Heartburn, Excess Gas, Acid Reflux, Irritable Bowel?
Arthritis, Chronic Pain, Anxiety, Bad Skin?

GO WITH YOUR GUT

The 5-Part Plan For Healing Gastrointestinal Issues
& Preventing The Diseases That Come With Them

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MIKE SHERIDAN

contact@leanlivinginc.com

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INTRODUCTION

"All Disease Begins In The Gut." – Hippocrates

It's common to overlook the health of our gastrointestinal system, even though it contains 10 times more health-determining bacteria than the rest of our body. Protecting us from infection, supporting our metabolism, and promoting healthy digestion and elimination.

There are over 100 trillion organisms in the gut, that make up ¾ of our immune system.

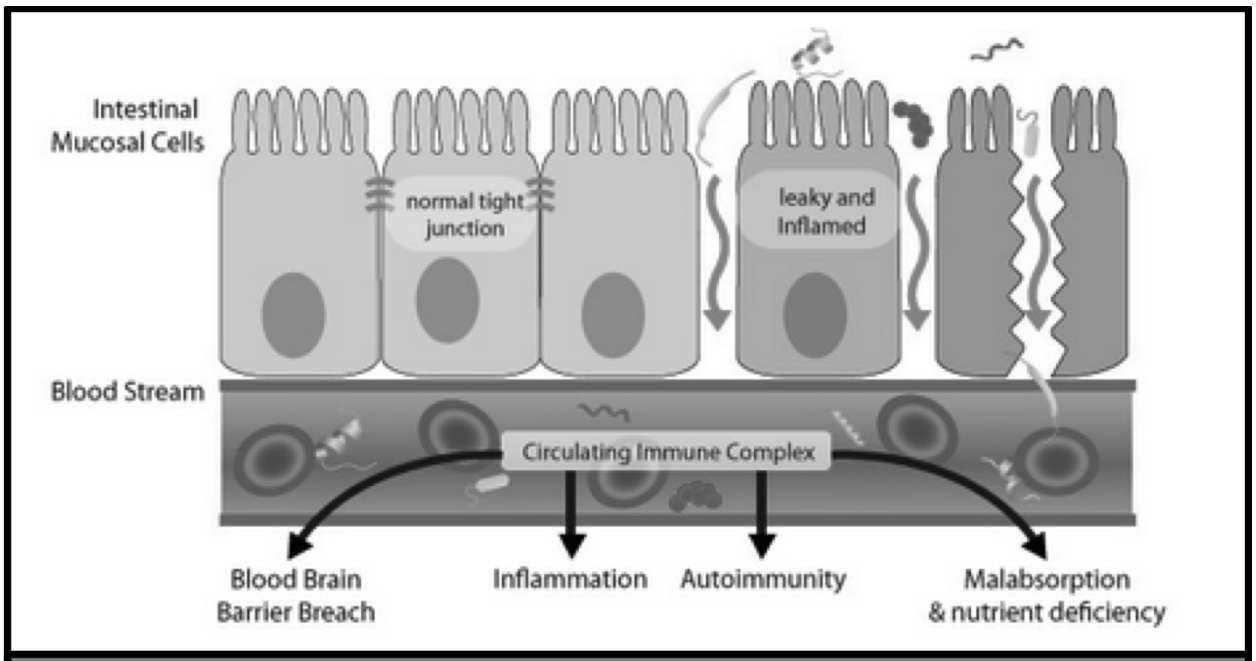
Unfortunately, the majority of the population has inadequate beneficial (good) bacteria, excessive damaging (bad) bacteria, and a lack of bacterial diversity. Largely because of a poor diet, but also because of:

- *Over-Medicating* – with antibiotics, birth control, NSAID's, anti-depressants, antacids, etc
- *Chronic Stress* – which can alter digestive secretion, gut permeability, blood flow, sensitivity, and even change bacterial composition
- *Exposure to Environmental Toxins* – notably pesticides, PCBs, herbicides, arsenic, BPA
- *Inadequate Bacterial Acquisition at Birth*
  - C-section birth
  - Parents gut health and mothers diet during pregnancy
  - Infants transition from breast milk to adult food
- *Current Health & Body Composition* – Poor overall disease status

And this is ultimately leading to unbalanced gut flora (dysbiosis), and an increased susceptibility to intestinal permeability (leaky gut). Since the same things that destroy our gut flora, can compromise our gut barrier; while the fungal infections and bad bacteria that prosper instead, can do the same.

The scary part being, that for some this presents itself as something that seems relatively harmless like bloating, heartburn, IBS, and excess gas, while for the not-so-lucky ones it can mean something more serious like a chronic inflammatory condition of the skin, joints, bowel, or brain and nervous system.

This is because, although the gut is inside our body, it's actually an external organ, that's main role is to prevent harmful substances from entering our body. So when that barrier (that's supposed to separate us from the external environment) is compromised, large foreign molecules are able to pass through to the bloodstream, and serious damage ensues. As the body launches an immune response to protect itself, but ends up damaging it's own organs and tissues. With the latest research clearly showing that a leaky gut is connected to 100's of untreatable (and often unexplainable) medical conditions.



- Eczema
- Psoriasis
- Arthritis
- Irritable Bowel Syndrome (IBS)
- Chronic Fatigue Syndrome
- Fibromyalgia
- Asthma
- IBD (Chron's, ulcerative colitis)
- Chronic Kidney Disease
- Depression
- ADHD/Tourette's
- Autism Schizophrenia
- Multiple Sclerosis
- Lupus
- Type 1 Diabetes
- Parkinson's

Meaning, your best chance of finally getting it to go away, or at least getting control of it, is repairing the cause (your gut), not treating the symptom (your condition).

Unfortunately, this is usually the part where people get very angry or stop listening. Because if this information is true, which the latest research suggests it is, the underlying message is that your sub-optimal health, or critical illness is your fault. Since the damaged gut is a result of your behaviour; whether that's choosing to medicate, choosing to eat certain foods, or letting yourself get exposed to harmful things.

But here's the thing – it's not your fault!

Because all you did was listen to *the 'experts'* (doctors, government, etc) and select the options you were given; the same options everyone else has been given, and the same choices everyone else has made. But unfortunately you (or those you love) may have a little less genetic protection on your side. Or perhaps you didn't have as strong a shot from the outset (ex: vaginal birth instead of c-section, no antibiotic exposure as a child, etc).

You're not a bad person, you're not a bad parent, and the fact that you're still reading this probably means you're a good one.

What this should serve as, is hope. Because it means you have the opportunity to upgrade your health and performance. And for those dealing with (or helping a loved one deal with) an unfortunate gastrointestinal problem (Chron's, Colitis, celiac, etc), heartbreaking mental disorder (ADHD, depression, autism) or devastating neurological condition (epilepsy, Parkinson's, multiple sclerosis), potentially turn your life around!

So, what's the harm in trying?

There's obviously no guarantee, but the evidence leads us to believe that these problems originate in the gut, and healing the gut (with *Live It NOT Diet!* and the protocol below) can lead to dramatic improvements; whether we're talking about allergies and skin conditions or mental and physical performance.

And sure, not every disease is the result of a leaky gut, and not everyone will develop a leaky gut. But with the evidence we have to-date (over 10,000+ papers) proving that this 100-year old hypothesis is no longer quackery, there's no reason why you shouldn't be doing everything you can to improve the integrity of your gut lining, encourage a positive bacterial environment, and optimize the overall function of your gastrointestinal system (digestion, absorption, elimination, etc) going forward.

Part 1

Avoid Antibiotics or Counteract With Probiotics

Gone are the days of believing that our gut microbiota remains stable once it's established as an infant. As research clearly shows dramatic changes after drug treatment, and considerable differences from dietary input. Meaning, our day-to-day behaviour can cause long-term alterations to our gut microbiota that positively or negatively affect our health and body composition. Whether we're a growing-child or a fully-developed adult!

