



Digestive Health and Immunity

Educate Yourself: Your Digestive Tract

Salivary Glands: Saliva helps moisten food so we can swallow it more easily. It also has an enzyme called amylase that makes it easier for the stomach to break down starches in food.

Esophagus and Stomach: The esophagus is the muscular tube to move food to the stomach. The stomach is a muscular organ where food gets broken down by being exposed to hydrochloric acid. This acid also kills bacteria. Digestive enzymes split the proteins in the food.

Liver:

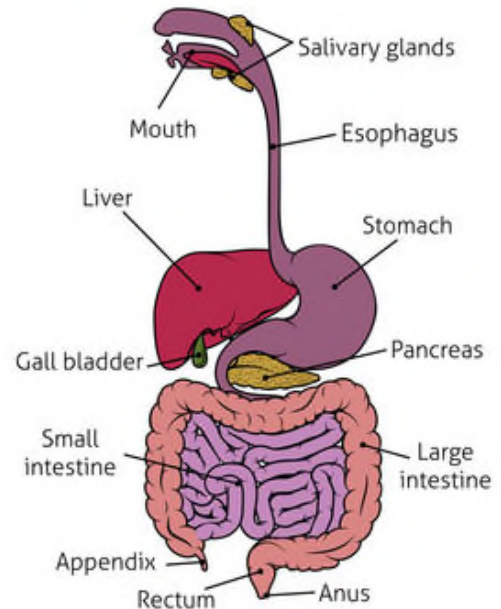
- Produces bile, a chemical that helps break down fats and carry waste out of the body
- Processes nutrients from the small intestine
- Filters blood from the stomach and intestines, removing waste and harmful substances
- Stores nutrients: The liver stores nutrients like glycogen, vitamins, and iron.
- Produces proteins for blood plasma and cholesterol and proteins that carry fats
- Helps the body get rid of bilirubin, a byproduct of red blood cell breakdown
- Controls blood sugar levels
- Fight infections
- Produces enzymes and proteins that help with blood clotting and tissue repair

Gallbladder: Primarily stores bile which helps your digestive system break down fats.

Pancreas: Produces enzymes that break down carbohydrates, fats, proteins, and acids. These enzymes are released into the upper part of the small intestine. Produces insulin and glucagon.

Small Intestine: Has three parts: the duodenum, jejunum, and ileum. Helps to further digest food coming from the stomach. Absorption of nutrients (vitamins, minerals, carbohydrates, fats, proteins) and water from food happens through the villi.

Large Intestine: Also has three parts: ascending, transverse and descending intestine also referred to as the colon. This is where the majority of our microbiota resides. When our gut is working properly, the bacteria in the colon produce certain vitamins, such as the B vitamins and vitamins K, which are absorbed into the body.

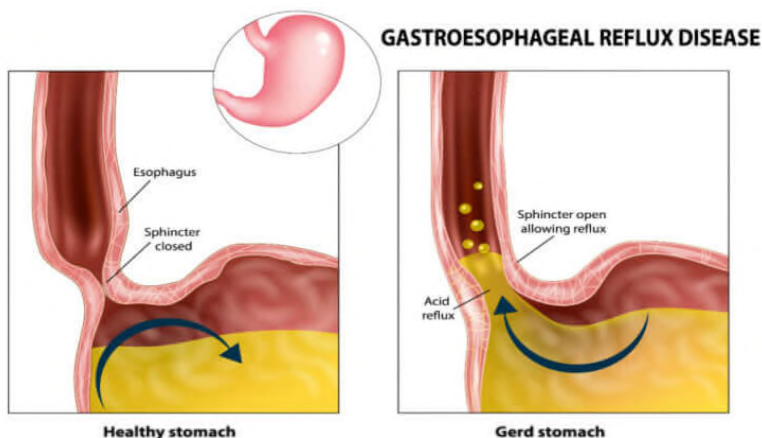


Next ... what can go wrong? And how do you fix it??

