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**Symposium**

March 13-15, 2020  
Denver, CO

ACA Nutrition Council  
April 30-May 3, 2020  
Port St. Lucie, FL

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SEPTEMBER 2019
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<td>DABCI’s</td>
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<td>NON–DABCI</td>
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How do we unsubscribe?

How do we sort out fact from fiction? In the fast world of social media, new concepts are presented almost minute by minute. One theory begets another opinion and before the day is over, all are regarded as fact.

Watching patient flow in our clinic for well over 50 years, I see patterns. Years ago I noticed patients who presented with health issues and they may have been on a single medication. Usually it was a blood pressure medication. When asked if it was being monitored, usually the answer was “no, I have a refill prescription.”

An interesting case back in the 1980’s was a patient who had been prescribed iron for her anemia, sometime in the 1960’s…. And she was still taking the iron! When we ordered blood work on this patient I remember Dr. Jack Kessinger telling me “she should be spitting hubcaps.” She was now suffering from iron overload!

In this day of Dr. Google, patients we see have usually been on their computers, researching their illnesses. We see most patients are on an average of well over 10 medications. With all the research and side effects of so many medications, I wonder why most patients aren’t apprehensive about taking so many? Could this be a case of “herd mentality” thinking?

I believe there is so much positive advertising on television concerning different drugs that it becomes a learned behavior to accept the fact that it is okay to take whatever a doctor prescribes. I think it would be a great step in the right direction if everyone would take more personal responsibility for their overall health. I fully understand that physicians are the experts in the field of medications. I also fully understand that our country is struggling with a crisis of overuse of opiates. How was that allowed to happen? Somebody along the path that we are on (as a country) did not make good decisions on how to steer their patients into healthy outcomes.

This leads me back to my observations of healthcare through my eyes over many years. At one time, there was a definite pattern of certain medications being prescribed. A good medical doctor friend of mine shared with me that it was easy navigating the healthcare system. The pharmacy sets the pace. Their reps visit clinics, bring doughnuts or lunch….and bring free samples to be distributed to patients. As I look back, I wonder when opiates were on the menu??

I wonder when “herd mentality” took over? I wonder if anyone is noticing a huge shift for everyone to think alike? I wonder when it became normal to just swallow a pill without asking why (?) and what are the consequences? When watching a medicine commercial on television, the film producer makes all the miracles (and side effects) seem so inviting. With their sing-song monotone presentation, anyone watching doesn’t notice when the message changes from helpful to death threatening.

Another observation I have collected over my years of dealing with patients is the idea of birthing babies. I wonder why there are so many caesarian section birth procedures now compared to 25 years ago? Is it convenience for the doctors and hospital staff? I have heard it is not nice to fool mother nature! I think the great creator had this procedure figured out more thoroughly than modern medicine. The birth canal natural birth feeds the infants immune response. I understand that newer research points out several advantages of natural childbirth that have been previously overlooked. Again, I wonder when we moved to a new procedure without researching the roadblocks that may be ahead?

Everyone has an opinion on babies and child rearing. When I hear a comment about old fashioned ideas, I think to myself…. babies are such old fashioned things!

Maybe it’s time to unsubscribe to information overload and use some common sense in dealing with health and life in general.

Just Sayin! ♦
## 300 HOUR DABCI DIPLOMATE PROGRAM

(WEEKENDS 1-26)

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**100 HOUR CERTIFICATE OF COMPLETION**
Health is a human right, however health care is not. Is it a right or is it a privilege? The answer to this is yes in both cases. “All men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are Life, Liberty and the Pursuit of Happiness”, wrote Thomas Jefferson in our Declaration of Independence.

The freedom to choose health is an unalienable right, but it is also a privilege. There are times it seems that some people have won the genetic lottery, and other times anything that can go wrong does. We are the captain of our own domain. Every decision we’re given the opportunity to make has an effect, either positive or negative. We are free to make our own decisions. The consequences we face for the most are from our own choices and thereby most consequences we will encounter are up to us.

Whether you choose frozen hot dogs and pretzels over a more reasonable and understood to be “healthier” diet will most assuredly result in opposing respective results. Self discipleship is a progressive state of personal improvement that is our ultimate individual responsibility to ourselves and those who shadow us. Neglect of this requirement leads to undo digression and early degeneration, thus resulting in our decreased ability to provide for our loved ones. Simply put, if we let our health status downgrade, we have to spend all the energies on our own survival. This leaves our loved ones to fend for themselves.

Health care involves service of one to another. The provision of professional health care is a service that we have the privilege to choose. These services are tendered according to their deemed worth. We are privileged to have the right to choose our health care provider(s) as well as treatment options-- for the most part. Choice is the foundation of freedom that is synonymous with America.

In these modern times patients are making their own health care choices. They can choose to work with a naturally minded physician or they can seek “a pill for an ill.” Some patients go straight to surgical procedures to remedy their health issues.

We live in a country that is prosperous enough to assure none of our citizens have to die of starvation or disease because of lack of personal resources to afford food or medicine. This safety net is by no means demonstrative in defining health care as an American right, but it does afford all of our fellow countrymen the privilege to enjoy the right to pursue happiness.

Historically, within the realm of professional health care provision, many obstacles have had to be overcome to provide such services. In the first century following the discovery and development of chiropractic, many DCs were jailed and ostracized for providing professional health care to the general public. The charge was “practicing medicine without a license”. New ideas and new concepts are sometimes hard to introduce! At the time chiropractic was coming into its own, the term “medicine” was being groomed by the AMA, to be synonymous with “health”.

Finally, in 1986 Wilk, et.al --the Chicago Five (a group of DCs)—won a federal lawsuit against the AMA in their continual open defamation of chiropractic. The AMA pled guilty to the charge of candidly leading its members toward the goal of alienating and eliminating the profession of chiropractic. No monetary windfall was sought by Wilk, et.al., though a considerable price was paid to achieve this victory; they only requested a level playing field in the American professional health industry.

Since that time, we’ve been able to cooperatively work together in the provision of care, which has been an advantage to consumers and providers from different disciplines within our industry. Now the term “medicine” includes MD, DO, DC, DVM, PA, NP, etc.

It is truly a privilege to serve our patients with the best health care possible..◆
Weekend  | Dates              | ID # | Topics                                                      | Instructor                  |
---       |--------------------|-----|-------------------------------------------------------------|-----------------------------|
1         | May 18-19, 2019    | 1001| Foundations of Chiropractic Family Practice                | Dr. Robert Kessinger        |
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3         | July 27-28, 2019   | 1006| Natural Strategies in Laboratory Testing with Homeostatic Lab Values | Dr. Robert Kessinger        |
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23        | May 15-16, 2021    | 1023| Neoplastic Disease & Cancer II                          | Dr. Michael Taylor          |
24        | June 12-13, 2021   | 1004| Male and Female Pelvic Classroom                          | Dr. Cindy Howard            |
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We’re all aware, especially women, of menopause, when women’s ovaries reduce and then stop secreting estrogens, progesterone, and a bit of testosterone. Men’s testosterone levels decline with time (a process termed “andropause”) of course much more slowly than women, but since all of our bodies have been saturated with thousands of pesticides, herbicides, and other killer molecules never, ever present on planet Earth before the “20th century,” men’s testosterone levels have started to decline at significantly earlier ages than ever before. Many more men have become more aware of andropause at significantly younger ages than all of their male ancestors.

Since the beginnings of comprehensive bio-identical hormone therapy (BHRT),” which was first done at Tahoma Clinic in the early 1980s, literally hundreds of thousands of post-menopausal women have observed that they’re staying healthier for significantly longer than post-menopausal women not using BHRT. As “bonus points,” most post-menopausal women using BHRT for a decade or more have noticed that they don’t appear to be aging at the same rate as post-menopausal women of the same age not using BHRT.