The microbiota is a tenant in our gut - with 100-150 times more genes than the human genome – that has the ability to turn our genes on or off based on what we feed it, and how we treat it.

Or simply put, we should be doing our best to keep this creature (our neighbour) happy. Since the healthier it is, the healthier we are; whether we're talking about immune protection and disease prevention, obesity and insulin resistance, or physical and cognitive performance.

Unfortunately, as discussed in the introduction, most of us *haven't* been taking care of our microbiota; especially over the last 50 years. As we've disrupted it's home, cut off it's food supply, and attacked it directly with antibiotics, crappy foods, and chronic stress. Leaving behind a gastrointestinal system that's overthrown by unfriendly bacteria (dysbiosis), chronically exposed to inflammation, and ready to break – if it hasn't already.

Arguably, one of the biggest contributors to this destruction is the introduction and rampant use of antibiotics. Since one of these treatments alone can wipe out beneficial gut bugs for years to come – and potentially never restored.

A study from 2008 in the journal PLoS Biology tested a single 7-day course of antibiotics, and saw no signs of the bacteria that was lost for over 2 years!

Without beneficial bacteria (healthy flora) in our gut we're more susceptible to damage and infection. As we lose our natural protection from 'bad' bacteria, that start setting up shop (colonizing) in our gastrointestinal tract.

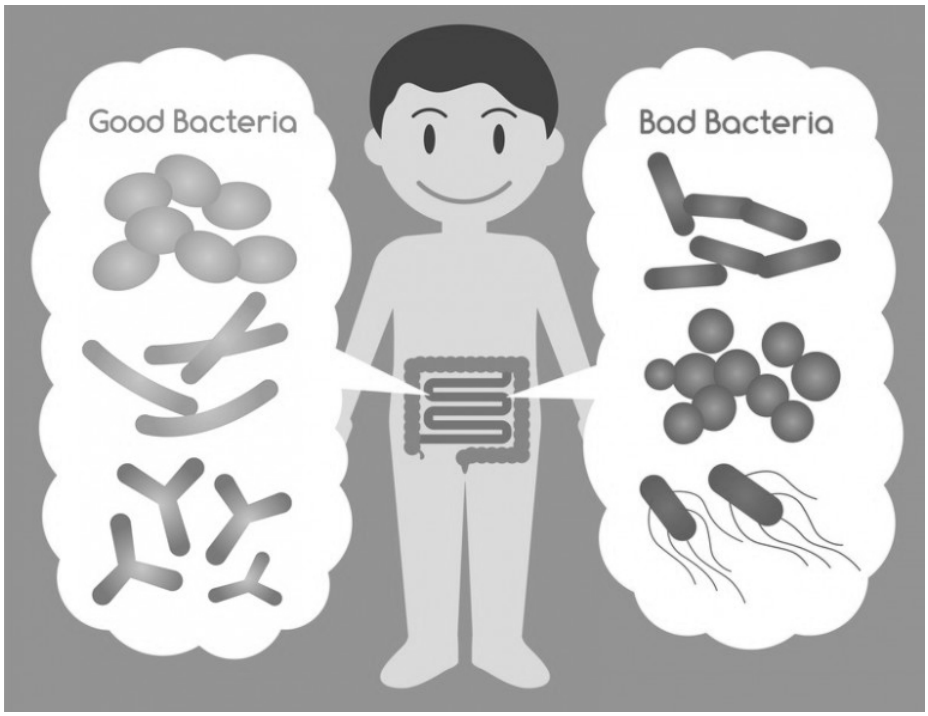
For instance:

Research has demonstrated that individuals with Irritable Bowel Disease (Chron's, colitis) have lower levels of protective bacteria (bifidobacteria, lactobacillus) and have found similar imbalances with other (non-gut-related) auto-immune conditions.

Now, whether the poor gut flora or infection is causing the leaky gut that's driving the auto-immune condition is debatable. But we do know that a bacterial balance is necessary for a proper immune response, and antibiotics strip away the healthy gut flora that would have otherwise provided an extra layer of support.

RESTORE YOUR FLORA

Not everyone has holes in their gut, or the auto-immune conditions that develop as a result, but everyone has the potential to develop them; and probably has the unfavorable ratio of good-to-bad bacteria that precedes it. Especially if they're eating (or had been eating) anything close to a diet that resembles the Standard American Diet, they've done a round or 2 of antibiotics, and they've been exposed to a considerable dose of environmental toxins, pharmaceutical drugs, and stress.



STEP 1 – Avoid Antibiotics When Possible

In some cases, antibiotics are absolutely necessary; so we can't avoid them entirely. But it does mean looking at the risk-to-benefit ratio of taking them, and counteracting the negative effects when they are.

Antibiotics compromise gastrointestinal health, so healing the gut after (and during) treatment is critical.

Obviously, no antibiotics would be ideal, and it's important to weigh your options when the opportunity presents itself. But sometimes it's required, which makes damage control a necessity.

STEP 2 – Take Probiotics During & After Treatment

Interestingly, supplementing a probiotic during antibiotic treatment seems to be beneficial. Which may sound goofy (since antibiotics kill probiotics), but research has shown less side effects and a lower risk of infection. With one study from 2005 in the journal of International Immunopharmacology showing the superiority of a probiotic supplement 'during and after' antibiotic treatment, compared to 'after' only.

STEP 3 – Compliment With Gut-Feeding *PRE*-biotics

This is the step that people forget, as they don't realize that the probiotics they're supplementing need something to eat to stick around. So, make sure your *Live It NOT Diet!* plan includes plenty of gut-feeding vegetable matter, and plenty of onions and garlic. The best fruits are the ones with a high amount of polyphenols and soluble fiber, and a low glycemic response – like berries.

ONGOING GUT SUPPORT

A variety of fermented (or cultured) foods are consumed across the globe as a dietary staple. Not only because they're an excellent way to increase the shelf-life of certain foods, but because they have tremendous health benefits.

- Improving digestion and elimination
- Enhancing immune function
- Increasing nutrition absorption
- Preventing 'bad' bacterial overgrowth
- Lowering inflammation
- Improving mood and cognitive function
- Treating gastrointestinal conditions
- Reducing body fat

Unfortunately, it's a different story in North America. Where personal appliances, grocery stores (on every corner), and preservative packed foods have removed the need for fermentation. While, at the same time, making the gut-supporting, disease-preventing nutrition knowledge disappear.

Realistically, we should be consuming fermented foods on a regular basis; instead of supplementing probiotics. As once our round (or two) of restoring our flora is over, these foods provide ongoing support from a natural source, with a higher bacterial count, and more bacterial diversity. Helping you work towards a level of bacterial variation that was typical of the disease-free hunter-gatherers that came before us.

The easiest way to introduce fermented foods, is to start with coleslaw or vegetables that you're familiar with (carrots, cucumbers, peppers), and then moving on to a more foreign addition like kimchi or sauerkraut (which may not be 'foreign' to you). Fermented dairy products (yogurt, kefir, sour cream) can also be great, but not when they're from a grocery store. As this usually means 'pasteurized' dairy, and lots of insulin spiking sugar additives.

For those with access to raw milk (or grass-fed at the very least), making your own kefir at home is encouraged. Since it provides way more bacteria than you'd ever find in a probiotic supplement (>100 times), and it's way more affordable. With kefir grains being cheaper than probiotics from the outset, and providing the ability to reuse them several times before you need to purchase more.