Salivary Glands: Most common is either infection or a salivary stone. Dry mouth (not enough saliva) is a big challenge for some.

How to Fix Salivary Glands: Stay hydrated, avoid oxalates, correct hormones.

Esophagus and Stomach: GERD – GastroEsophageal Reflux Disease – a common problem related to **not enough** stomach acid.

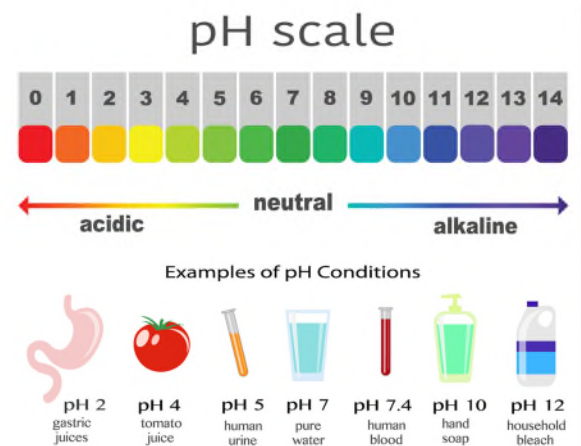


The presence of adequate stomach acid is what **closes** the esophageal sphincter to prevent the “splashing” up the esophagus.

You need acid!

Anti-acid medicine does not make sense, but that’s what traditional medicine always recommends.

Without enough acid, food does not get broken down, bacteria and other problematic organisms do not get killed and digestive enzymes don’t work well. In addition, lack of acid alkalizes the entire gut, making it difficult for the villi to absorb nutrients, especially minerals.





Common signs and symptoms of low stomach acid.

1.	Bloating, indigestion, gas, belching, feeling of excessive fullness after meals
2.	Heartburn, GERD
3.	Deficiency of minerals (iron, zinc, copper) and magnesium) and vitamins (B12).
4.	Dysbiosis, yeast imbalance
5.	Irregular bowels - diarrhea or constipation
6.	Undigested food in stools
7.	Recurring intestinal infections
8.	Food allergies, intolerances and sensitivities
9.	Bad breath
10.	Weak or cracked nails

Why does it feel as if I have too much acid? “The true cause of most ‘acid reflux’ is a LACK of stomach acid, causing the food to sit in the stomach and ferment. A build-up of acetic and butyric acids, known acids of fermentation, are the actual cause of the reflux” (*Wright, 2009, p. 13*).

How to Fix Your Stomach Acid:

#1 – Diagnose it. Take the baking soda test. Do you have adequate stomach acid?

#2 – Clean up your diet. Get rid of the “Hateful Eight” / rancid PUFA fats in your diet.

#3 – Correct underlying nutritional deficiencies. At a minimum, take Formula 2 Multivitamin and Mineral Complex.

#4 – Add Herbal Aloe to soothe the stomach and reduce inflammation, allowing the tissues to act more normally.

#5 – Try Aminogen to more completely break down proteins and settle the stomach.

#6 – Need more help? Take a shot of Apple Cider Vinegar before each meal and/or try using Betaine HCl, which is basically stomach acid in a capsule.



Liver: The most common liver issue is non-alcoholic fatty liver disease (NAFLD). Carbohydrates, in conjunction with the rancid PUFAs are the primary cause. Uncontrolled Type II diabetes can also cause NAFLD.

How to Fix Your Liver:

#1 – Clean up your diet. Get rid of the “Hateful Eight” / rancid PUFA fats in your diet.

#2 – Take steps to control blood sugar.

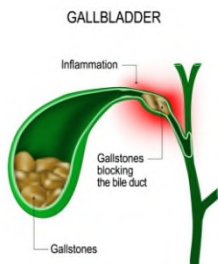
#3 – Take liver friendly supplements such as Milk Thistle.

#4 – Reduce or eliminate alcohol.

Gallbladder: Cholecystitis, or inflammation of the gallbladder, is often caused by a build up of stones. When a stone blocks the duct, it is horrifically painful. Once the gallbladder is removed, bile drips continuously into the intestinal tract, which can lead to generalized GI issues such as diarrhea.

