

Introduction/Background

Prevalence:

Approximately 20% of all adults in the United States suffer from gastroesophageal reflux disease (GERD) symptoms of heartburn and regurgitation (Papadakis & McPhee, 2020). GERD may lead to erosive esophagitis if left untreated (Mayo Clinic, 2020).

GERD Risk Factors (Clarrett and Hachem, 2018):

- Excess Body Mass Index
- Acidic food/beverage consumption
- Size and timing of meals
- Smoking
- Anxiety/depression
- Sedentary lifestyle
- Older age

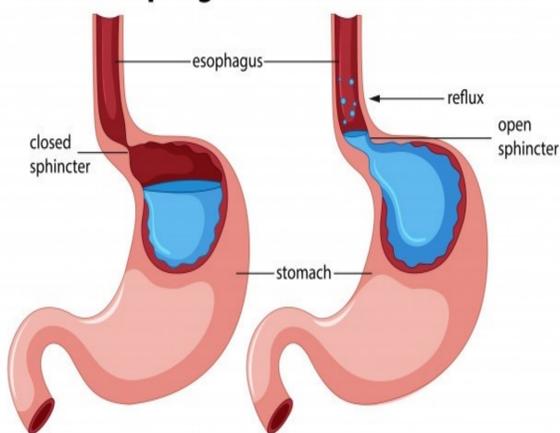
Traditional GERD Treatment (Katz, Gerson and Vela, 2020):

- Weight loss
- Eating modifications
- Sleeping modifications
- Proton pump inhibitor (PPI) or histamine 2 receptor antagonist (H2RA) medications

Health Impact:

- PPI treatment can be harmful to overall health with time (Macke, et al., 2020). Long-term PPI use increased proliferation, colonization and overgrowth of gut flora in oral cavity, gastrointestinal tract and fecal samples (Clarrett and Hachem, 2018).

Gastroesophageal reflux disease (GERD)



Problem

Long-term PPI use may lead to adverse health consequences for people living with GERD. Alternative therapies may be helpful in reducing the risk of harm.

PICO Question:

Does adding a probiotic to medication therapy for uncontrolled GERD in adults improve symptoms?

Theoretical Framework

Henderson's Nursing need theory was used to guide this project. Components 2 and 3 were primarily used in this work. (V. Henderson 1964).

Henderson's Nursing Need Components

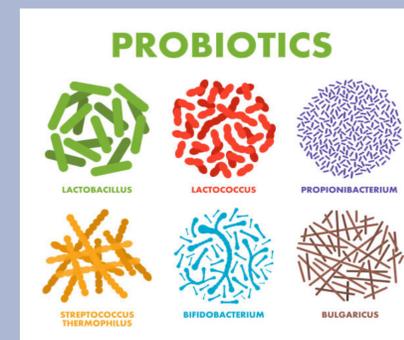
Breath normally	Keep the body clean and well groomed
Eat and drink adequately	Avoid dangers in the environment and avoid injuring others
Eliminate body waste	Communicate with others in expressing emotions, needs, fears, or opinions
Move; maintain desirable postures	Worship according to one's faith
Sleep and rest	Work in such a way that there is a sense of accomplishment
Select suitable clothes-dress and undress	Play or participate in various forms of recreation
Maintain body temperature within normal range by adjusting clothing and modifying environment	Learn, discover, satisfy the curiosity that leads to normal development and health and use the available health facilities.

Methods

A review of literature was conducted using databases CINAHL, PubMed Central, Medline, NCBI, NLM, Gale Elsevier, and Up-to-Date in March 2021. The John Hopkins Nursing Evidence Based Practice Toolkit Evidence Level and Quality Guide was used to procure quality studies. The following key words were used: probiotics, proton pump inhibitors, histamine 2 antagonists, GERD, gastroesophageal reflux disease, reflux, and esophagitis.

Results

- Probiotic use with omeprazole significantly reduces GI symptoms (Sun et al., 2019).
- Fermented milk containing probiotics improved symptoms of GERD (Urita et al., 2015).
- Gastric fluid decreased overnight in patients with dyspepsia who were taking a probiotic (Nakae et al., 2016).
- Bowel symptoms are reduced when taking a probiotic (Compare et al., 2015).
- Small intestinal bacterial overgrowth reduction was seen in pediatric patients with GERD who took at PPI and probiotic (Belei et al., 2017).
- Multi-strain probiotics improve GERD symptoms (Horvath et al., 2020; Waller et al., 2010).
- A daily dose of oral multi-strain probiotic is recommended in concurrent to a PPI treatment for GERD (Waghay et al., 2019).
- Positive reduction of GERD symptoms noted with multi-strain probiotic use added to traditional medication management (Cheng & Ouwehand, 2020).



Discussion/Recommendations

Supplementing traditional GERD treatment with a multi-strain probiotic for adult patients with GERD is recommended. *Lactobacillus* and *Bifidobacterium* strain probiotic preferred. Practice implications from this work suggest the need to educate providers treating GERD with PPI alone on the positive outcomes associated with adding a daily probiotic.

Future Recommendations: Further studies are needed to determine the efficacy of probiotic use alone for treatment of symptomatic GERD. Considerations for adding probiotics to GERD therapy may lead to new standards of GERD care. Patients may experience fewer hospitalizations and recurrent illnesses or enteric infections from reduced GERD inflammation.

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