[Note: They're called kefir grains, but they're not a grain like wheat, oats, and barley]

Essentially, you purchase a kefir starter granule, and leave it in some raw milk for approximately 12-24 hours. Once it's transitioned into kefir, you store it in the fridge and consume it as needed – a few tablespoons before bed (like your probiotic supplement) seems to do the trick.

Raw yogurt and milk can also be extremely beneficial. Although to avoid any negative impact on your physique, they're best consumed after exercise, when whey and insulin is more friend than foe.

Fermented vegetables can be consumed whenever you like (ex: kimchi, sauerkraut, etc), but starting with a small serving at dinner a few times per week is recommended at first. Mainly to get used to the taste, but also because too much at once can be quite potent.

Vegetable Fermentation Directions:

1. Choose your vegetable(s) – onions are overpowering; cabbage is a great base
2. Peel vegetables with a skin and place in mason jar
3. Add herbs and spices (optional) – garlic, ginger, basil, etc
4. Mix water or celery juice (preferred) with a starter culture - this is the brine
5. Pour brine into the mason jars to cover the vegetables completely
6. Put the lid on loosely and store in a relatively warm (approx. 72 degrees) location
7. Check on your mix after 4-7 days, and move to the refrigerator when you're happy with the flavor

To save money, you can use salt and water instead of a 'starter culture,' but the process takes a lot longer and doesn't provide as much bacterial diversity.

Part 2

Stop Taking Antacids & Restore Stomach Acid

Medical doctors and TV commercials may have you believing otherwise, but the underlying problem with heartburn or reflux is too little acid, not too much. As the malabsorption of foods increases intra-abdominal pressure that bloats the stomach, pushes the contents of the stomach up, and drives whatever acid and digestive juices that are present there into the esophagus.

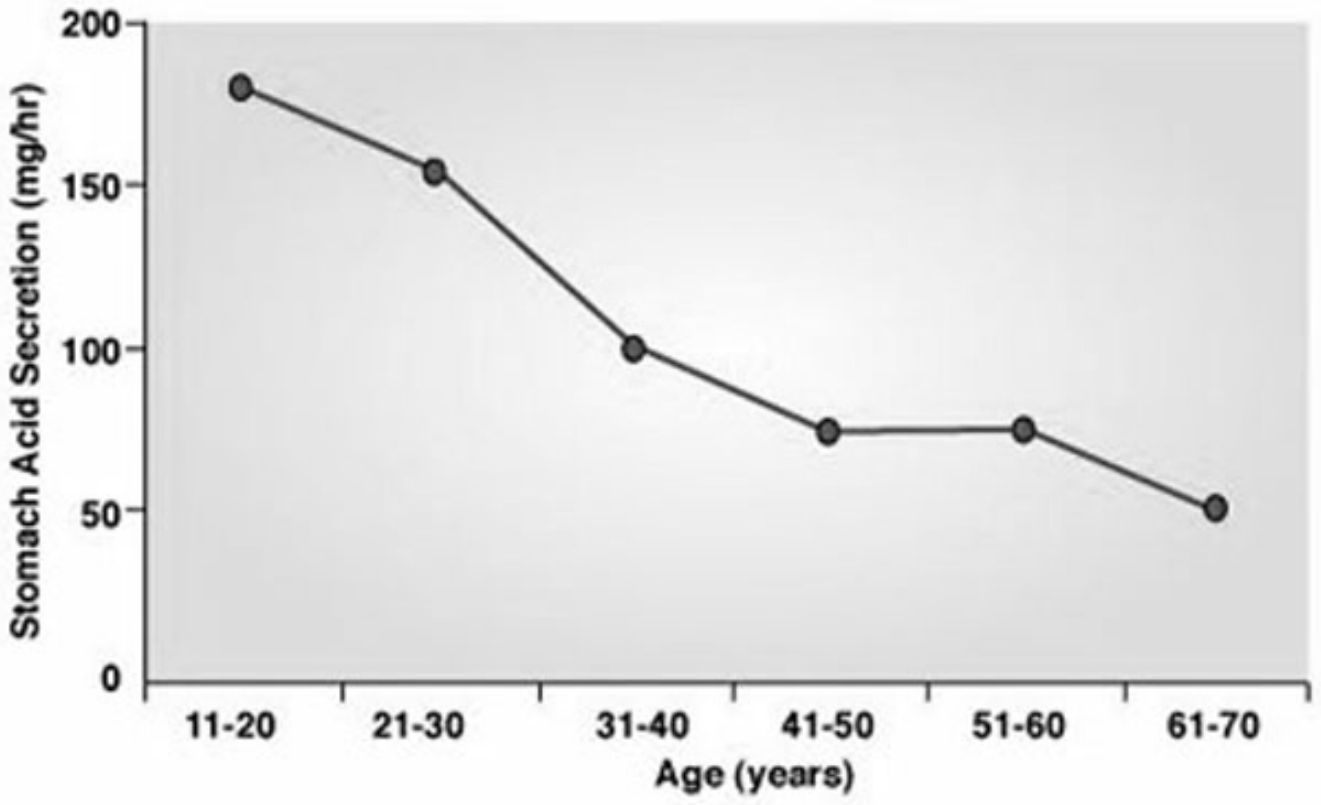


Fig. 1. Contrary to popular belief, stomach acid secretions drop with advancing age. This graph shows average decline in stomach acid secretion in humans between age 20 to age 80. (From "*Why Stomach Acid is Good For You.*")

Or put another way, by taking an antacid to lower stomach acid (which is already declining with age), we're only making things worse. And not just because of our hampered ability to break down and absorb the nutrients in our food, but because low stomach acid permits bad bacterial overgrowth - which may actually be what's driving the stomach acid decline in the first place.

Acid-suppressing drugs are hampering our ability to digest food properly (causing bacterial overgrowth), and decreasing the acid that suppresses bacterial overgrowth.

For instance, there's evidence to suggest that 50% of people worldwide are infected by Helicobacter pylori (H. pylori) - a bacteria that burrows itself in the mucus lining of the stomach and releases an enzyme (called urease) that reduces stomach acid (so it can survive). Yet, over 80% of those infected never exhibit any noticeable symptoms.

The disturbing part being, that the infection occurs when stomach acid is low (i.e. taking antacids), the bacteria is fueled by poorly digested starches (i.e. the western diet –fructose, wheat), and the infection rate increases with age (by 1% for every year of life). Meaning the carb-loading, antacid-popping, baby-boomers are the perfect candidates. And once their infected, the slippery slope of the acid-lowering infection, heartburn-like symptoms, and acid-lowering medication only gets worse.

One study from 1990 found that long-term use of the acid-suppressing drug Prilosec, reduced HCL secretion to zero!

But that being said, whether you have H. pylori or not, and whether you're a baby boomer or not, you need to assess your level of stomach acid and more than likely take action to maximize it. Given that the combination of dietary and lifestyle factors that have become common for North American's all contribute to an underactive stomach and poor digestion on their own:

- Chronic stress
- Excessive antibiotic use
- Nutrient deficient food (as enzyme production requires specific nutrients, or "co-enzymes," like animal-derived B12 and iron)

And given that failure to do so could result in inadequate enzyme production (protein, lipase, etc) and food breakdown in general. Meaning less nutrient absorption, inflammation of the gut lining (gastritis), and an increased susceptibility to infection - from H. pylori and other parasites (Cryptosporidium, Blastocysistis hominis, etc), or bad bacteria overgrowth (Salmonella, E. coli, C. albicans, etc) and SIBO in general.

A study from 2002 determined that 71% of patients with GERD (Gastroesophageal Reflux Disease) also tested positive for IBS.

THE DIGESTION TEST

The following test is worthwhile for gauging where you're stomach acid is at. The goods new being, that it costs next to nothing, and you can administer it yourself. And the better news being, that if you do find out you're on the low side, you can start taking action to improve your absorption of essential nutrients (B12, iron, etc), and reduce your risk of future gastrointestinal issues (or the unfortunate conditions that accompany them).