How to Fix Your Gallbladder:

#1 – Avoid rapid weight loss.



#2 – Clean up your diet. Eliminate PUFAs. (sound familiar?)

#3 – Taking bile salts and/or apple cider vinegar can be helpful.

#4 – Do a gallbladder cleanse to remove the stones. See Mortiz in references.

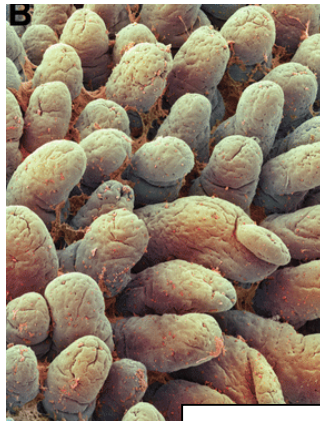


Pancreas: Most common issues here are pancreatitis (inflammation of the pancreas) and pancreatic cancer. Both typically start with symptoms such as nausea and vomiting and/or abdominal pain. This is serious so please seek medical input.

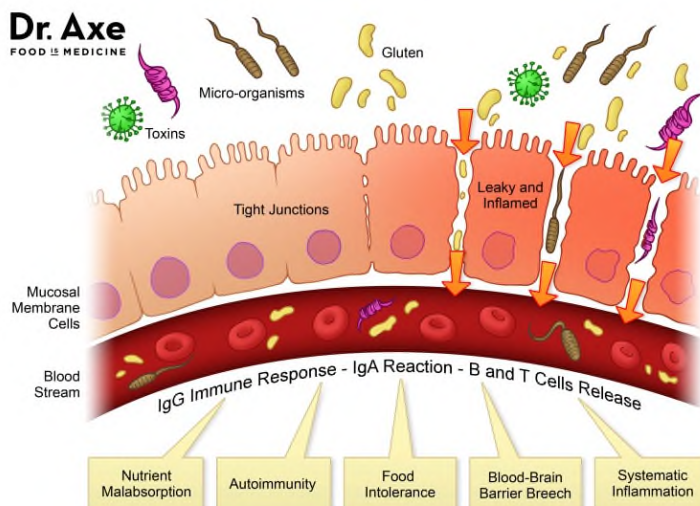
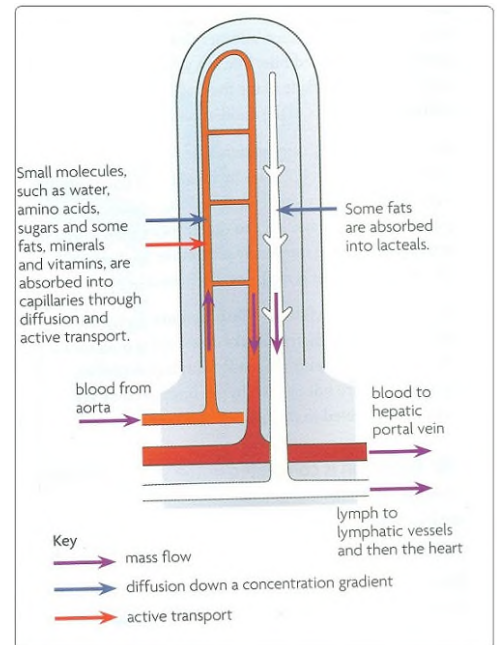
How to Support Your Pancreas: See all of the above recommendations.

Small Intestine: Approximately 20 feet in length, the important structures in the small intestine are the villi, where we absorb our nutrients. The villi can become damaged when exposed to irritants like alcohol, drugs, chemicals (think glyphosate), sugar and refined carbs. Stress/cortisol can cause intestinal permeability and damage. For sensitive people, gluten from wheat, rye and barley can also cause permeability.

When the tight junctions between the villi begin to break down, the results are what we call Leaky Gut Syndrome.