We men are (as women sometimes say) slower than women to actively take care of our own health. However, we are faster—for obvious-to-men reasons—to do something about our declining testosterone levels. Doing that as part of male BHRT has the same effectiveness in promoting healthy longevity as BHRT does for women.

There’s a third important “pause” that happens to both women and men that very significantly lowers our chances of healthy longevity. This third “pause” is totally overlooked and (believe it or not) often actually made much worse by mainstream” or “standard of care medicine. This third “pause” is “Gastropause,” which is the often-declining function of our stomachs over time. “Gastropause” doesn’t happen to everyone. At Tahoma Clinic we’ve congratulated the occasional 85 year old about his or her 100% normal stomach function—but more often than not, Gastropause occurs significantly before that age.

“Gastropause” (although that name wasn’t used then) was extremely well documented in a 1932 research publication from the Mayo Clinic titled Normal Range of Gastric Acidity from Youth to Old Age published in 1932. Led by Drs. Frances Vanzant and Walter C. Alvarez, Mayo Clinic researchers reviewed stomach acid secretion tests done for 3,308 research volunteers...1,454 women and 1,854 men... between the ages of twenty and seventy-nine years old. (They added to their own data statistics from similar studies done with 365 children ages one to twenty, with the total reviewed being 3,673.)

Here’s their report about the percentage of individuals 20 years of age and older whose stomachs were found to secrete suboptimal hydrochloric acid, the definition of “Gastropause.”

As might be expected, the frequency of the problem increased in both sexes with age until ages sixty to sixty-nine. Women had a higher percentage of suboptimal stomach acid secretion (“hypochlorhydria,” or lower than optimal stomach acid, and “achlorhydria,” no secretion of acid) than men in every age group. Here is a summary of what the researchers reported:

The researchers give a possible explanation for the decline in the percentage of individuals tested with low or no stomach acid in their 70s: “After the age of 65 years there appears to be a definite falling off in the amount of [hypochlorhydria and] achlorhydria, possibly because persons with [hypochlorhydria and] achlorhydria are not as hardy or long-lived as are those who have a strongly acid gastric juice.” A briefer version of this explanation would be: “Individuals with low or no stomach acid don’t live as long!”

Good digestion starts with stomach acid! The same cells that make hydrochloric acid make pepsin, an enzyme focused on digesting proteins into amino acids, the “building blocks” of all our bodies proteins. When stomach acid is low, blood levels of essential amino acids are low. Stomach acid helps separate the minerals from the “food matrix” in which they’re found; when stomach acid is low, levels of many essential minerals are low.

Normally functioning stomach lining cells also make “intrinsic factor,” which should really be named after its function as “vitamin B12 absorption factor.”

(Continued on next page)
Without intrinsic factor, vitamin B12 can’t be absorbed, no matter how much we swallow! That’s why so many older people are taking/being given vitamin B12 injections, because their stomachs are sufficiently "gone" into "Gastropause" that they can’t help to absorb sufficient vitamin B12 from food or from supplements.

The effects of stomach acid reach beyond optimal digestion in the stomach. When food is fully acid-digested, the acid stimulates opening of the sphincter muscle separating the stomach from the duodenum (uppermost small intestine). When the acid and food are released into the duodenum, they stimulate the release of a hormone named “secretin,” which stimulates the pancreas to secrete bicarbonate.

Pancreatic bicarbonate not only neutralizes the gastric acidity, it also alkalinizes this part of the digestive process, which is necessary for maximal activity of the pancreatic enzymes to break down fats, carbohydrates, and the remaining undigested proteins into easily absorbable particles ready to be absorbed further down the intestinal tract. But without an adequate “secretin” signal released by optimal acidity and optimally digested food at the end of gastric digestion, the pancreas can’t do its digestive job optimally, either.

Optimal stomach acid is necessary for the best of health! How can we possibly expect to stay healthy if enough fully-digested nutrients are not available to keep these bodies within which we spend our lives on planet Earth as well-repaired as possible? It should be no surprise that the Mayo Clinic researchers found that after age 60, a larger percentage of individuals who had low stomach acid weren’t with us anymore! Stomach acid is literally tied to how long we live!

Other adverse health effects of “Gastropause” also happen. One is the growth of an increasingly “unfriendly” intestinal microbiome. An obvious example of this is acne rosacea, which results from the growth of bacteria in the upper small intestine that can’t grow there at all if the acid passing into it from the stomach is optimal. For details—along with citations—concerning curing (yes, that’s curing) acne rosacea with nothing more than hydrochloric acid supplementation, see the June 2017 Green Medicine Newsletter.

Many other unfriendly micro-organisms are also encouraged to grow in the more alkaline intestinal environment caused by “Gastropause.” One of the best examples of this is Candida Albicans, sometimes called “yeast infection,” which can live in the intestines with or (more often) without causing local intestinal symptoms. Candida in the bowels can cause health problems elsewhere in our bodies, including mental health problems.

Another major problem caused by “Gastropause” is gastro-esophageal reflux. Despite the research published in 1969 that reported that stomach acid closes (not opens!) the sphincter muscle separating the stomach from the esophagus, patent medicine companies have raked in hundreds of billions of dollars selling the myth that “too much acid causes heartburn,” and using that research-disproven theory, simultaneously selling “acid blocking” medicine to “cure” the problem. Since most acid-blocking patent medications literally cause “Gastropause,” it is and was obvious that acid-blocking patent medications would increase dementia and a long list of other illnesses, all associated with the 100% “Gastropause” and very poor nourishment that these patent medicines cause.

The following article is updated from Chapter 1 of Why Stomach Acid Is Good For You: Natural Cures for Heartburn and Indigestion by Jonathan V. Wright, M.D., and Lane Lenard Ph.D. (2001)

The Myth Of Acid Indigestion

Heartburn, indigestion, dyspepsia, and “acid indigestion,” are extremely common afflictions. Thanks mostly to diet and lifestyle factors, and sometimes because of genetics, pregnancy, anatomy, or simple aging, it seems like sooner or later, almost everybody gets an upset stomach in one form or another. Who hasn’t felt the acute burning in the back of the throat and upper chest after eating certain foods? Who hasn’t popped a Tums or gulped a “bicarb” to extinguish the acidic flames that seem to roar up from the stomach during a heartburn attack?

A Gallup Poll found that 44% of the U.S. population suffers from heartburn at least once a month, and 7% experience it weekly. According to the National Institute of Diabetes and Digestive Diseases, 60 million people experience heartburn at least once a month and 25 million feel the burn every day.

If we are to believe what we see in the media, the American populace is awash in indigestion-causing stomach acid. We can’t watch TV (especially the evening newscasts) without seeing dozens of slick commercials for expensive, high-tech patent medicines like Prilosec,® Prevacid,® Tagamet,® Zantac,® Pepcid,®...
indigestion,” heartburn, and its more serious consequence GERD are a result of too much stomach acid. The facts say otherwise.

Consider this conveniently overlooked observation: The incidence of indigestion, “simple” heartburn, and GERD increases with age, while stomach acid levels generally decline with age. If too much acid were causing these problems, teenagers should have frequent heartburn, while grandma and grandpa should have much less. Of course, as everyone knows, exactly the opposite is generally true.

It is simply a matter of common sense. How many of us can run faster at age 40 than at age 20? How many have better vision at 50 than when we were younger? We all experience declining hormone levels as we grow older. We can think of literally dozens of examples of naturally declining function with age, so why should the output of acid by the stomach be an exception?