STEP 1 – Purchase a Betaine HCL Supplement

Make sure it contains Pepsin or acid-stable protease, because, a stomach not producing enough HCL, is usually not producing enough protein digesting enzymes either. Here's an example of the contents in one I'd recommend from *Designs For Health*:

Supplement Facts

Serving Size 1 capsule

Amount Per Serving		% Daily Value
Betaine HCl	200 mg	*
GastroENZ™ Proprietary Blend	180 mg	*
Ox Bile Extract, Protease (DPPIV), Amylase, Pepsin, Protease SP, Glucoamylase, Lactase, Acid Protease, Invertase, Lipase		

* Daily Value not established.

STEP 2 – Memorize These 3 *Critical* Dosage Points

- The test is only performed at a meal with a significant amount of protein (usually lunch and dinner)
- Each advancement in capsules (ex: 1 to 2) happens at next main meal (not the same one!)
- Stop progressing to more caps when you feel a burn OR reach 6 capsules

STEP 3 – Follow The 6-Step HCL Protocol

1. Eat half of the protein in your meal first (ex: half of a chicken breast)

2. Take capsule(s), starting with 1

3. Eat rest of protein + remainder of meal

4. If you feel burn (like heartburn, warm sensation) within 10-15 minutes of taking capsules, STOP THE TEST.

5. If you don't feel burn within 10-15 minutes repeat steps 1-4 AT YOUR NEXT BIG MEAL (LUNCH OR DINNER), adding 1 more capsule (up to a maximum of 6)

6. Once you've found the proper dosage for you (1 cap less than when you felt the burn). Stick with that dosage at main meals until you get the burn. Then lower dosage again by 1 cap and continue supplementing at that dosage.

Unfortunately, there's usually some confusion with this. So, here's an example scenario:

- Tuesday Dinner – Take 1 capsule. No burn.
- Wednesday Lunch –Take 2 capsules. No burn.
- Wednesday Dinner – Take 3 capsules. No burn.
- Thursday Lunch – Take 4 capsules. Feel burn.
- Thursday Dinner – Dose 3 capsules. No burn
- Friday Lunch – Dose 3 capsules. No burn

….continue dosing 3 capsules at main 'protein-containing' meals

- Lunch 2 weeks later – Dose 3 capsules. Feel burn.
- Dinner – Dose 2 capsules. No burn

…continue dosing 2 capsules at main 'protein-containing' meals

- Etc, etc

Once you feel a burn at 1 capsule, you no longer have to take the HCL capsules; as it means we've kick-started your acid production. Although, you may want to try the test again in the future if you start experiencing any of the symptoms listed above. Or, may want to take the odd capsule after a very large or heavy meal (all-you-can-eat sushi on a Feast Day perhaps!?).

An important point to keep in mind, is that this isn't an overnight process. With most middle-aged individuals taking anywhere from 3-6 months (with consistent HCL supplementation), and a small minority having to supplement for years without ever making any progress (because of over-medicating in the past).

> ***Research suggests that 30% of women over 60 have inadequate gastric secretion, while 40% of women over 80 have no gastric secretion at all.***

If that's the case for you (no improvement after 6 months), you can either come to the grips with the fact that HCL supplementation may be required for the rest of your life, and perhaps switch to a more concentrated Betaine HCL supplement (so you're not taking 6 capsules), OR try step 4.

STEP 4 – Consider Herbal Supplement to Eradicate H. Pylori (like this one)

But whatever you decide, it's essential that you create an environment where you have enough stomach acid to digest your food, absorb the nutrients in it, and prevent infection. While incorporating some diet- and lifestyle-related best practices, so you're primed for a promising digestive future.

ONGOING SUPPORT – VINEGAR

Simply put, vinegar is to digestion, as fermented foods are to gut flora - *The 'real food' supplement that came well before pills and capsules.*

Initially, vinegar was used as a food preservative, until it's long-list of medicinal benefits were discovered. With some cultures (like the Chinese) using it as a sanitizer over 1000 years ago, and others using it as a go-to for treating wounds and ailments.

Sadly, we've lost sight of many of these traditional uses; especially when it comes to improving the strength and health of our gastrointestinal system. With the majority of us opting to visit the local pharmacy to choose from 1 of 10 digestive aids, or make an appointment with their over-prescribing doctor to grab another round of reflux medication.

As discussed, antacids are a counterproductive approach to treating indigestion, and antibiotics may kill pathogens, but they also kill "healthy" gut bugs. Leaving us prone to 'bad' bacterial overgrowth, by inhibiting the digestive juices needed to properly break down food, and destroying the beneficial flora that's supposed to prevent it.

Vinegar, on the other hand, kills 'harmful' bacteria (like E. coli and Staphylococcus) and helps create the acidic environment we need to properly digest our food. Ensuring we can access the essential nutrients (in big hunks of meat), and preventing stalls that can lead to gastrointestinal discomfort and an increased risk of infection and overgrowth.

"Vinegar has a positive impact on gut health because it's anti-microbial. It helps to break down the bad bacteria and feed the good."

Interestingly, vinegar also has a long list of other benefits – including being anti-glycemic (lowers the blood sugar response after meals), and supplying a hefty dose of health-boosting antioxidants (catechin, chlorogenic, epicatechin, gallic, and caffeic acids, etc) – but to stay on topic, we'll just say that it should be consumed daily for digestion. And not just the minimal amounts you get from salad dressings, pickled foods, and condiments (ketchup, mustard, hot sauce, etc).

Similar to fermented foods, you should be incorporating a daily dose of vinegar into your routine. With a little swig of Apple Cider Vinegar after non-vinegar containing meals being the easiest way to accomplish this. Starting with a small sip after your biggest meal of the day (usually dinner) and adding it to other meals as you see fit.

I'm a big fan of the Bragg's brand, because it's 'raw, unfiltered, organic, and unpasteurized' and comes in a large 1L bottle.

Part 3

Get To Know SIBO & Consider An Intervention

Aside from reducing inflammation, indigestion, and irritation in the gut, one of the reasons carbohydrate restriction alone gives people so much digestive relief, is because most of the bad bacteria that overgrows in the gastrointestinal tract thrives on glucose. Meaning, bacteria that may be present has nothing to eat, and goes dormant.

The bad news is, in many cases that's not enough for the bacteria to go away for good. Leaving you with bad bugs sitting in your gut, and waiting to feed. Whether you're adding beneficial bacteria and stomach acid to try and wipe them out, or not.

And again, this isn't to say that everyone has an overgrowth of damaging flora in their gut that's going to damage their gut lining. But it is to say that these issues are more common now than ever, and it's a direct result of the foods most of us have been eating, stressful lifestyle most of us are following, environmental toxins most of us are exposed to, and medications most of us have been advised to take.

Fortunately, when it's overgrowth from a specific pathogen, or strain of bacteria, the HCL and probiotics protocols mentioned above can often take care of it. Unfortunately, when it's Small Intestinal Bacterial Overgrowth, or SIBO, they can't. Since SIBO isn't one specific type of bad bacteria causing a problem, as much as it's too much of the wrong types of bacteria causing a problem. With good and bad bacteria from your large intestine living in your small intestine, feeding on undigested food particles (mostly starches), producing excessive hydrogen (or methane) gas, and leading to a chronically inflamed gut that's susceptible to becoming permeable.