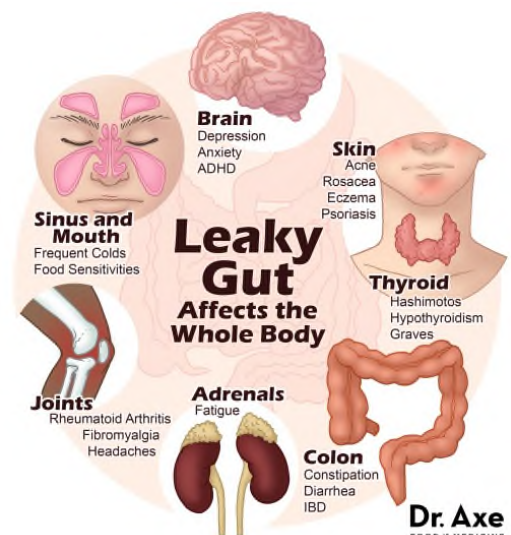


Scanning electron micrograph of small intestine



Many people think “I don’t have trouble pooping. Why would you think I have a leaky gut?”

It’s SO much more than just pooping.



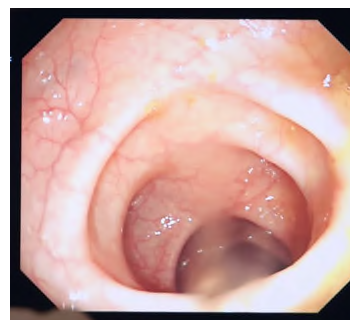
How to Fix Your Small Intestine:

Research shows it's possible to see significant improvement in villi health by

- #1 – Strictly adhering to a gluten free diet, especially if diagnosed as Celiac disease.
- #2 – Avoiding other grains while healing as their proteins are similar to gluten and can cause cross-reactivity ie they mimic gluten resulting in a gluten-type reaction
- #3 – Healing foods include bone broth, apple pectin (sauce), lots of fibrous veggies and some fruit (prebiotics) ie follow an anti-inflammatory diet.
- #4 – Taking supplements like l-glutamine, collagen, probiotics, Omega 3 fats, zinc, and strategic nutrigenomic supplements to upregulate your gut cell function – Cell Activator, Herbal Aloe, Immunity Essentials from Herbalife. In severe cases, try ION Gut Health.
- #5 – Avoiding irritants like alcohol, drugs, chemicals, sugar, refined carbs and stress.

Adapted from gutsybynutrition.com.au/gutsy-by-nutrition-blog/2024/1/12/is-it-even-possible-to-heal-damaged-gut-villi

Large Intestine (Colon): Aside from colon polyps and cancer, the main issue with the colon is constipation or diarrhea. Note the absence of villi. The colon's job is to conserve water and electrolytes and play host to approximately 40 trillion organisms to include bacteria, viruses (?!), protozoa, fungi as well as helminths – flukes, tapeworms and roundworms (!?).



Bristol Stool Chart

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on the surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. Entirely Liquid

How to Fix Your Large Intestine:

Get Your Poop Straight (pun intended). You should poop well at least once a day. Ideally, two or three times.

- #1 – Drink water!
- #2 – Drink Herbal Aloe. Reduces inflammation and normalizes bowel function. Can be helpful for both constipation and diarrhea.
- #3 – Many people are magnesium deficient, which can affect stool consistency, so supplements are helpful.
- #4 – Exercise more, especially walking.
- #5 – Try squatting (eg, Squatty Potty).
- #6 – Add a probiotic – see Simply Probiotic info next page.

#7 – If your gut is healthy, add more fiber. If not healthy, fiber can cause the formation of endotoxin, a lipopoly-saccharide found in the cell wall of Gram-negative bacteria, is a pyrogen which induces inflammation and fever as an immune response in higher organisms. Pyrogens can lead to anaphylactic shock and death of patients.

#8 – Get your thyroid tested, especially if you are a woman over 40. Constipation is one of the classic symptoms of hypothyroidism.