Science has confirmed what common sense tells us. For most of this century, medical researchers have repeatedly and consistently documented an age-related decline in stomach acid. So, if we have less and less stomach acid as the years add up, why do we get more and more heartburn and indigestion? And more importantly, why are we treating that heartburn and indigestion by taking patent medicines that wring the last few drops of acid out of the stomach?

What’s so bad about depleting stomach acid? The list is a long one! Unfortunately, the conventional medical wisdom refuses to recognize this, which suits the makers of acid-depleting patent medicines just fine. The problem is that many of the adverse effects associated with long-term suppression of stomach acid may take years or even decades to develop, while clinical trials of most patent medicines, which might expose these problems, generally last only a few months.

GERD: The Serious Side of Heartburn

It wasn’t too long ago that heartburn was viewed as largely a nuisance, something we joked about, put up
with, blamed on Mother’s cooking. Today, heartburn is
widely seen by the medical profession as the primary
symptom of a potentially dangerous medical condition
known as *gastroesophageal reflux disease*, or GERD.
This shift in attitude has been driven in part by the
availability (and marketing) of new patent medicines
and surgical procedures and partly by new research.
When heartburn occurs regularly for months or years, it
is said to be *chronic*. People with chronic heartburn
may have damage to their esophageal lining (especially
the lower end of the esophagus) that begins as mild
irritation, but may end up with scarring, constriction,
ulceration, and ultimately, in a very small percent of
people, cancer.

This is why intermittent or minor heartburn should
never be allowed to become chronic. Although GERD
occurs only in a minority of people who have heart-
burn, given the potential danger of chronic heartburn,
today’s acid-trumping treatments would seem to be
among modern medicine’s more important, if under-
appreciated, marvels. GERD appears to have met its
match in these potent patent medicines that not only
relieve heartburn but promise to protect us against more
serious, even life-threatening conditions.

It’s no wonder they have become among the best-
selling patent medicines ever produced. Indigestion/
heartburn/GERD is a multibillion-dollar cash cow for
the pharmaceutical industry. In the U.S. alone, we spent
more than $7 billion on them in 1999. Prilosec® alone
accounted for more than half of that, $4 billion, nearly
doubling its sales from the previous year.

**Indigestion and Heartburn Are Not Caused by Too
Much Stomach Acid**

As you might have guessed, we think there’s something
dreadfully wrong with this rosy financial picture? We
wonder why so much of humanity is going to such
great lengths to rid themselves of all that annoying
stomach acid, when very few of us have ever consist-
tently had too much acid in our stomachs, … when
(except for a few rare conditions) heartburn is hardly
ever associated with too much stomach acid.

Chronic heartburn sufferers often have their stomachs
and esophaguses examined via x-rays and “gastro-
scopes” (fiber-optic tubes that allow the doctor to look
inside the stomach and even take pictures), but in 30
years of medical practice, not one person who’s had
these procedures done elsewhere has ever told me that
he or she also had carefull measurements made of
stomach acid production! When we actually measure
stomach acid output under careful, research-verified
conditions, the overwhelming majority of heartburn
sufferers are found to have too little stomach acid pro-
duction.

Remember the research reviewed in the first part of this
article? To repeat: the researchers reported that the
lower esophageal sphincter muscle (for the technically
inclined the “LES”) is closed in response to strong
stomach acid. Think about that: it makes sense that if
Nature and Creation have provided for humans very
strong stomach acid for optimal digestion (pH 2 for the
technically inclined; only vultures have a stronger
stomach pH, reported to be 1.5) that there would also
be provided (for those same humans) strong protection
against that very strong acid digesting the lower
esophagus too? That strong protection is provided by
the lower esophageal sphincter, not by acid-blocking
patent medicines!

**Conventional Treatments for Heartburn and GERD**

**Acid Neutralizers (Antacids).** These classic products,
commonly referred to as antacids, rely on the funda-
mental chemical fact of life that acid and alkali (also
called “bases”) neutralize, or cancel each other out. The
active ingredients are typically calcium, sodium, alumi-
num (not a good choice), or magnesium salts that com-
bine with the normal stomach acid, hydrochloric acid
(HCl), to form a “neutral” salt.

Since antacids do not affect the secretion of stomach
acid, their effect on the gastric acidity is transient, last-
ing only until all the antacid molecules are used up. In
the meantime, HCl continues to be secreted. Antacid
products are easily available without a prescription and
are widely regarded as extremely safe (except those
containing aluminum). For occasional use, they can be
useful for reducing heartburn and, when used this way,
probably will not cause any harm.

**Acid Blockers.** These patent medicines (also called H2-
blockers) reduce acid levels by throwing a roadblock
right in the middle of the process that leads to acid se-
cretion. Most gastric acid secretion is the end result of a
process that begins with the hormone gastrin stimulat-
ing histamine-producing cells, which in turn signal acid
-producing cells to secrete hydrochloric acid. By block-
ing the action of histamine, the message never gets to
the acid-producing cells to secrete acid. These patent
medicines can be very effective in turning off most of
the acid flow for hours at a time.

The long-term, continuous suppression of gastric acid
secretion has important adverse consequences for our
(Continued on next page)
health. These long-range adverse effects are noted above (repeatedly, sorry about that, but understanding them is important) and although very well documented by many researchers, they are largely ignored by practitioners of “standard of care” medicine. In addition, these acid-secretion-blocking patent medicines all have well-documented more rapidly occurring adverse effects, most of which involve GI disturbances, such as constipation, diarrhea, nausea, vomiting, and yes, heartburn.

Currently available H2-receptor blockers include Tagamet® (cimetidine), Zantac® (ranitidine), Pepcid® (famotidine), and Axid® (nitazidine).

**Proton Pump Inhibitors.** The biochemical mechanism inside cells in the stomach’s lining that actually produce and secrete hydrochloric acid was named the “proton pump.” Proton pump inhibitors are the most potent of the acid-suppressing patent. They block the action of this pump mechanism, hence their name, proton pump inhibitors (PPIs). Just one of these pills is capable of reducing stomach acid secretion by 90% to 95% for the better part of a day.

Taking higher and/or more frequent doses of PPIs, as is often recommended for “intractable” heartburn or for treating peptic ulcers, produces a state of achlorhydria (no stomach acid), duplicating the final phase of naturally occurring “Gastropause.”

There are many serious concerns associated with the use of PPIs. The most common short-term adverse effects include diarrhea, skin reactions, and headache, which can sometimes be severe. Other adverse effects, which occur less frequently, include impotence, breast enlargement, and gout. Currently available proton pump inhibitors include, Prilosec® (omeprazole), Prevacid® (lansoprazole), Aciphex® (rabeprazole), and Nexium® (esomeprazole).

**But these patent medicines relieve symptoms...**

We’ve all heard of “short-term gain, long-term pain”? That’s what all of these “standard of care” treatments (given without ever actually measuring stomach acid) yield—short-term gain (unless you’re one of the many “lucky” ones who have relatively immediate adverse effects). None of these patent medicines cause the lower esophageal sphincter to close itself and block any acid reflux! They “work” by mopping up as much of the acid “flood” as possible (neutralizing antacids) or by drying up the river of acid itself (patent medicines such as Zantac® and Prilosec®). In so doing, they stop the heartburn pain while accelerating the aging process by causing malnutrition!

**The relief anti-acid patent medicines offer is transient.** Heartburn stays away only as long as acid levels stay suppressed, and acid levels stay suppressed only as long as we keep taking the patent medicines. If we stop taking them, we risk heartburn’s return, sometimes with a vengeance. We medical types like to call this a relapse. It’s not uncommon for people using Zantac®, Prilosec®, and even Tums® to take them daily for years and years at a time in order to avoid a relapse. Now that many of these patent medicines are available over-the-counter (without a prescription) and are promoted as being equivalent to (in terms of safety and ease of use, at least) and much more effective and longer-lasting than old-fashioned acid neutralizing products, people are even more likely to overuse them.