Although, this is provided you don't pay attention to the early warning signs. Which tend to revolve around IBS and digestive distress symptoms like:

- Bloated or cramps after eating
- Excessive burping and gas
- Bad breath
- Low hunger or energy
- Constipation or undigested food in stool
- Diarrhea or loose stools
- Heartburn or Reflux
- Chronic nutrient deficiencies (despite good nutrition)

But could also present themselves as a chronic conditions related to the skin (acne, rosacea, psoriasis, eczema), brain (depression, anxiety, brain fog, etc), and joints (arthritis, fibromyalgia, etc). Since the gastrointestinal system is directly connected to these areas (gut-skin, gut-brain, and gut-joint axis), and an inflamed, permeable gut is typically seen in individuals with these conditions.

A review paper from 2007 in the journal Gastroenterology & Hepatology suggests that SIBO affects 6-15% of otherwise healthy (asymptomatic) individuals, and 80% of those suffering from irritable bowel syndrome.

Thus, if you're still exhibiting any of these symptoms after implementing the *Live It NOT Diet!* principles and Part 1 and Part 2 of this Gut Healing Protocol, you'll want to take a look at the SIBO intervention below. Especially if the symptoms flare-up after higher-carbohydrate, starch-heavy meals.

THE SIBO INTERVENTION

Before getting into a serious intervention, it's essential that you exhaust all of gut-supporting, digestion-enhancing points already mentioned. In addition to following the nutrition and lifestyle plan laid out in *Live It NOT Diet!*.

Once you've established what would be a considered a solid baseline of health, and you're confident that your current eating habits are as good as they can be, give yourself an honest assessment (or have a professional do it) and decide if the intervention is necessary.

STEP 1 – Try 1 Round of Caprylic Acid

There's the potential that your suspected SIBO is the result of a yeast or fungus overgrowth (like candida), or specific pathogen (like Streptococcus and E. coli), not an overgrowth in your small intestine. So a round of caprylic acid is recommended to rule these out, and potentially fix your issues, without having to resort to (or spend the money on) something more invasive.

Interestingly, caprylic acid is one of the main components in coconut oil that's responsible for it's antibacterial, antiviral, antifungal and anti-inflammatory properties. The difference being, a caprylic acid supplement (like this one from Biotics) provides a more concentrated dose.

Start with a 500mg capsule once per day (in capsule form) and progress yourself 500mg every 3-4 days until you reach 2000mg. The capsules are best taken spread throughout the day on an empty stomach, or 30-60min before meals.

STEP 2 – Get Tested For '*Both Types*' of SIBO

As mentioned earlier, SIBO creates excessive gas by fermenting carbohydrates. And this gas can be hydrogen, methane, or both, depending on the bacterial composition. So, it's essential that you go beyond the standard hydrogen testing; especially if it comes back negative.

Traditional SIBO breath tests only look for excessive hydrogen gas, even though anywhere from 35%-75% of those with SIBO are excessive methane producers.

Basically, a methane producing SIBO (associated with constipation) has an overgrowth of archaea – which feeds on the hydrogen and produces a methane byproduct. While non-archaea SIBO, or your standard hydrogen-producing SIBO (associated with diarrhea), doesn't. Although, keep in mind that it's also possible to see both.

Breath tests can be taken at home, or at a lab (recommended). Which usually requires 12 hours of fasting, and no fermentable foods for 2-3 days leading up to it. Look for the lactulose test instead of the glucose test - as this paints a better picture of the entire small intestine (not just the first few feet where glucose is absorbed) – and the 3-hour breath test instead of the 60-min one.

STEP 3 – Do a Herbal Intervention (if Test is Positive)

If you can believe it, the current treatment for SIBO is antibiotics. Even though, as discussed earlier, they wipe out just as much good bacteria as bad, and tend to result in SIBO resurfacing in the future. Largely because of good bacteria (probiotics) to provide ongoing protection, but also because of antibiotic resistance. Which is when bacteria outsmart the medication previously used to treat them, through natural adaptation, genetic mutation, or acquisition (from other bacteria).

The effectiveness of antibiotics against SIBO can vary between 40 and 90%, but that's before looking at the fact that 50% of all patients have a recurrence within one year.

Fortunately, this doesn't happen with the herbal options – as they include an enormous number of individual compounds the bacteria can't develop a resistance to - and new evidence (2014) suggests that they can be more effective at wiping out SIBO than antibiotics.

For instance, Rifaximin is the most commonly prescribed antibiotic for SIBO. Yet, a recent paper in the journal Global Advances in Health and Medicine showed that 2 herbal therapies (from nutraceutical companies – Biotics & Metagenics) were 12% more effective (46% vs 34%) at normalizing breath hydrogen tests in patients with SIBO.

The first herbal therapy, (and the one I recommend) was from Biotics - 2 capsules, twice daily of Dysbiocide & FC Cidal for 4 weeks. And the second, that was equally effective, from Metagenics – Candibactin-AR & Candibactin-BR at the same dosage – is also an option.

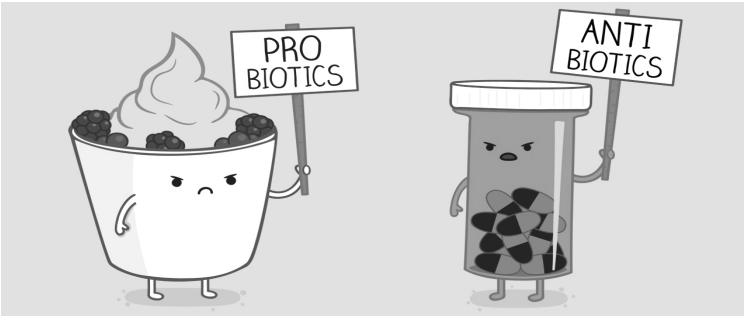
STEP 4 – Test Again & Try a New Herbal (if Necessary)

Your best to consult with a Naturopathic Doctor, or Alternative Medicine Practitioner if the first round of SIBO treatment is unsuccessful. Since they will be able to provide more insight into herbal therapies that may work better in your situation.

STEP 5 – Test Again & Try Antibiotic (as Last Resort)

Fortunately, the antibiotics typically prescribed for SIBO – Rifaximin (for hydroge-type) and Neomycin (for methane-dominant) – are designed to stay in and kill bacteria in the intestine, not get absorbed into the bloodstream. Unfortunately, the 10-14 days most doctors prescribe them for aren't enough to cure the SIBO, and they generally add more antibiotics on top of the original, or a different more invasive one (like Metronidazole), if the first round is unsuccessful.

Put another way, going the antibiotic isn't favorable. But provided you've exhausted all of your other options, you don't really have a choice. And as discussed in Part 1, you can counteract a lot of the damage by committing to probiotic supplementation during and immediately after the treatment.



ONGOING SUPPORT – COCONUT OIL + HERBS

Once you've re-established your healthy gut flora, brought your stomach acid back up to a reasonable level, and removed any unwanted bacteria from your gastrointestinal tract, the only thing left to do is maintain it. And other than the fermented foods and vinegar mentioned already, the best way to do that is with a regular intake of coconut oil and some specific herbs and spices. Since they effectively disinfect the gut, and create an environment where the bad bacteria won't want to live.

Fortunately, we won't go through all of the potential gut-boosting herbs and spices, or the long-list of side benefits that go with each one. However, we will touch on 10 of the biggest players, and give a brief rundown on what you can expect.

Interestingly, many of the herbs and spices on the list (like garlic, thyme, and ginger) are found in the herbal therapies used to treat SIBO.

