

Lactobacillus Probiotics: Their Role in Fertility

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Background & Significance

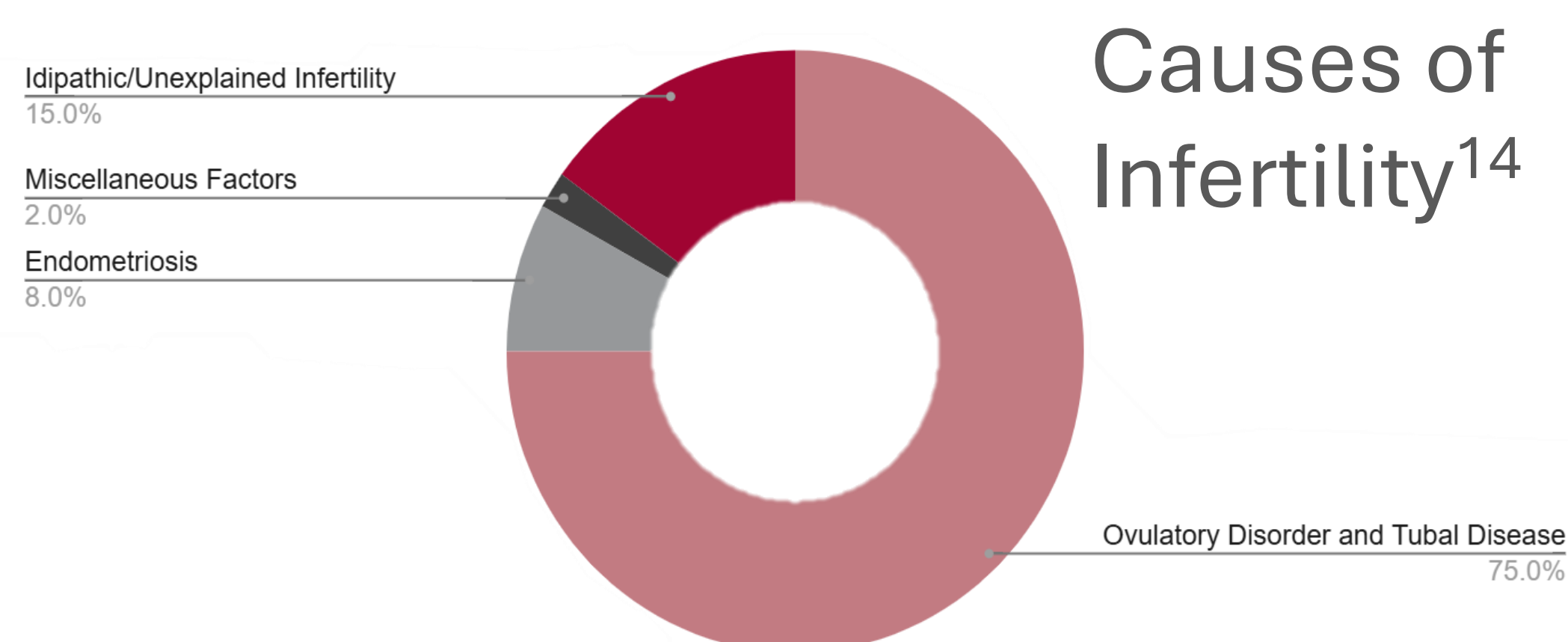
Research suggests that women who become pregnant without assistance frequently have high levels of vaginal Lactobacilli. This indicates that fertility and presence of this genus may be linked.

Infertility is:

- A condition faced by 16% of couples worldwide⁴
- Diagnosed after 12 months of unprotected intercourse for women under 35¹¹.
- If no pathology has been found, the infertility is classified as Unexplained Infertility.
- Unexplained infertility affects approximately 15% of those couples diagnosed with infertility
- Contains an exhausting process of medical history, menstrual tracking, physical exams, imaging, and hormone testing

Lactobacillus:

- A genus of bacteria found in the human gastrointestinal and vaginal tracts, known for their ability to produce lactic acid



Picot & Methods

PICOT: Among women with idiopathic infertility, does supplementation with Lactobacillus-based probiotics compared to standard care increase rate of successful pregnancies?

Databases used:

- PubMed and UMB EBSCO
- Keywords “lactobacillus” AND “fertility”
- Inclusion Criteria of publishing date between 2020-2025
- 6 papers were selected for this project from the results

Results

Study	Baseline Alkalotic (>5) Vaginal pH in Participants	Post-Treatment Normal Vaginal pH in Participants	Pregnancy Effectiveness	Percent Improvement in Lactobacillus Count Post-Treatment
Lan & Chen (2023)				
Control/Metronidazole	100%	44%	82%	
Lactobacillus/Metronidazole	100%	18%	96%	
Fernandez et al. (2021)				
Control	0%			
Repeat Abortion	100%	71%	81%	
Infertility	100%	71%	52%	
Fernandez et al. (2023)				
Non-Pregnant Control	0%	N/A		
Repeat Abortion	100%	75%	80%	
Infertility	100%	50%	55%	
Iniesta et al. (2022)				
Entire Group			33%	6%
Jafarbad et al. (2024)				
Control			33.33%	37.10%
Probiotic			39.02%	62.90%
Jepsen et al. (2022)				
Control			2.60%	
Placebo			11.10%	

Conclusions & Future Research

- Probiotics have shown potential in improving outcomes for women with unexplained infertility by tempering the vaginal microbiome.
- This data collection included infertility studies with and without ART. Their outcomes and vaginal microbiome protocols differ significantly!
- Despite positive findings, the studies' quality is not ideal for generalization.
- An emphasis on controls must be better incorporated into fertility intervention studies.
- No related adverse events occurred. This intervention is among the safest and cheapest available.
- Even in small studies, successes included couples who unsuccessfully tried ART before joining Lactobacillus intervention^{2,3,5}.
- The successes indicate that more research in this area is integral.

The CNL Role

- Investigate and Integrate: Ensure that current fertility testing protocols are up to date and investigate further whether the vaginal microbiome should be standardized in all fertility testing¹³.
- Advocate: For patient safety, ensure that the addition of Lactobacillus is not dangerous, and for patient interests, provide testing and treatment with assured safe, preliminary options if the patient desires it¹³.
- Track Impacts: Monitor the effects this treatment and implementation has over time, both on patient emotional toll and on concrete fertility success rates¹³.

References & Terms



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