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## Dietary and Behavioral Reflux Management

Adam M. Gehr

Deanna Britton

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# **Dietary and Behavioral Reflux Management**

By: Adam Gehr, MA  
& Deanna Britton, PhD, CCC-SLP



# Outline

Gastroesophageal Reflux and Dysphagia

Clinical Relevance of Pamphlet

Scoping Review Methods

Scoping Review Results

Updated Pamphlet

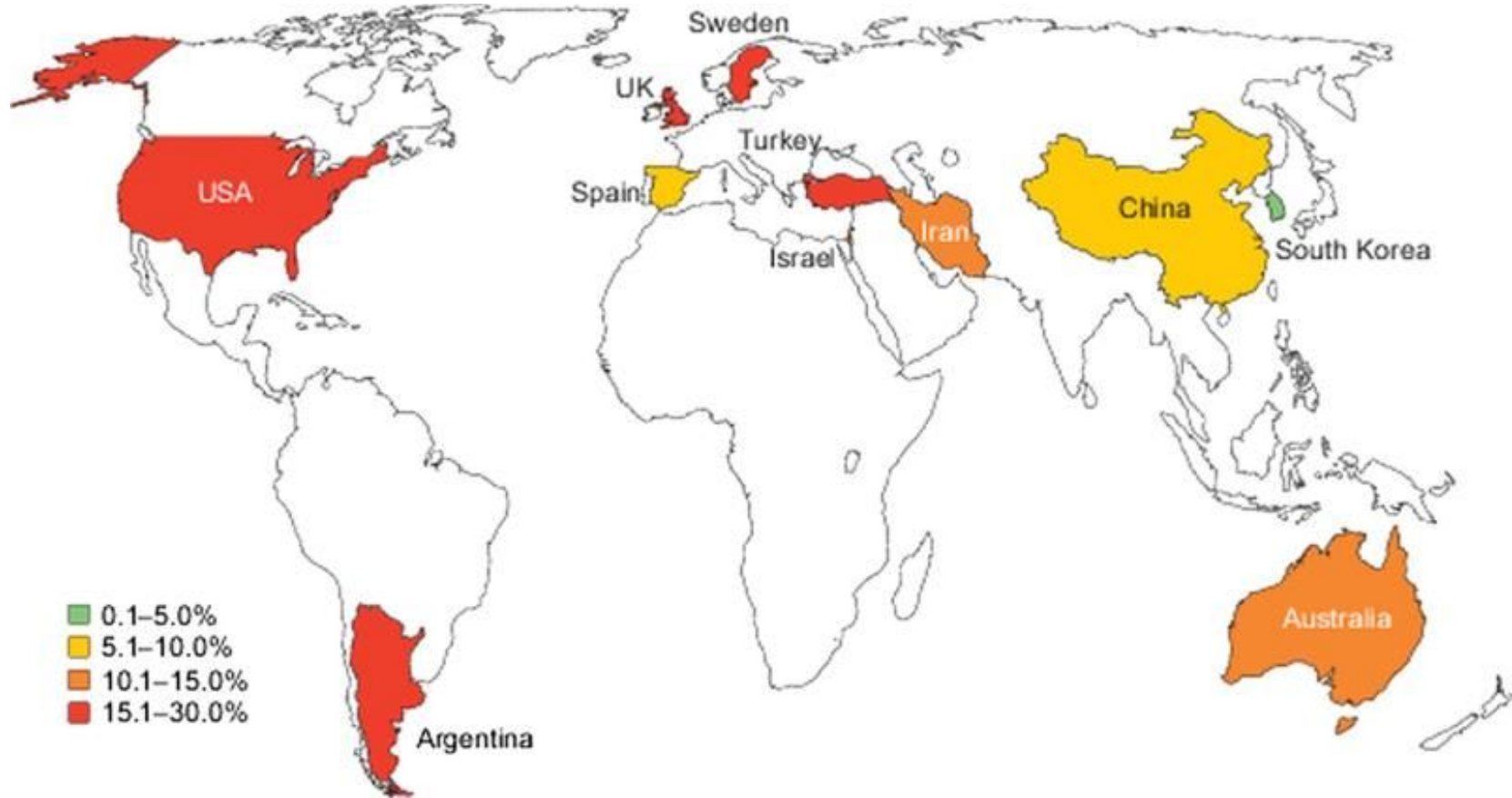


# Gastroesophageal Reflux

- ❖ Gastroesophageal Reflux Disease (GERD)
- ❖ Symptoms Include: heartburn, chest pain, difficulty swallowing (dysphagia), regurgitation of food or sour liquid, sensation of a lump in the throat
- ❖ Affects around  $\frac{1}{4}$  of the U.S. Population<sup>1</sup>

## Long Term Effects

- ❖ Irritation and inflammation of the esophagus (esophagitis)
- ❖ Esophageal stricture
- ❖ Barrett's esophagus
- ❖ Sleep Apnea





## Relation to Dysphagia

- ❖ Chronic reflux can lead to difficulty swallowing (dysphagia)
- ❖ Has been associated with Cricopharyngeal Dysfunction
- ❖ Aspirated stomach acid can damage the lungs and affect breathing
- ❖ Behavioral modification can limit damage from reflux



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## In the Clinic

- ❖ Patients often present with swallowing difficulties related to acid reflux
- ❖ Best treatments are often a combination of medical and behavioral
- ❖ 40-80% of information provided by healthcare providers is forgotten immediately<sup>2</sup>
- ❖ 50% of that information is incorrect<sup>2</sup>
- ❖ Important to provide in writing







