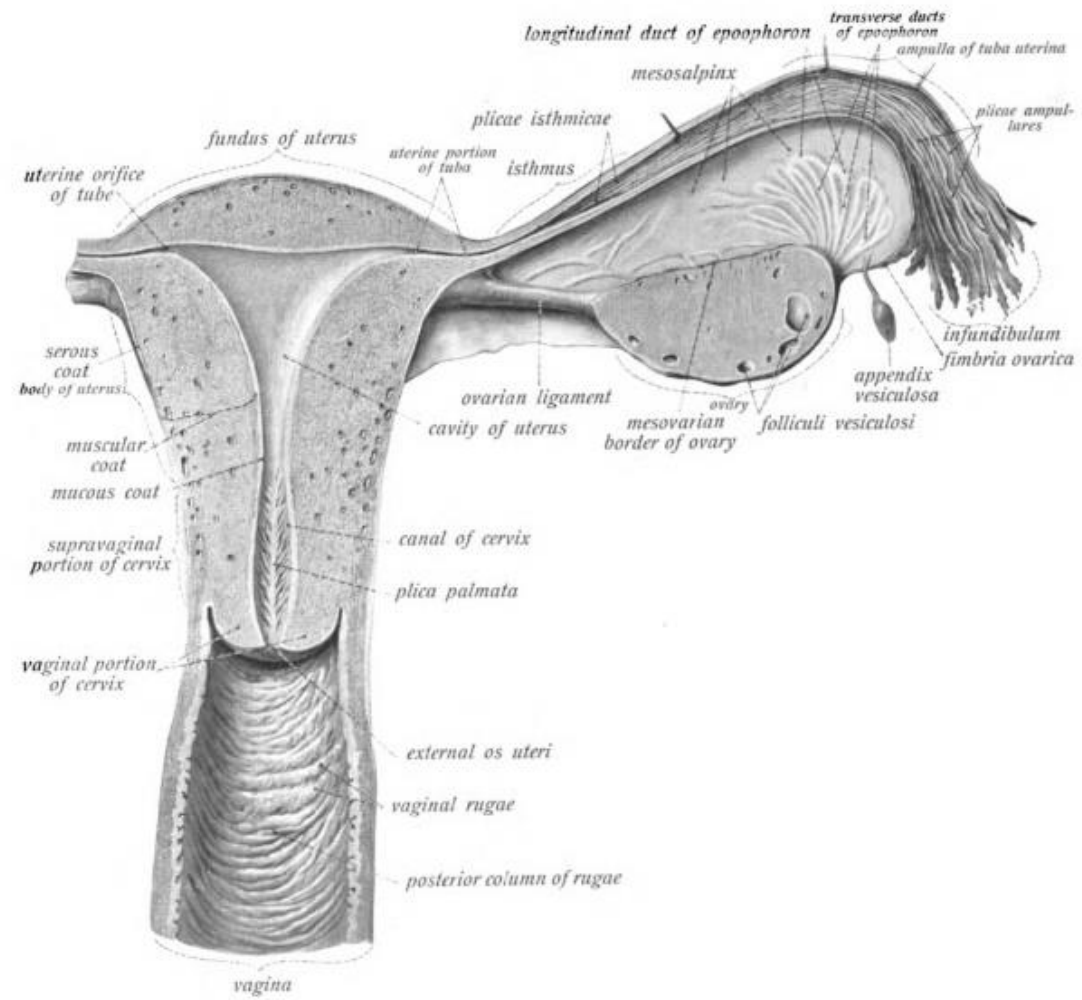




# Probiotics + Vaginas

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WITH CAMILLE FREEMAN

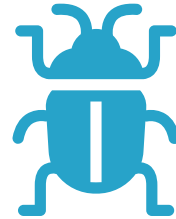


# Vaginal Basics

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Normal pH pre-menopause: 3.5



200 spp of bacterial known to colonize vaginas



$10^7$  –  $10^8$  organisms per mL of vaginal fluid

Healthy Flora,  
Lower Risk of:

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HIV

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HSV-2

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Gonorrhea

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Chlamydia

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PID

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Pre-term labor

# Most common flora

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*L. crispatus*\*

*L. gasseri*

*L. iners*

*L. vaginalis*

*L. jensenii*



# What's so great about Lactobacillus?

Lowers pH by producing lactic acid

Competes with potential pathogens for space/nutrients

Aggregates with potential pathogens

Produces bacteriocins and signaling molecules

# Things that can cause dysbiosis

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Antibiotic use

Spermicide use

Vaginal douching

Hormonal changes

New partner or increased frequency of intercourse

Diaphragms

Smoking



# Rx meds & Lactobacillus

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## Will NOT kill

Metronidazole

Trimethoprim/sulfamethoxazole

Levofloxacin

## May kill (?)

Gentamycin

Clindamycin

Erythromycin

Ciprofloxacin

Tetracycline

## Will kill

Ampicillin

Cefazolin

Cefotaxime

Vaconmycine

From Melkumyan et al. (2015)





# Bacterial Vaginosis

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# Bacterial vaginosis



Most prevalent cause of vaginal s/s in reproductive age



About 30% of women have BV at any given time



Antibiotics cure most of the time, but recurrence is up to 50% in 12 mo.



Sx: odorous discharge. No redness/swelling/pain

# Probiotics for BV

Best evidence for *L. rhamnosus* GR-1  
and *L. reuteri* RC-14

Products with these strains:

- Jarrow's Femdophilus
- Integrative Therapeutics Pro-Flora Women's Blend
- RepHresh Pro-B

Studies are mixed about efficacy for prevention and “cure”

# Other strains to consider:

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- *L. fermentum* LF15 and RC-14
- *L. plantarum* LP01
- *L. brevis* CD2
- *L. crispatus* CTV-05 and M247
- *L. acidophilus* GLA-14
- *L. rhamnosus* HN001

A close-up photograph of several plumeria flowers with white petals and yellow centers, set against a dark, blurred background. The flowers are the primary visual element of the slide.

# Vulvovaginal Candidiasis

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# VVC Overview



Up to 75% will experience at least once



Usually due to *Candida albicans*



40-50% recurrence after 1<sup>st</sup> episode



Sx: burning, itching, redness, odorless discharge



Lactobacillus stays dominant

# Treatment

Fluconazole is v. effective, but recurrence is high

Overall probiotics are less effective/promising for VVC

*L. rhamnosus* GR-1 has some evidence

Boric acid 600 mg vaginally QD-BID x 7-21d is commonly used

Also consider: *L. acidophilus* La5, *L. fermentus* FL10, *L. acidophilus* LA02

# General Notes

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- Best dose/dosing strategy?
- Oral v. vaginal administration?
- What to try if not working?
- Quality!
- Alone or with Rx medications?
- Potential harms?



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Thank you for  
being here!

SLIDES & REFERENCES:

[WWW.CAMILLEFREEMAN.COM/VAGINAS](http://WWW.CAMILLEFREEMAN.COM/VAGINAS)