1. *Thyme* – often used in tea format to treat everything from athletes foot to yeast infections

2. *Oregano* – has proven just as effective in killing E.Coli and staph as penicillin

3. *Basil* - directly disarms a long list of infections (including listeria) with it's various volatile oils (estragole, myrcene cineole, eugenol, limonene, etc)

4. *Garlic* – keeps things balanced in your gut, by killing yeast and pathogenic bacteria, and feeding the beneficial microbes that help keep us lean and healthy

5. *Mint* – relaxes the gut muscles, stimulates enzyme production, and kills bad bacteria overgrowth

6. *Ginger* – known for soothing or calming the muscles of the gastrointestinal system to support healthy digestion and elimination

7. *Cloves* – encourage the body to secrete hydrochloric acid (HCL), and supplies a powerful shot of antimicrobial, antifungal, and antiviral oil

8. *Tarragon* – improves digestion by stimulating enzyme production, relaxing the gastrointestinal muscles, and going to work on any bacterial infections

9. *Cardamom* – regarded as one of the top spices for aiding digestion, and it's powerful oil kills pathogenic bacteria (*Streptococcus mutans* and *Candida albicans)*

10. *Fennel seeds* – provide relief to those with a stressed-out, irritated gastrointestinal tract, and protects against bacterial overgrowth and infection.

A study from 2007 in the journal Digestive and Liver Disease, had more than 75% of the 57 participants experience significant relief from their irritable bowel syndrome symptoms (abdominal bloating and pain, excess gas, diarrhoea, constipation, etc) after 4 weeks of supplemental peppermint oil.

As discussed earlier, coconut oil's caprylic acid content makes it a potent yeast and fungus killer. Though it's also a rich source of lauric acid, and has a similar anti-inflammatory and anti-oxidant effect as the herbs and spices just mentioned. Meaning it not only prevents the development of SIBO and dysbiosis, but helps protect the gut lining from any unnecessary oxidative and inflammatory damage.

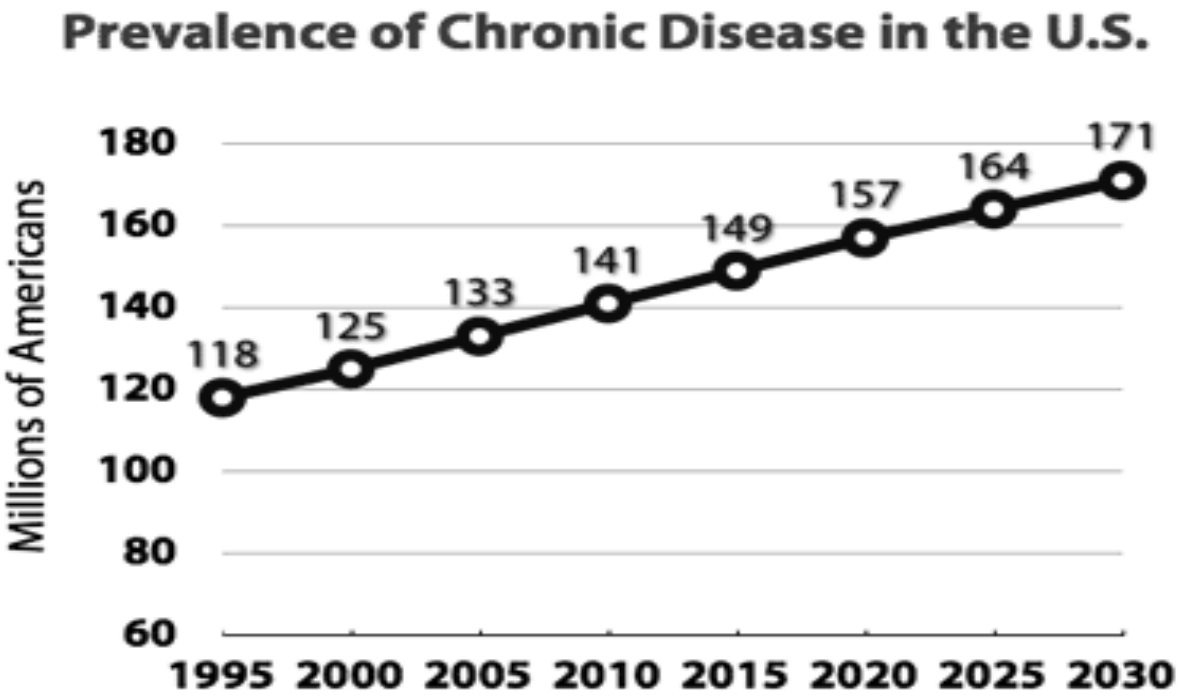
The best way to get coconut oil is to cook with it. And the same goes for the 10 herbs and spices above. Add them to your meals, put them in your soups (and teas), and find a way to consume them regularly.

Part 4

Balance Sympathetic & Parasympathetic Stress

Most of us recognize that excess stress is bad for our health and body composition, but not many of us understand why. Because if we did, we'd probably start paying a little more attention to the techniques for reducing it; instead of treating it like hippy mumbo-jumbo or a curfew from Mom and Dad, and purposely burning the candle at both ends in spite of it.

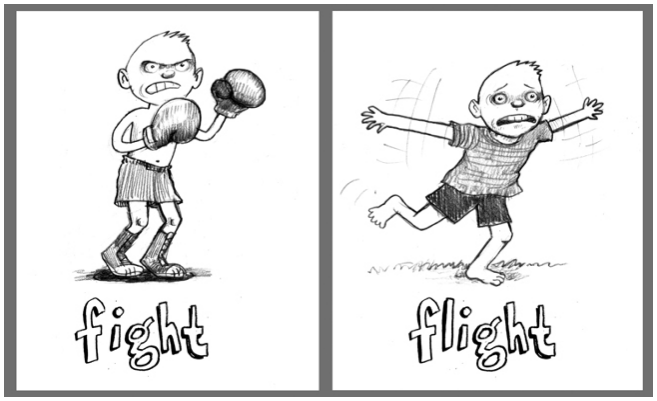
Well maybe not *purposely*, but the North American population is more stressed than ever. And not surprisingly, we're seeing a steady decline in health and increase in degenerative disease as a result.



Source: Wu, Shin-Yi *et al.* 2000. Projection of Chronic Illness Prevalence and Cost Inflation. RAND Corporation.

Obviously there's more at play here, and I'll be the first to tell you it's largely diet related. But the impact of stress can't be ignored. Especially when we know it's directly related to how much we work, how much we rest, and how much we play.

Without going into too much detail, the stress response is a primal instinct designed to increase our chances of survival. Our blood pressure increases, energy floods to our muscles and brain, and we're ready to think, move, and react quickly.



This 'fight or flight' process, coined 'the alarm reaction phase' by the great Hans Selye involves the adrena medulla (found in the adrenal glands) releasing a massive amount of hormones (called catecholamines), after getting a direct message from the brain (the two are directly connected) that *somethin' ain't right*. Followed closely by the adrenal cortex (also found in the adrenal glands) releasing steroid hormones (corticoids), which help increase blood flow and blood sugar.

The problem is, we're biologically designed to follow up this 'sympathetic' response with a 'parasympathetic' reaction shortly after. Where the adrenal glands stop secreting extra hormones (adrenaline, aldosterone, cortisol), our kidney's stop hanging onto water and salt, blood glucose returns to normal, and energy and resources are redistributed to non-urgent, non-life threatening systems that were sacrificed during the emergency – digestive, reproductive, immune.

Parasympathetic = Rest & Digest, Feed & Breed

In other words, stress is supposed to be acute not continuous, and occasional not consistent. And unfortunately, without regular recovery we get into Selye's 'resistance' and 'exhaustion' phases, where excess glucocorticoids (like cortisol) and mineralocorticoids (like aldosterone), negatively affect our carbohydrate tolerance, nutrient metabolism, inflammatory balance, gut health and immune system.

Basically, the over-stressed professional is fight-or-flight from the time they get up in the morning to the time they go to bed. Whether that's thinking about what they have to do, doing what they have to do, worrying about what they just did, or stressing about tomorrow. Since the brain controls the response, and 'perceived' danger is equivalent to *actual* danger.