**These patent medicines disrupt the natural gastrointestinal environment.** Although widely believed to be safe and well-tolerated, acid-blocking patent medicines, by their very nature, induce profound changes in the internal environment of the stomach and intestines. These changes, which we will discuss in more detail in later chapters, have been associated with a wide range of ailments. Decades of research have demonstrated that chronically low levels of stomach acid (not necessarily caused by patent medicines) can be harmful in the long run, leading to maldigestion, malabsorption, and malnutrition.

**We can become dependent on anti-acid patent medicines.** Once we start taking anti-acid patent medicines, we may become dependent, or at least reliant on them. They work only as long as you keep taking them. Stopping treatment commonly triggers an acid “rebound,” which can be quenched only by—you guessed it—taking more acid-suppressing patent medicines. Although the rebound is typically short-lived, lasting a couple of days at most, how many people are willing to “tough it out” and endure the heartburn when they can quickly squelch it by getting back on their acid blocker? While this isn’t exactly a true addiction, once this cycle gets going, we’re almost as good as “hooked” on acid suppression.

This strategy works very well for patent medicine companies, but leaves much to be desired for people suffering from heartburn. If these patent medicines actually cured heartburn/GERD, the companies wouldn’t make nearly as much money as they do by selling patent medicines that provide only temporary relief.

**A Much Safer “Temporary Fix” (But Keep It Tem-**

(Continued on next page)
porary!

Refluxin™ is a safe, effective, totally natural but very little known source of heartburn/acid reflux relief. Refluxin™ tablets (chewed and swallowed after meals) contain a combination of mucoprotective (protective of mucous membranes) natural agents, pectin, lecithin, and mucin which form a “floating raft” when in contact with liquid. A small amount of sodium and potassium bicarbonates reacting with citric acid provides buoyancy. When reflux occurs, the “floating raft” becomes part of the reflux, coating the lower esophagus with a safe natural barrier to acid penetration. But since the “Refluxin raft” literally floats on top of the food, it interferes much less with the digestive process.

Refluxin™ is indeed safe and effective to relieve heartburn, but should be used by heartburn sufferers only until thorough evaluation (and subsequent treatment) can be done by a physician skilled and knowledgeable in natural medicine. That’s because Refluxin™ treats the symptoms but not the cause of heartburn, which is usually—although not always—caused by lower (sometimes much lower) than optimal stomach acid.

It’s Your Decision

If you have indigestion or heartburn, a disease very frequently associated with low stomach acid output and poor digestion, which would be preferable, treat the cause or take a drug to suppress the indigestion and heartburn, and then more patent medicines for each other symptom? The answer appears obvious, yet it’s going to be a long time before patent medicine companies give up their antacid/acid-blocker cash cow.

Fortunately, you don’t have to wait until the FDA, the AMA, and the many other alphabet-soup agencies that control the conventional wisdom in medicine today (almost always following the patent medicine industry line) see the “error of their ways.” (Hint: it’s never going to happen, because there’s so little profit in the natural—unpatentable—acid, vitamin, mineral, amino acid, herbal, and other supplements that can be used to eliminate heartburn, indigestion, and to treat related diseases.) You could go down to your local health food store right now and purchase everything you need for a fraction of the cost of a prescription for Prilosec®, Prevacid®, or other acid suppressor.

Before you do that, though, we suggest you read Why Stomach Acid is Good For You (from which this article is adapted) first, because you’ll learn:

1. As we age, stomach acid levels do not increase, as we would expect from the increase in heartburn associated with age. In fact, for many people, acid levels decrease.

2. Overuse of neutralizing or buffering antacids, and ordinary use of powerful acid-suppressing patent medicines, can inhibit the absorption of essential nutrients and impair the digestion of protein, minerals, and a few vitamins.

3. The resulting malnutrition can, over many years, lead to depression, osteoporosis, arthritis, and other chronic degenerative diseases that reduce the quality of our lives and may ultimately shorten our life-spans.

4. The best way to treat “acid indigestion” is not with less stomach acid, but (almost always) with more. Remember, optimal stomach acid itself “closes the door” between the stomach and the esophagus. Replacement acid in the form of safe, inexpensive substitutes for endogenous (internally-produced) stomach acid, such as betaine hydrochloride with pepsin, enhances digestion, and heartburn, indigestion, bloating and gas eventually vanish.

5. The improved digestion and absorption of essential nutrients that results from appropriate acid replacement, combined with natural supplemental digestive enzymes and elimination of toxins and allergens, improves health and extends longer life, and improves the symptoms of a long list of diseases associated with low stomach production.

Sorry to be repetitive and possibly boring: the cause of heartburn and GERD is failure to close the lower esophageal sphincter muscle with strong acid, so “standard of care” treatment of heartburn and GERD with acid-blocking patent medications is actually malpractice!

While heartburn/acid indigestion is most frequently a symptom of “Gastropause,” other causes of these symptoms exist. Food allergy is one; some individuals report that heartburn and indigestion disappear when specific foods (often dairy and gluten, coffee, and alcohol) are eliminated. And while lower than optimal stomach acid/”Gastropause” often occurs because of “getting older,” another cause can be viral infection. Of course, the bacterium Helicobacter pylori is also a common cause of low stomach acid/”Gastropause.”

Testing for “Gastropause”: Notes of Caution

Please work with a practitioner skilled and knowledgeable in natural medicine who can very precisely measure whether or not you have less than optimal stomach

(Continued on page 93)
IngredIent Facts

Artichoke (Cynara scolymus)
Extremely safe, well-studied nutrient that has antioxidant, choleretic, hepatoprotective, bile-enhancing and lipid-lowering effects.

Dandelion (Taraxacum officianale)
Hepatic antioxidant that stimulates the production of bile and enhances bile flow into the intestine.

Choline Bitartrate
Proper amounts of choline are needed to produce phosphatidylcholine; the nutrient needed to maintain proper bile viscosity. Exogenous oral choline administration has been shown to increase phosphatidylcholine and membrane phospholipid synthesis.

Taurine
Organic compound that functions in the conjugation of bile acids. It also has antioxidative and membrane stabilization effects.

Glycine
Essential amino acid that functions in the conjugation of bile acids and has been scientifically shown to increase portal blood flow, bile production, hepatic microcirculation and maintain cytochrome oxidase activity under conditions of hepatic injury.

Activated Charcoal:
Extremely safe and effective binder shown to have a high affinity for binding pathogenic bacteria, mold toxins, pesticides, herbicides, volatile organic compounds (VOCs).

Chlorella:
Known for its ability to bind metals, VOCs, pesticides, herbicides, and mycotoxins. It can also stimulate immune functions by way of NK activation.

Sodium Alginate:
Alginate are the carbohydrates that make up the cell wall of seaweed. They have the capability to bind heavy metals and work mainly in the gastrointestinal tract to prevent reabsorption of toxins as they are being pulled from tissues.

Bentonite Clay:
Healing to the gut as well as an ability to bind mold toxins, bisphenol A (BPA), pesticides and herbicides.

Aloe:
Aids in healing the lining of a damaged intestinal tract, healing and/or preventing leaky gut syndrome.

Acacia Gum
A prebiotic fiber that helps with constipation issues, as most binders can exacerbate these issues.

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and ultimately optimize digestion once again. Unfortunately, acid production itself by the stomach lining cells rarely returns.

In Conclusion (finally!)