## Methods

- Search Parameters
- Searches in PubMed and Google Scholar
- Inclusionary and Exclusionary Criteria:
  - Included: Most pertinent related English language articles related to adult gastroesophageal reflux and behavioral factors
  - For all: English only; NOT “children,” “pediatric,” “infant,”
  - Limit year 2017 – Present (completed March 2022)
  - Did not limit years for beverage search

KEYWORDS --- GASTRO-ESOPHAGEAL REFLUX, GERD,

Pubmed (incl. Medline) and Cochrane databases	Free Text Search Terms
MeSH Headings: GASTRO-ESOPHAGEAL REFLUX, or GERD	"GERD" or "Reflux" or "Gastroesophageal reflux"

## (General) AND.....

KEYWORDS --- BEHAVIORAL MODIFICATIONS, LIFESTYLE, BEHAVIOR

Pubmed and Cochrane databases	Free Text Search Terms
MeSH Headings: LIFESTYLE, or BEHAVIOR	"Behavioral modification" or "Lifestyle" or "Behavior"

## (Physical Adjustments) AND.....

KEYWORDS --- EXERCISE, SLEEP, POSITION, ELEVATION, BED

Pubmed and Cochrane databases	Free Text Search Terms
MeSH Headings: EXERCISE, or SLEEP, or POSITIONING	"exercise" or "sleep" or "position" or "elevation" or "bed"

## (MEALS) AND.....

KEYWORDS --- MEAL SIZE, MEAL TIME, WEIGHT, OBESITY, FOOD INTAKE

Pubmed and Cochrane databases	Free Text Search Terms
MeSH Headings: MEAL, or MEAL TIME, or WEIGHT, or OBESITY	"meal size" or "meal time" or "weight" or "obesity" or "food intake"

## (DIET) AND.....

KEYWORDS --- DIET, FOOD, BEVERAGES, SOOTHING

Pubmed and Cochrane databases	Free Text Search Terms
MeSH Headings: DIET, or FOOD, or BEVERAGES	"diet" or "food" or "beverages" or "soothing" or

## (OTHER) AND.....

KEYWORDS --- EXERCISE, CHEWING, GUM, SMOKING, TOBACCO, ALCOHOL, STRESS

Pubmed and Cochrane databases	Free Text Search Terms
MeSH Headings: EXERCISE, or CHEWING, or GUM, or SMOKING, or TOBACCO, or ALCOHOL	"chewing" or "gum" or "smoking" or "tobacco" or "alcohol" or "stress"



## Notable Changes to Prior Handout

- ❖ Previous handout created by Nick Sanford & Deanna Britton (2017)
- ❖ Inclusion of Beverage alternatives
- ❖ Inclusion of sleep suggestions
- ❖ Changed phrasing to be more affirmative and represent updated research
- ❖ Removed suggestions that may have adverse effects among certain patient populations



## Dilemmas

- ❖ Not a lot of good research on beverages to soothe GI tissues
- ❖ Some that have been shown to be beneficial also have possible side effects
  - Licorice Root
  - Marshmallow Root
- ❖ Some behaviors/diets have been shown to be beneficial but can be contraindicated in the populations we see
  - Elimination diet
  - Lose weight
  - Low carb diet



# Finding Highlights

\*Superscript references are attached to each recommended strategy in the pamphlet (e.g. Sleep on left side<sup>4, 6, 7</sup>)

## Physical Adjustments

- ❖ Raise head of bed 6 inches or sleep on a bed wedge
- ❖ Avoid bent forward postures
- ❖ Do not lie down immediately after eating
- ❖ Sleep on your left side

## Mealtime Behaviors

- ❖ Eat smaller more frequent meals rather than a few large meals
- ❖ Avoid eating right before bed
- ❖ Eat meals slowly and methodically
- ❖ Avoid high intensity exercise immediately after eating



## Other Modifications

- ❖ Maintain a healthy weight
- ❖ Avoid tight fitting clothes that restrict abdomen
- ❖ Reduce high impact life stressors, fatigue, and irritability
- ❖ Chew sugar free gum for 30 minutes after meals (if tolerated)
- ❖ Quit tobacco smoking
- ❖ Sleep for 7-8 hours per night



## Common Food and Beverage Triggers

- High fat foods such as greasy and fried foods
- Acidic foods such as tomatoes and citrus
- Spicy foods
- Citrus juices
- Whole milk
- Coffee and caffeinated tea
- Soda
- Alcohol
- Mint Teas



# Beverage Alternatives

## Water

Less acidic fruit or vegetable juices (aloe vera, celery, carrot, etc.)

Coconut water

Ginger tea

Herbal teas such as chamomile

Low fat or plant based milk





# Conclusions

- ❖ Diet and behavioral management of Gastroesophageal Reflux are important aspects of treatment
- ❖ Patients benefit from recommendations in writing
- ❖ These should be applicable to most patients seen in the clinic
- ❖ Many previous recommendations continued to be appropriate but beneficial to update periodically
- ❖ Further research on diet and GERD is warranted



## References

1. El-Serag, H. B., Sweet, S., Winchester, C. C., & Dent, J. (2014). Update on the epidemiology of gastro-oesophageal reflux disease: a systematic review. *Gut*, 63(6), 871–880.  
<https://doi.org/10.1136/gutjnl-2012-304269>
2. Kessels R. P. (2003). Patients' memory for medical information. *Journal of the Royal Society of Medicine*, 96(5), 219–222. <https://doi.org/10.1258/jrsm.96.5.219>