Thus, without even getting into what Stock Brocker Sam is eating, if Stock Broker Sam is sleeping, and whether Stock Broker Sam is exercising, we know aldosterone, cortisol, and epinephrine are chronically pumping out of his adrenal glands, which elevates his heart rate, increases his blood sugar, and tells his digestion, reproductive hormones, and immune system to take a backseat.

"And we wonder why high-stress people get sick?"

Sadly, high-stress people also tend to carry excess body fat, and have trouble gaining and maintaining muscle mass too. Which isn't surprising, given what we know about chronically elevated blood sugar and insulin, and given that chronically cortisol makes us store fat, burn muscle, lose our insulin sensitivity and act as a pre-cursor for the metabolic syndrome, and the diabetes and heart disease that comes with it.

But what's worse, is that the systemic release of corticoids increases inflammation. Meaning circulating cytokines on a chronic and consistent basis, and an increased risk of the chronic epithelial damage, and chronic inflammatory conditions that occur as a result.

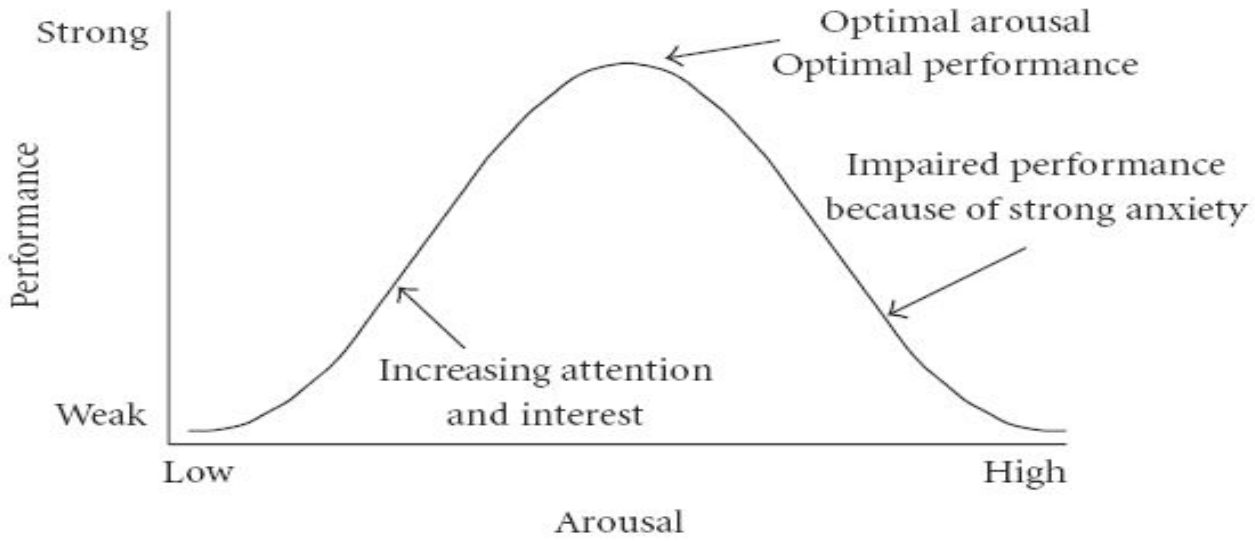
Or simply put, just like the gut can negatively affect the brain, our brain can negatively affect our gut - shutting down the gastrointestinal system (poor digestion and elimination) and promoting inflammation in times of stress, and making us more susceptible to infection, overgrowth, and permeability.

FIND YOUR ALLOSTATIC BALANCE

The good new is, just like inflammation, stress can be controlled. And the better news is, you have more control over it than inflammation. Because aside from avoiding behavior's that promote it (lack of sleep, worrying) you have the ability to control your personal response to it.

> ***"Stress is not what happens to you, but how you react to it"***
> ***– Hans Selye, Stress of My Life, 1977***

Moreover, acute stress applied to the right person at the right time, results in favorable adaptations (eustress). With exercise being the perfect example.



In all cases, the key is striking a balance between your sympathetic (work) and parasympathetic (rest) nervous system – also referred to as your 'allostatic balance.' Which ultimately comes down to controlling the cumulative total of anything and everything in your life that causes mental, physical and emotional stress (allostatic load).

In today's world, this usually means increasing our parasympathetic time away from technology. Since being connected is stressful enough as it is, and worrying about the news or getting worked up on reality TV triggers the alarm phase we don't want (especially in the evening, when it's wind-down time).

Getting longer, high-quality sleep should be priority #1; followed by exploring other ways to recharge your batteries (like meditation).

Though your stress-reducing plan should also include turning distress (the bad stuff) into eustress (the good stuff), by doing your best to **create a simple one-task, distraction-free environment.** Because regardless of the size, task accomplishment builds self-efficacy, while a giant list of half-completed To-Do items, or getting side-tracked by the ADHD that is the internet, promotes the opposite.

Learning to say "no" and be selfish of your free time is also an extremely helpful practice. As if it's not work or family related, and you're not going to enjoy it, there should be no reason to do it – especially if it's some one or some thing that adds distress.

And lastly, it's about **matching the quantity of good stressors (eustress), like exercise, to your current allostatic load.** Which could mean doing a little bit less (sets, weight, time), opting for a low-intensity stress-reducing activity (like walking) instead, or skipping the workout all together so you can get to bed early.

This may sound backwards for improving your health and body composition, but with the way people are operating these days it's necessary. Chronic stress changes the way your body responds to meals, changes the way your body responds to exercise, and raises biomarkers for disease whether your regimen is perfect or not.

It's also one of the hardest changes to make, because people who want to 'do better' have trouble doing what they perceive as *nothing* to get there.

But it isn't nothing! Because perfect balance is only achieved by touching extremes at both ends (ex: acute stress with exercise, recovery with sleep), and doing your best to avoid living a life that's dominated by one or the other (ex: high stress work, zero activity). Not only so you can thrive and be happy, but because *realistically* your life (and your gut health) depends on it.

Part 5

Understand What NSAIDs Do To Your Gut

Hate to generalize, but if you're a Baby Boomer you're probably used to popping Advil or Aspirin when something hurts.

Headache? No problem.

Back ache? Handled.

Arthritis? Taken care of.

Someone else is in pain? "Did you take an ibuprofen?"

What's worse, is that many have been advised to take a Baby Aspirin each day as a preventative measure. Since your trusty doctor believes (or has been taught to believe) it's the best way to prevent a heart attack.

Meanwhile, these NSAIDs (Non-Steroidal Anti-Inflammatory Drugs) are damaging your gut, and doing nothing for the underlying issue:

CHRONIC INFLAMMATION!

Sure, the inflammatory symptoms can be masked, or temporarily reduced with pills and potions, but the problem is never properly addressed. Giving you the false reassurance that you feel good (or better), forcing you to depend-on (and likely increase) your regular dosage, and doing consistent damage to your gut lining.

Sadly, this is the same area that's already taking a beating from the Western diet and lifestyle. Meaning, your NSAID popping behavior is poking holes in your gut that's already inflamed, and will continue to be inflamed because you (and your doctor) have made no effort to get to the root of what's causing this inflammation in the first place.

The ultimate irony being, that in many cases it's a leaky gut driving the chronic inflammatory condition. So, people prescribed NSAIDs are taking medication that's worsening the very root of the problem - a busted gut!