Heartburn is usually a benign condition, but if you suffer from it regularly for months or even years at a time, it can be a sign of a serious disease, such as an esophageal ulcer or Barrett’s esophagus, a serious condition that can lead to a fatal form of cancer. Thus, we always suggest that the first step you take in treating your heartburn is to consult a physician who can rule out ulcer and Barrett’s and who will then guide and support you in treating your heartburn/GERD the natural way. The final chapter of Why Stomach Acid Is Good For You will tell you how to find a knowledgeable physician who, when you utter the words heartburn and indigestion, won’t automatically reach for the Prilosec®.

References:
1 VanZant F et al., Normal Range of Gastric Acidity from Youth to Old Age, Archives of Internal Medicine 1932;49 (3):345.
2 For further information on “remote” effects of Candida Albicans, see The Missing Diagnosis by C. Orian Truss M.D., available @ www.usedbooksearch.co.uk.

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New Weapon Against Gluten

by: Rachel Olivier, MS, ND, PhD

It is well recognized that undigested proteins in the gastrointestinal tract cause immunological reactions. Some of these reactions are the result of gluten intake, due to the inability to digest gluten. Gluten is a family of proteins, known to affect the gastrointestinal tract in sensitive individuals. "For some people, gluten can cause severe gastrointestinal problems. While some of these [sensitive] people have celiac disease, others are simply gluten sensitive," according to Balakireva V and A. Zamyatin Jr., 2 “gluten intolerance is an umbrella term integrating three major types of gluten-related disorders: autoimmune celiac disease (CD), allergy to wheat, and non-celiac gluten sensitivity (NCGS).”

The frequency of gluten sensitivity is said to be one in twenty. 6 The first lines of physiological defense against a reaction to gluten is the presence of HCl and pepsin in the stomach. However, because gluten molecules are proline rich, they are highly resistant to proteolytic degradation within the gastrointestinal tract. 2 As a consequence, normal digestive enzymes fail to degrade gluten before it reaches the small intestine, where it induces inflammatory responses that may lead to inflammation, and eventually to celiac disease in sensitive individuals.

In genetically predisposed individuals carrying the human leukocyte antigen (HLA) antigens HLA-DQ2 or HLA-DQ8 on specialized antigen presenting cells, gluten peptides can cause celiac disease (CD) upon ingestion, resulting in T-cell activation and small intestinal inflammation, villous atrophy, crypt hyperplasia, and a broad spectrum of intestinal and extraintestinal symptoms. 8, 9, 10 Celiac disease, specifically, is defined as a T cell-driven intolerance to wheat gluten. As noted earlier, gluten proteins are highly resistant to hydrolysis mediated by proteases of the human gastrointestinal tract, thought to be a consequence of their high degree of proline rich moieties. This resistance to hydrolysis results in emergence of pathogenic peptides, causing CD and allergy in genetically predisposed people. 11 As a consequence of their proline rich moieties, enzymes will fail to degrade gluten before it reaches the small intestine, the site where gluten induces inflammatory T-cell responses that may ultimately lead to celiac disease.

However, “new research may have found an enzyme that can relieve symptoms in gluten-sensitive people.” In one study it was demonstrated “that taking a tablet containing this enzyme can stop the gluten from reaching the small intestine, drastically reducing the symptoms of gluten intolerance.” From published studies it is clear that gluten is not always totally digested by several commercial proteases. For example, the use of DDP-IV to digest gluten does not result in the digestion of the “interior part” of the gluten molecule, the part that has the immunogenic peptide fragments that are related to gluten sensitivity. Some formulators add an additional protease to DDP-IV such as papain or a fungal protease, claiming that their formulation is effective for digesting gluten without any clinical documentation.

A new enzyme on the market is a prolyl endopeptidase (Tolerase). This enzyme has clinical studies to support its use for gluten sensitive patients. According to these studies, it is the most effective gluten digesting enzyme currently on the market. 12 This compound (Tolerase), has been demonstrated to significantly diminish the gluten concentration in both the stomach and duodenum. It is also able to digest the immunogenic parts of gluten, and thus serves to inactivate gluten. As an added benefit, the product is stable and active under gastric conditions. Additionally, the new product formulated with Tolerase also contains proven stomach/gut healing compounds including Vitamin U and Gamma oryzanol, as well as Okra and Marshmallow root for mucilage support.

Explicitly, Gamma oryzanol, a derivative of rice bran and rice germ, functions as a potent anti-oxidant, demonstrated in clinical studies to protect the gastrointestinal mucosa and provide benefits in gut healing. It is also effective in the treatment of ulcers, and other gastrointestinal syndromes. Additionally, Gamma oryzanol has antioxidant effects as demonstrated by a reduction in the degree of oxidation of lipids and cholesterol, 13, 14, 15 including in the retina, 16 and it has also demonstrated a high capacity to trap peroxyl radicals. 17 Specifically, it has been demonstrated that “gamma oryzanol re-

(Continued on next page)
duced the incidence of stress-induced ulcers. In another animal study, an eight-day treatment with gamma oryzanol, 100mg/kg, subcutaneously, showed a significant inhibition of fasting ulcer, while the five-day pretreatment exerted slight effects on ulcers. In a third animal study, gamma oryzanol, given 1-100mg/kg subcutaneously daily for five days, reduced the ulcer index dose-dependently, and slightly prevented the rate of increase in serum level of 11-OHCS (hydroxylcorticosteroid). These effects were observed in adrenalectomized as well as sham operated rats. Gamma oryzanol has also been demonstrated to improve muscle strength following resistance training. Specifically, 600 mg/day gamma oryzanol supplementation during the 9-week resistance training increased muscular strength in young healthy males, but it did not change anthropometric and body measurements.

Vitamin U, named such due to its anti-ulcerogenic capacity, and its GI protective effects, has been demonstrated to be protective against famotidine (Pepcid)-induced suppression of gastric surface mucus cell function. Natural sources of vitamin U include green cabbage leaves, alfalfa sprouts, spinach, kale, tomatoes, celery, wheat, turnips, radishes, and parsley. Also, raw or fermented foods.

Okra (Abelmoschus esculentus) possess strong antioxidant activity, and is noted as beneficial to support mucous membrane inflammation, especially for inflammation of the respiratory tract (when accompanied by excessive secretions). Okra is comprised primarily of water, carbohydrates, and protein with very little fat and a fair amount of dietary fiber. Okra is also a significant source of vitamin C and contains many other micronutrients such as calcium, phosphorus, iron, beta-carotene, and B vitamins. The carbohydrate content of okra is primarily in the form of mucilage, a long chain polysaccharide molecule made up of sugar units and amino acids. Thin-layer chromatography analytical methods indicate that the polysaccharides in okra gum contain galactose, galacturonic acid, rhamnose and glucose. This water-soluble mucilage is the source of okra’s viscous, slippery consistency, which is linked to okra’s effectiveness in treating gastritis and other conditions where the mucilage acts as a demulcent agent, i.e., it provides relief to inflamed mucous membranes.

Okra is said to be an excellent source of vitamins C and K, and a very good source of folate, vitamin A, magnesium and thiamin. According to one source the Secondary Metabolites include: (Per 1 cup [approx. 100 g] raw okra pods) include, and excellent source of Vitamin K: 31.3 mcg (26.1% DV) and Vitamin C: 23 mg (25.6% DV), as well as a very good source of Folate: 60 mcg (15% DV), Vitamin A: 716 IU (79.5% DV), Magnesium: 57 mg (13.5% DV), Thiamin: 0.2 mg (16.7% DV), Dietary Fiber: 3.2 g (11.4% DV), and Vitamin B6: 0.22 mg (12.9% DV), and a good source of Potassium: 299 mg (6.4% DV), Calcium: 82 mg (6.3% DV), Phosphorus: 61 mg (4.9% DV) and Niacin: 1 mg (6.3% DV). It also provides Zinc: 0.6 mg (5.5% DV), Iron: 0.6 mg (3.3% DV), and Vitamin E: 0.27 mg (1.8% DV). DV = Daily Value as established by the US Food and Drug Administration, based on a 2,000-calorie diet. The Macronutrient Nutrient Profile for okra consists of:

Profile: (Per 1 cup [approx. 100 g] raw okra pods)
33 calories 2 g protein 7.5 g carbohydrate 0.2 g fat

Marshmallow (Althaea officinalis) is a mucilaginous herb that forms a protective coating on the mucosal lining of the respiratory tract, which functions to defend the lining against irritants. It also possesses anti-inflammatory activity.