Get the Oxygen Out

Your colon should be a carbon dioxide rich environment. “Healing your gut starts with creating the optimal low-oxygen environment that beneficial, oxygen-intolerant bacteria need to thrive. An essential strategy is elevating carbon dioxide levels in your gut, which is achieved by increasing your carbohydrate intake, particularly easily digestible ones.” (Mercola, Feb 10, 2025)

Repair the Colonic Environment with Sporebiotics

- Sporebiotics contain a *Bacillus* species bacteria, protected in a protein spore coat.
- Because of their spore coat, survive the stomach acid and are unaffected by antibiotics.
- They increase immune tolerance and help repair a damaged intestinal barrier.
- By increasing immune tolerance, food allergies, chemical sensitivities and inflammatory conditions can be dramatically calmed or eliminated.
- Sporebiotics inhibit pathogens allowing other beneficial bacteria to flourish.
- Produce necessary nutrients like short-chain fatty acids (butyrate), vitamins, and antioxidants
- They may also help people with electrosensitivities.

Mercola interview with Dietrich Klinghardt MD PhD see references



Remove Helminths – Parasites

Prescription drugs, such as albendazole, mebendazole, and ivermectin, are the primary treatment for helminths. They target and kill the worms. Red light therapy can also kill parasites.

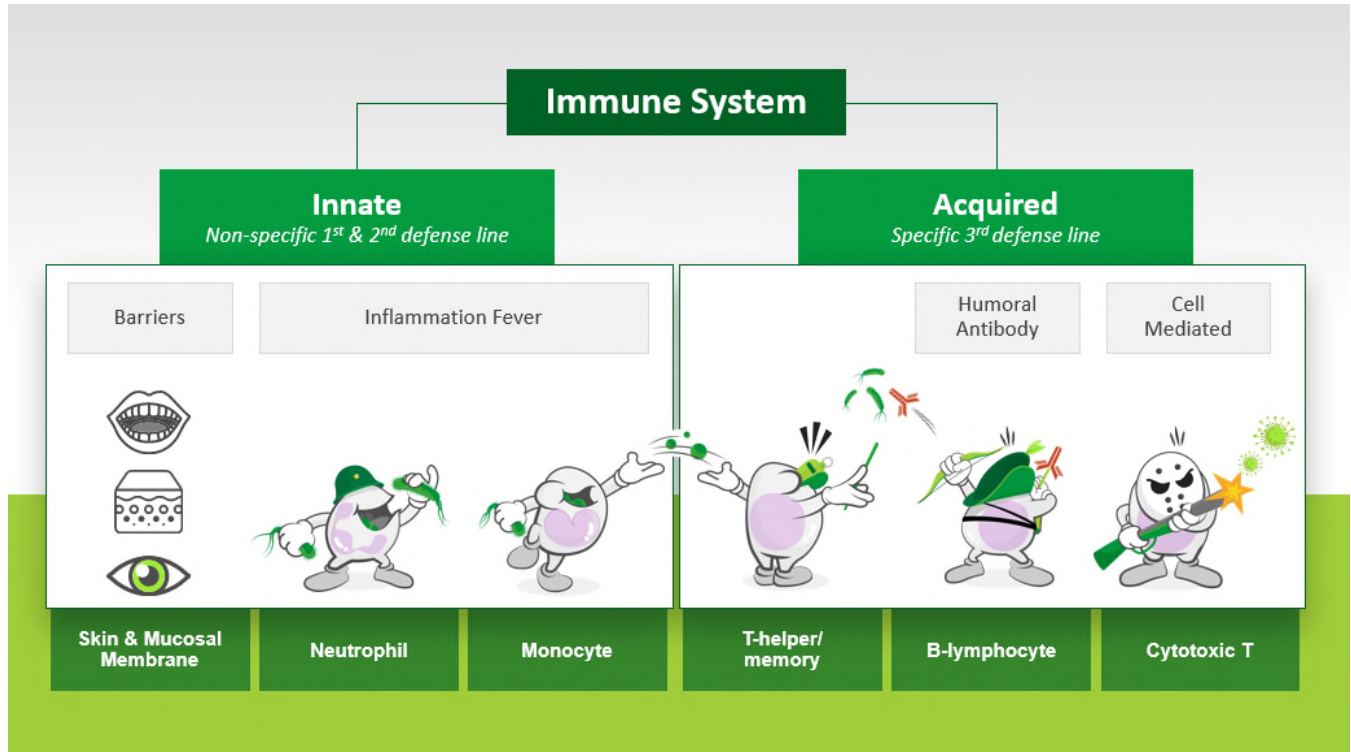
Support Your Immune System with Antioxidants