For example:

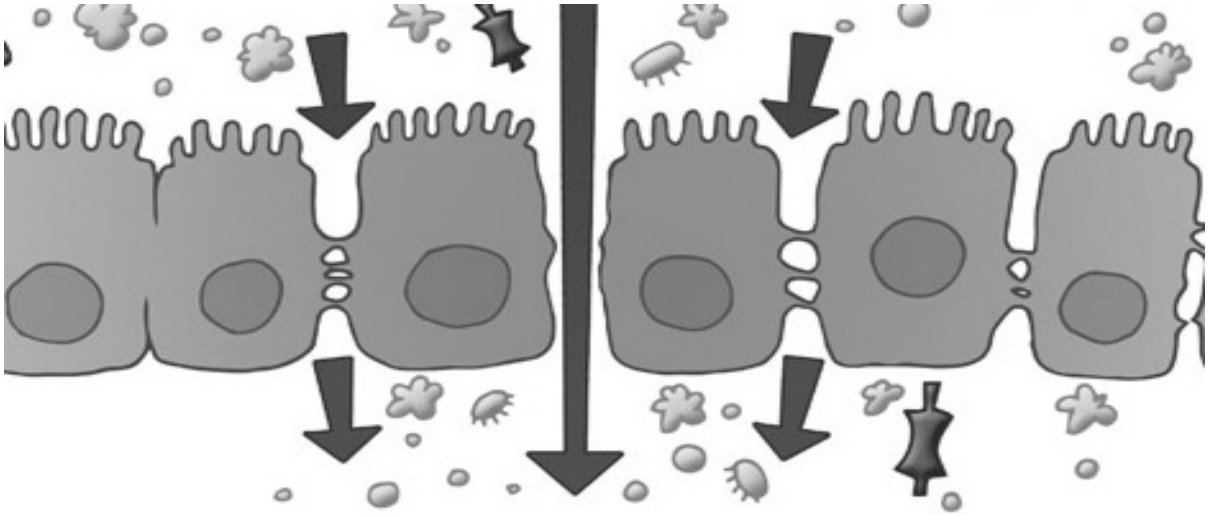
> ***"NSAIDs are thus shown to disrupt intestinal integrity and long term treatment leads to inflammation of the small intestine."***

> ***"Aspirin acts on the colon to unmask a susceptibility to gut leakiness."***

> ***"Ibuprofen aggravates exercise-induced small intestinal injury and induces gut barrier dysfunction in healthy individuals."***

> ***"A very low dose of aspirin (10 mg daily) decreases the gastric mucosal prostaglandin levels and causes significant gastric mucosal damage."***

The reason this happens is because NSAIDs are designed to inhibit COX enzymes (cyclooxygenase), which normally help the body produce prostaglandins that fight pain and inflammation. And unfortunately, preventing the action of one of those enzymes (COX-1) has a negative impact on the gut; since the prostaglandins that should have been secreted to protect the gut from damage are not. Making you more susceptible to intestinal permeability, increasing your sensitivity to inflammatory foods, and even changing the microbiota makeup of your gut.



To which one might say:

"Then let's make a drug that only inhibits one enzyme…?"

Although that's been done, and it was a disaster. Largely, because these enzymes work synergistically – if you block one, the other is upregulated. And when scientists developed a drug to block COX-2 only (ex: Celebrex), they realized it increased heart disease risk.

In other words, NSAIDs are a lose/lose. Take ibuprofen, which reduces both COX-1 and COX-2, and deal with gut issues. Take asprin, which preferentially reduces COX-1 and deal with BIG TIME gut issues. Or take a prescription COX-2 inhibitor, and increase your risk of a heart attack.

WHAT ABOUT TYLENOL?

Also known as paracetamol or acetaminophen, Tylenol is technically not an anti-inflammatory drug, as it doesn't prevent blood from clotting (block COX enzymes). And thus, unlike aspirin and ibuprofen it doesn't irritate the gut, or cause any of the COX enzyme issues discussed above. But it does increase your risk of liver failure significantly with chronic or 'above daily dosage' use and there's plenty of evidence suggesting it's not much better than placebo for pain.

Frankly, if you're taking Tylenol for chronic headaches or migraines, it's likely because of a similar inflammatory condition. So, just like Advil and Aspirin, the true remedy is fixing your inflammation problem (NOT signing up for a Tylenol pez dispenser).

This means eliminating inflammatory foods, balancing your omega 6:3 ratio, embracing the anti-inflammatory lifestyle practices (walking, sleeping) discussed in *Live It NOT Diet!*. and following the gut-healing protocol we just covered:

- Restoring your gut flora and bacterial balance
- Improving the digestive environment with greater HCL production
- Removing SIBO and other potential pathogens
- Reducing stress and finding an allostatic balance
- Avoiding unnecessary medications – antibiotics, antacids, NSAIDs

Along with that, you can look to incorporate some of the secondary tips listed below. Which are all discussed in greater detail at http://coachmikeblogs.com.

1. *Keep taking Zinc, Magnesium and Fish Oil* - to strengthen the gut lining, lower stress and relax the gastrointestinal muscles, and reduce inflammation. http://coachmikeblogs.com/what-to-supplement-and-why/

2. *Drink Bone Broth* – to heal the gastrointestinal tract with collagen and glucosamine. http://coachmikeblogs.com/bone-broth-make-it-a-staple-this-winter/

3. *Get Blue Blocking Glasses and Black Out Blinds* **–** to prevent blue light (from technology) and artificial light from messing with your sleep. http://coachmikeblogs.com/cant-sleep-blame-technology/

4. *Consider Going Wheat-Free (even on Feast Days)* – to avoid the gliadin proteins in wheat (and other gluten containing grains) that activate zonulin, and permeate the gut (in everyone). http://coachmikeblogs.com/the-wheat-free-feast/

5. *Avoid Water With Meals & Chew Your Food* – to let the digestive fire burn (during and after meals), and encourage easier breakdown and smoother passage through the GI tract (with smaller food particles). http://coachmikeblogs.com/5-small-nutrition-tweaks-that-make-a-big-difference/

6. *Try Fasting With Herbal Tea* – to give the gastrointestinal tract the opportunity to relax, while the beneficial compounds in tea do some house cleaning. http://coachmikeblogs.com/why-you-should-fast-occasionally/

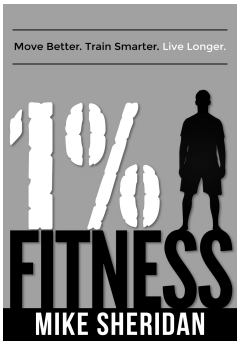
7. *Consider Adding a Blended Beverage to Breakfast (Super Shake)* – to get some much needed pre- and probiotic support (from berries, greens, coconut oil, kefir and spices), that you may have trouble incorporating into your daily diet otherwise.

8. *Experiment With "Bitters" (in VERY small doses)* – to help stimulate HCL and other digestive juices from herbs you wouldn't otherwise use when cooking (Dandelion, Gentian root, Beet root, Goldenseal root, Milk thistle, Wormwood, Yellow dock, etc).

Next Steps

Live It NOT Diet! Updates + $5-off *1% Fitness*

Your next step is *1% Fitness*, but I urge you to hold back on pursuing it until you've been comfortably following *Live It NOT Diet!* for a month or two. As nutrition and healthy living is going to give you 80-90% of the results, and I'd hate to see you compromise any of that because you're caught up with having to "workout."



When you are finally ready, make sure you head over to http://liveitbonus.com and grab the $5 off coupon I'm offering as an incentive to leave a *Live It NOT Diet!* review (on Amazon). Keeping in mind that there's no pressure for it to be a positive 5-star one (if that's how you feel), and it doesn't have to be long or extravagant either.

All I ask for is your honest opinion of the book, as it helps people find my work, and helps me understand where and how I can improve it.

Outside of that, look for an email from me every week (or so) where I'll be sharing some FAQs and best practices for *Live It NOT Diet!.* And if you haven't already, you can check-out the latest updates from me on Twitter and Facebook, or by subscribing to my Monthly Newsletter at: http://coachmikeblogs.com.

Stay Lean!
Coach Mike

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