The German Commission E Monographs, a therapeutic guide to herbal medicine, approves Althaea officinalis for irritation of mouth and throat and associated dry cough/bronchitis, as well as for mild stomach lining inflammation. It is also noted to alleviate local irritation, to inhibit mucociliary activity, and to stimulate phagocytosis, as well as to aide with mild inflammation of the gastric mucosa. Caution: Marshmallow may have hypoglycemic effects; use with caution in diabetic patients.

In comparison to other gluten digesting products on the market, which must typically be used in combination with additional digestive aids to be effective, this endopeptidase (Tolerase) containing product is effective as a stand-alone product. In comparative products containing DDP-IV, even with the additional compounds, they are only effective an estimated 35% of the time. Thus, when compared to other similar products, the major advantage of the prolyl endopeptidase is that it does not need to be used in conjunction with synergistic ingredients to be effective. Also, a lower dose is typically required to offer the same effect as comparable products, thus making it more economical and offering better patient compliance.

Unlike Tolerase, DDP-IV is an exopeptidase that digests the outer part of the gluten protein. This digestion has not shown clinical benefit by itself. However, it is also promoted as a “gluten and casein digestive enzymes to support the breakdown of gluten or casein.”

(Continued on page 98)
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Similase GFCF supports a gluten-free, casein-free lifestyle and helps relieve occasional indigestion, gas and bloating.” They use microbial enzymes that aid the digestion of gluten. No claims are made that they can digest the endopeptides of gluten like tolerase does.

Gluten and casein digestive enzymes. Digestion of gluten and casein can be particularly difficult for some individuals. The product Similase GFCF provides enzymes to support comprehensive digestive health, while also featuring superior dipeptidyl peptidase IV (DPP IV) activity for the digestion of proline-containing dipeptides from gluten and casein. Similase GFCF supports a gluten-free, casein-free lifestyle and helps relieve occasional indigestion, gas, and bloating. There is science that shows gluten is not easily digested by commercial enzymes.

The insolubility of gluten in aqueous solutions is one of the major limitations for its more extensive use in food processing. Wheat gluten was enzymatically hydrolyzed by several commercially available proteases (Alcalase 2.4L, PTN 6.0S, Pepsin, Pancreatin, Neutrase and Protamex™) with protein recovery of 81.3%, 42.5%, 53.3%, 61.6%, 46.3% and 43.8%, respectively. The hydrolytic efficiency of these proteases on wheat gluten was also compared.

The hydrolytic efficiency of these proteases on wheat gluten was enzymatically hydrolyzed by several commercially available proteases (Alcalase 2.4L, PTN 6.0S, Pepsin, Pancreatin, Neutrase and Protamex™) with protein recovery of 81.3%, 42.5%, 53.3%, 61.6%, 46.3% and 43.8%, respectively. The hydrolytic efficiency of these proteases on wheat gluten was also compared.

Thus, overall Tolerase has the most beneficial effect in eliminating the symptoms of gluten sensitivity.

About the Author
Dr. Rachel Olivier serves as a Physician Advisor for Biotics Research Corporation, a position she has held for over seventeen years. As a Physician Advisor she serves to educate and provide professional leadership for physicians and practitioners, in an effort to improve product understanding. She serves as Biotics’ chief consultant, advisor and technical expert, and also writes technically oriented papers, training curriculum, and product support material for practitioners and members of the sales team. In addition to this role, she also maintains a part-time nutritional practice, Healthstone Wellness, where she guides patients on lifestyle interventions and provides nutritional consultations. She holds a Masters degree in Molecular Biology from University of Southwestern Louisiana (currently the University of LA), along with a traditional Naturopathic Degree from Honolulu University, and a PhD in nutrition from California University.

She can be contacted at (800) 231-5777 or via email at: rolivier@bioticsresearch.com.

References:
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The Deutz paper describes the results of a randomized, double blind study where ingestion of a complete, balanced functional food beverage containing added whey protein and leucine was able to significantly stimulate muscle protein synthesis in resting patients, whereas a standard functional food beverage without additional whey protein and leucine had no effect on muscle protein synthesis in resting patients.

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What biochemistry and physiology underlies this elevation in androgens in PCOS patients? As you might expect from all that we have learned about chronically ill patients over the years, the usual suspects for the hyperandrogenism seen with PCOS is obesity, inflammation, insulin resistance, and increased free radical activity. Jamilian et al comment: “Hyperandrogenism might occur due to the inflammatory response of the abnormal ovarian theca cells to free oxygen radicals. Furthermore prior studies have indicated that increased oxidative stress and elevated inflammatory markers such as C-reactive protein (CRP) in women with PCOS are correlated with obesity, insulin resistance, and an increased risk of cardiovascular disease (CVD).”

THE ROLE OF MELATONIN IN OVARIAN PHYSIOLOGY

If you are like me, you probably had no idea that melatonin had any role in ovarian function. I certainly did not until I read this paper. Due to this lack of knowledge, the following quote was certainly an eye opener for me:

“Current evidence suggests the involvement of melatonin in ovarian physiology including ovulation, follicular development, luteal function, and oocyte maturation. Furthermore, melatonin deficiency seems to be involved in the pathophysiology of PCOS. It has been shown that melatonin is an efficient predictor of oocyte quality and IVF outcomes: indeed, its high concentration correlates positively with a satisfactory quality of oocytes. On the other hand, intrafollicular melatonin level is significantly reduced in patients with PCOS.”

However, from an overall standpoint, it is interesting to note that PCOS patients tend to demonstrate high levels of melatonin.

Why might this be? The next quote discusses this relationship and why it exists:

“In addition, Jain et al. demonstrated that nocturnal melatonin levels in women with PCOS are higher than in control subjects. Elevated nighttime melatonin levels in PCOS have been explained by a feedback mechanism due to its decreased concentration in the ovarian follicles. So, women with PCOS who have high oxidative stress are synthesizing more melatonin, probably in an effort to eliminate extra free radicals.”

Why is high melatonin in the ovarian follicle so important? Jamilian et al continue:

“High melatonin levels in the ovarian follicle fluid is pivotal for ovulation, follicular growth, and quality of oocyte, whereas reduced melatonin levels in follicular fluid may be responsible for decreased oocyte quality and anovulation in these women.”

(Continued on next page)
The next quote discusses past research on the impact of melatonin and myo-inositol supplementation:

“In a recent study, melatonin and myo-inositol co-supplementation significantly improved embryo and oocyte quality in women with PCOS who were candidates for IVF, when compared with myo-inositol alone. In addition, treatment with melatonin and myo-inositol significantly improved ovarian stimulation protocols and pregnancy outcomes in women who failed to conceive in previous IVF cycles because of poor quality of the oocyte.”