Supplements to reduce ROS (reactive oxygen species) also known as free radicals (think rust) support your Innate and Acquired Immune System – next ...



Your Immune System Outside of the GI Tract: Innate and Acquired

Simply put, it is a complex network of cells and proteins that defends the body against infection. The immune system is broken into two parts: Innate and Acquired. About 75% of our immune system operates in our colon.



Many thanks to the Gatorade Sports Science Exchange for developing this graphic.

Notice the Barriers – 70 to 80 percent of your immune system is located in these organs!!!

Neutrophils – white blood cells, first to the site of potential danger. They can neutralize invaders.

Monocytes – large white blood cells that move in to clean up a mess, but also hand off information to the Acquired Immune System.

T-helper and B-lymphocytes are the memory banks of our immune system. They also have the ability to fight trouble and clean up messes.

Cytotoxic T cells – also known as Natural Killer Cells! Guess what they do!

How Can We Fix or Maintain a Healthy Immune System?

EPICOR®
presents

GET A STRONG IMMUNE SYSTEM

It's really simple...the stronger your immune system, the better you are able to stay healthy and enjoy every moment with the people you love.

How to get there? Dietary supplements formulated with EpiCor® brand dried fermentate provide the right immune armor for a strong, healthy immune system.

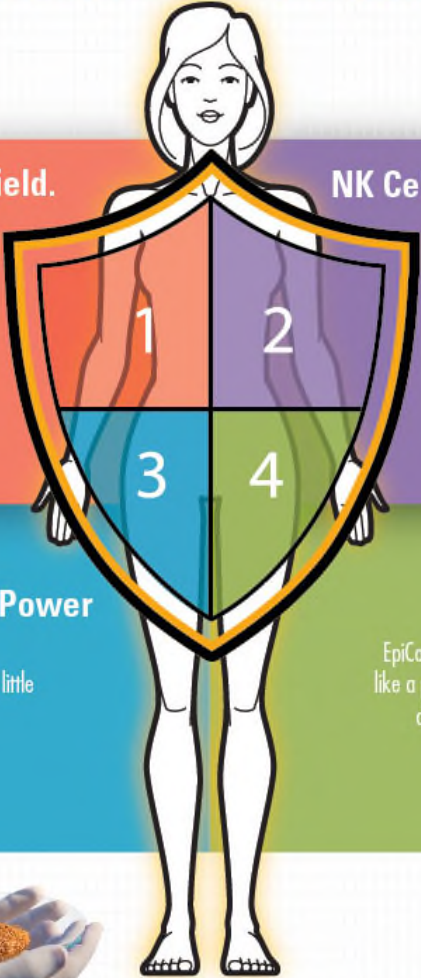
PUT ON YOUR IMMUNE ARMOR WITH EPICOR:

Mucosal Shield.

EpiCor helps increase secretory IgA antibodies, which are important for healthy mucosal immune function.

NK Cell Activation.

EpiCor helps activate Natural Killer (NK) cells in as little as two hours.



Antioxidant Power

EpiCor helps increase antioxidant power in as little as two hours.

Gut Health

EpiCor has been shown to act like a prebiotic in sophisticated digestive system models.



WHAT IS EPICOR?