**THE CLINICAL STUDY CONDUCTED BY JAMILIAN ET AL**

In their randomized, double-blinded, placebo-controlled trial, Jamilian et al evaluated 56 patients aged 18-40 years of age with PCOS who were candidates for IVF. One group of 28 ingested two 5 mg caps of melatonin per day for 12 weeks. The other group of 28 ingested a placebo. The intent of the study was to examine the effect of melatonin supplementation on “…clinical status, hormonal profiles, oxidative stress biomarkers, inflammatory factors, and gene expression related to inflammation…”

The findings were as follows:

“Our findings depicted that melatonin administration for 12 weeks to women with PCOS significantly reduced hirsutism, total testosterone, hs-CRP, and plasma malondialdehyde, while increasing plasma total antioxidant capacity (TAC) and glutathione (GSH) levels. In addition, melatonin administration reduced gene expression of IL-1 and TNF-α.”

In the next quote the authors reiterate the important yet underappreciated role of melatonin in female reproductive function:

“Although it has been considered that the melatonin in human pre-ovulatory follicular fluid is derived from the body circulation, it may also be produced in the ovary (granulosa and oocyte cells). There is current evidence demonstrating elevated melatonin concentrations in the luteal phase compared with the follicular phase of the human menstrual cycle. Melatonin directly stimulates the production of progesterone by granulosa cells or luteal cells and might act at the ovary level to regulate luteal function.”

What was the proposed mechanism for the effect of melatonin supplementation on the PCOS patients? Two possibilities were suggested, the first being independent of any effect on insulin. This conclusion by Jamilian et al was based on the results of previous research:

“After 6 months of supplementation, melatonin significantly improved menstrual irregularities and biochemical hyperandrogenism in women with PCOS through a direct, insulin-independent effect on the ovary.”

The other suggested possible mechanism was insulin-mediated:

“Melatonin is favored toward the treatment of PCOS via its influence on the production of steroids, thereby modulating ovulation and reducing insulin resistance and dyslipidemia.”

**SOME FINAL THOUGHTS ON THE RELATIONSHIP BETWEEN MELATONIN AND REPRODUCTIVE FUNCTION IN FEMALES**

My first thought is, as I suggested above, that I never had any idea how important melatonin is to female reproductive health. I have certainly seen many presentations on melatonin supplementation and have read many papers on the role of melatonin in human health. Yet, for whatever reason, this was my first exposure to a fairly significant research database on the role of melatonin in female reproductive function and, more importantly from a clinical standpoint, the value of melatonin supplementation for women with PCOS-related signs and symptoms which may include, most interestingly, inability to undergo successful in vitro fertilization (IVF).

Of course, to be clear, the Jamilian et al paper did not claim that melatonin supplementation could conclusively improve IVF outcomes. Rather, it stated that melatonin supplementation could create conditions related to embryo and oocyte health that would be conducive to IVF success.

What does appear to be clear and conclusive from the Jamilian et al paper is that there is a very good possibility that melatonin supplementation could be useful in helping the many women suffering from PCOS to alleviate signs and symptoms as well as optimize the key drivers of these signs and symptoms such as inflammation, insulin resistance, and oxidative stress.

**About the Author**

Dr. Moss graduated from the University of Michigan Dental School in 1974 and practiced dentistry in Grand Rapids, Michigan up to 1985. For the last 25 years he has operated Moss Nutrition Products which supplies the Moss Nutrition Professional Line of supplements to practitioners. Since 2000 he has served as adjunct faculty at the University of Bridgeport Nutrition Institute, starting with the Vitamins and Minerals class and, most recently, adding the Assessment in Nutrition class to his teaching responsibilities. Finally, his newsletters of review and commentary on different subjects relating to functional medicine and clinical nutrition are regularly featured in the journals Nutritional Perspectives and The Original Internist.
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A Commentary on the Available Evidence

by Adrian Isaza PhD, DC, DABCI, DACBN

INTRODUCTION

In 2011, at least three different meta-analysis concluded that there was an association between proton pump inhibitors and spinal fractures. Yu, et al, conducted a meta-analysis of observational studies and found that proton pump inhibitors modestly increased the risk of hip, spine, and any-site fractures. Kwok, et al, conducted a meta-analysis which included 12 studies covering over 1,500,000 patients which found that the association is mostly for spine fractures.

Ngamruengphong, et al, performed a systematic review and meta-analysis with over 220,000 fracture cases that were analyzed. The study concluded that there is a modest association between proton pump inhibitors use and increased risk of hip and vertebral fractures.

Recently, two major studies found an association between proton pump inhibitors and spinal fractures. In 2015, Cai, et al, conducted a meta-analysis of 18 studies that revealed a high risk of spine fracture observed in PPI users. This meta-analysis provided evidence to support that both proton pump inhibitors and histamine 2 blockers were associated with increased risk of fracture. Finally, in 2016, Zhou, et al, published a meta-analysis of eighteen studies involving a total of over 240,000 fracture cases. This meta-analysis concluded that PPI use modestly increased the risk of hip, spine, and any-site fracture.

As of 2010, three hospitals in the USA started a stop order policy for all PPIs. They are interested in conducting further studies with melatonin (associated with amino acids and vitamins) in order to replace the therapy with PPIs. The formula with melatonin associated with amino acid and vitamins is a very promising therapy with no significant side effects and very effective in terms of cure of giant ulcers (which are typical of HIV positive patients). PPIs cannot regress or heal this type of ulcer.

NUTRACEUTICALS FOR GASTROESOPHAGEAL REFLUX DISEASE

Melatonin:
Melatonin alone or combined with amino acids and vitamins has shown some promising results for the treatment of these conditions.

In 2006, Pereira performed a single blind randomized study in which 176 patients with GERD were given a dietary supplementation containing: melatonin, L-tryptophan, vitamin B6, folic acid, vitamin B12, methionine and betaine (group A) and 175 received treatment of 20 mg omeprazole (group B). All patients of the group A (100%) reported a complete regression of symptoms after 40 days of treatment. On the other hand, 115 subjects (65.7%) of the omeprazole reported regression of symptoms in the same period.

In 2010, Kandil, et al, conducted a study where 36 patients were divided into 4 groups (control subjects, patients with reflux disease treated with melatonin alone, omeprazole alone and a combination of melatonin and omeprazole for 4 and 8 weeks). This study found that melatonin has a role in the improvement of Gastroesophageal reflux disease when used alone or in combination with omeprazole.

In 2011, Celinsky, et al, performed a study consisting of three groups (A, B and C) of 14 idiopathic patients in each treatment group with gastroduodenal chronic ulcers treated with omeprazole (20 mg twice daily) combined either with placebo (group A), melatonin (group B) or with tryptophan (group C). This study concluded that melatonin or tryptophan, when added to omeprazole treatment, accelerates ulcer healing and this likely depends mainly upon the significant increments in plasma melatonin.

Probiontics:
In 2013, Wang, et al, carried out a meta-analysis of 10 controlled trials involving over 1400 participants. This study revealed that lactobacillus-containing and Bifidobacterium containing probiotic compound preparation during initial H. pylori eradication therapy in the adult may have beneficial effects on eradication rate. In 2018, Losurdo, et al, published a system-
atic review of 11 studies which demonstrated that probiotics alone show a minimal effect on \textit{H. pylori} clearance, thus suggesting a likely direct role.\textsuperscript{11}

**Licorice:**
In 2014, Momeni, et al, performed a double-blind clinical trial of 60 patients with PUD and positive rapid urease test. This study showed that licorice is as effective as bismuth in \textit{H. pylori} eradication.\textsuperscript{12}

**Aloe vera:**
In 2015, Panahi, et al, conducted a pilot randomized controlled trial of 79 subjects who were given aloe vera syrup and the frequencies of eight main symptoms of GERD (heartburn, food regurgitation, flatulence, belching, dysphagia, nausea, vomiting and acid regurgitation) were monitored.