EpiCor is a groundbreaking immune ingredient with published human research on supporting immune strength. Unlike other immune ingredients that simply boost, EpiCor works on multiple levels to help you live more healthy days. That's important because the immune system is very complex and you want a solution that helps address your everyday immune challenges.

www.epicorimmune.com

Herbalife Nutrition Immunity Essentials

Fast Facts:

- ➔ EpiCor® Acts Like a “Multivitamin” for Your Immune System®
- ➔ EpiCor® supports mucosal defense*
- ➔ Excellent source of zinc, vitamins C and D
- ➔ Made with non-GM ingredients
- ➔ No artificial flavors or sweeteners

What are antioxidants? Molecules that scavenge free radicals from the body cells and prevent or reduce the damage caused by oxidation.

What is a PREbiotic? Plant fibers that act like fertilizers to stimulate the growth of healthy bacteria in the gut.

Nutrition Workshop – Digestive Health and Immunity

Page 8

Revision Date 2/2025

Take Action:

- 1) Add *Aminogen* to fully break down proteins.
- 2) Take *Formula 3 Cell Activator* and *Herbal Aloe Drink* to combat inflammation and promote regeneration of the villi.
- 3) MOVE IT OUT!! Pay attention to the number of bowel movements each day. Try some *Herbal Aloe Drink* and/or *Active Fiber Complex* to counter constipation or diarrhea.
- 4) Try *Simply Probiotic* or *MegaSporeBiotic* to heal the gut and retrain the immune system.
- 5) Support your Acquired Immune System with *Schizandra Plus*, *Rose Guard*, *Best Defense*.
- 6) Incorporate *Immunity Essentials* into your product regimen.

Resources for Further Study:

- A Midwestern Doctor (2024, Aug 18) Stomach Acid Is Critical For Health: Unpacking the Great Acid Blocker Scam. *The Forgotten Side of Medicine*, published on Substack.
- Axe, Josh (2014) <http://draxe.com/4-steps-to-heal-leaky-gut-and-autoimmune-disease/>
- Dr Jockers.com has great graphics and detailed articles on many health issues.
- Georgina, Chanel (2021, Nov 29) Dementia: Common over-the-counter medication linked to '44 percent' increased risk. www.express.co.uk/life-style/health/1528022/dementia-risk-medication-proton-pump-inhibitors
- Klinghardt, Dietrich (2024). articles.mercola.com/sites/articles/archive/2023/12/17/sporebiotics.aspx
- Mercola, Joseph (2025, Feb 10). *Butyrate – A Tiny Molecule with Big Potential for Health and Healing*
- Mercola, Joseph (2024, Aug 21) Acid Reflux Medications Linked to Higher Migraine Risk. articles.mercola.com/sites/articles/archive/2024/08/21/acid-reflux-medications-migraine-risk.aspx
- Mercola, Joseph (2023, Sept 23). Why You Should Never Take Antacids for Digestive Reflux. articles.mercola.com/sites/articles/archive/2023/09/27/never-take-antacids-for-digestive-reflux.aspx
- Mercola, Joseph (2014). articles.mercola.com/sites/articles/archive/2009/04/11/natural-constipation-relief-strategies-you-should-know-about.aspx
- Mercola, Joseph (2013). articles.mercola.com/sites/articles/archive/2013/12/09/microbiota-forgotten-organ.aspx
- Moritz, Andreas (2017, Eneri-Chi Publishing). *The Amazing Liver and Gallbladder Flush*.
- Mutzel, Mike (2014, Wilsonville Media) *Belly Fat Effect: The Real Secret About How Your Diet, Intestinal Health and Gut Bacteria Help You Burn Fat*.
- Walsh, Neil (October, 2019) Gatorade Sports Science Exchange. Nutrition and Athlete Immune Health: A New Perspective. <https://www.gssiweb.org/sports-science-exchange/article/nutrition-and-athlete-immune-health-a-new-perspective>
- Wright, Jonathan (2009, Prxaktikos Books) *Your Stomach*. http://arbl.cvmb.colostate.edu/hbooks/pathphys/digestion/basics/gi_immune.html