In this study Aloe vera was safe and well tolerated and reduced the frequencies of all the assessed GERD symptoms, with no adverse events requiring withdrawal.\textsuperscript{13}

**Ginger:**
In 2011, Hu, et al, designed a randomized double-blind study of 11 patients who were given ginger capsules. In this study, ginger stimulated gastric emptying and antral contractions in patients with functional dyspepsia.\textsuperscript{14}

In a previous double-blind placebo controlled study of over 1200 participants in 1998 by Talley, et al, omeprazole showed no significant benefit over placebo in dysmotility-like dyspepsia.\textsuperscript{15}

In conclusion:
It is feasible to treat different gastrointestinal conditions like reflux disease, peptic ulcer disease caused by \textit{H. Pylori} and functional dyspepsia with natural supplements as an alternative to pharmaceuticals. More studies measuring the efficacy and safety of these supplements are warranted.

**About the author:**
Adrian Isaza is both a physician and an academic. He also teaches graduate students at Everglades University for the Alternative Medicine Degree program. Adrian holds a diploma in diagnosis awarded by the American Board of Chiropractic Internists and a diploma in nutrition awarded by the American Clinical Board of Nutrition. Moreover, he is a Certified Chiropractic Acupuncture Practitioner and has a masters degree in medical science. He recently obtained his PhD in medical sciences and practices medicine full time in Tampa, Florida. Dr. Isaza has published over 30 papers advocating the use of alternative medicine.

**References:**
Nail Mineral Analysis

An Alternative to Hair Mineral Analysis

by: E.Blaurock-Busch PhD

Over the past 50 years, hair mineral analysis (HMA) has been discredited by numerous, so-called experts who really did not understand the complexity of this test. In all fairness, HMA has also been targeted by foes of alternative treatment methods, because outrageous statements have been made by nonmedical people. While it is still claimed that sodium and potassium levels of hair are representative of adrenal function, modern analytical methods demonstrate that neither of these essential elements can be reliably tested in hair, especially if the hair sample is not washed in the laboratory prior to testing. For sodium and potassium, blood is still the medium of choice.

Like hair, fingernails and toenails are made of a tough protein called keratin, as are animals’ hooves and horns. Along with hair and teeth they are an appendage of the skin. These tissues accumulate metals that circulate in the bloodstream. Due to their specific growth pattern, hair and nail reflect past or chronic exposure.

The average nail growth has been noted by different authors between 2-3 mm per months and is considered about 1/3 the growth rate of hair. A complete nail replacement may take between 3 to 6 months; toenails require 12 to 18 months. The actual growth rate is dependent upon age, gender, season, exercise level, diet, and hereditary factors. Nails grow faster in the summer than in any other season. Pregnancy causes a change in nail growth as it does in hair growth. Contrary to popular belief, nails do not continue to grow after death; the skin dehydrates and tightens, creating the illusion of nail (and hair) growth.

Physiologically, nail can depict the history of recent imbalances. As the American Academy of Dermatology has stated in its webpage, nail has been used as a diagnostic tool since ancient times. Deep transverse grooves known as Beau's lines may form across the nails (not along the nail from cuticle to tip) and are usually a natural consequence of aging, though they may result from disease. Nutrient deficiencies, drug reaction or poisoning can be located through nail analysis. The visual nail evaluation has long been used as an early test, followed by testing the actual nail mineral concentration.

Zinc lines are seen after injury to the nail bed. They are also found in nails of patients suffering from a chronic zinc deficiency or after patients experienced severe and often feverish infections. See table 1

Table 1

Table 2 shows nails from a patient with iron deficiency.
Discoloration, thinning, thickening, brittleness, splitting and other deformations can indicate illness in other areas of the body. Nail mineral analysis (NMA) reflects toxic exposure as it happened during the period of growth.

Concave nails such as the ones seen in Table 3 may be seen in patients afflicted with hemachromatoses or systemic lupus erythematosus.

Table 3

Discolored nails such as the one in Table 3 are generally the result of injury, but a chronic B12-deficiency also causes nails to be black in appearance. Table 4 shows an injured nail.

Table 4

A thallium or arsenic intoxication changes the appearance of nails as shown in Table 5.

Table 5

Research, some of it is outlined on the next two pages, has substantiated nail mineral analysis as a useful indicator for nutrient mineral and toxic metal evaluation. NMA is a useful alternative for patients undergoing chemotherapy and total hair loss, or for those who chemically treat hair. For this metal test, 0.20g are needed and nails must be free of paint. Over the past 40 years, Micro Trace Minerals of Germany established nail reference ranges. (See sample report, on following page 112)

Part 1 of this sample report shows a borderline high manganese level, which may be improved by a change in eating and drinking habits. Tea drinker often show elevated manganese levels. Foods high in manganese include mussels, wheat germ, tofu, sweet potatoes, nuts, brown rice and chickpeas. Low cobalt levels may indicate a need for vitamin B12 (the B12 molecule contains cobalt).

Part 2 shows an elevated barium and mercury level in need of treatment. For an elevated uranium level, the method of choice would be avoiding the source.

The authors of Trace Elements in Nails as Biomarkers in Clinical Research stated that “compared to other potential biomarkers of trace elements, nail measurement has certain advantages in clinical research.”

(KaHe 2011) Van Noord and colleagues assessed the selenium levels in nails of premenopausal women and stated that ‘smoking-related decrease in nail selenium level was of the same order as the differences between breast cancer cases and controls’ (Van Noord 1987). Hunter et al assessed the validity of the selenium concentration in human toenails as a measure of selenium intake and concluded that “data provide further evidence for the validity of toenail selenium as a measure of selenium intake and indicate the need to control for

(Continued on page 113)
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## MINERAL ANALYSIS

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<tr>
<th>Doctor</th>
<th>Sample Doctor</th>
<th>Patient Name</th>
<th>Sample Patient</th>
<th>Clinical Information</th>
<th>Sample Report short profile (P9)</th>
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<table>
<thead>
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<th><strong>Essential Trace Elements (ppm = mg/kg = mcg/g)</strong></th>
<th><strong>Acceptable Range</strong></th>
<th><strong>Test Value</strong></th>
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</thead>
<tbody>
<tr>
<td>Chromium</td>
<td>0.10 --- 1.40</td>
<td>0.29</td>
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<tr>
<td>Cobalt</td>
<td>0.01 --- 0.29</td>
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</tr>
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<td>Copper</td>
<td>4.45 --- 17.40</td>
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<td>Iodine</td>
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<td>Iron</td>
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<td>Manganese</td>
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<td>Molybdenum</td>
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<td>Calcium</td>
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<th><strong>Acceptable Range</strong></th>
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<td>Boron</td>
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<td>Germanium</td>
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<td>Lithium</td>
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<td>Aluminum</td>
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<table>
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<th><strong>Acceptable Range</strong></th>
<th><strong>Test Value</strong></th>
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</thead>
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<td>Arsenic-total</td>
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<td>Barium</td>
<td>&lt; 4.00</td>
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<td>Beryllium</td>
<td>&lt; 0.03</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Bismuth</td>
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<td>Cadmium</td>
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<td>Lead</td>
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<td>Mercury</td>
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<td>1.17</td>
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<td>Nickel</td>
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<td>3.28</td>
</tr>
<tr>
<td>Palladium</td>
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<td>Silver</td>
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<td>Tin</td>
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<td>Uranium</td>
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<td>Zirconium</td>
<td>&lt; 2.80</td>
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n.n. = not detected

Accreditation: DIN EN ISO 17025; Quality control: Dipl. Ing. Friedle, Ing. J. Merz, Dr. Rauland; Validation: Dr. E. Blaurock-Busch PhD, Laboratory physician: Dr. med. A. Schönerberger
Dr. Blaurock-Busch: Nail Analysis (continued from page 110)

age and cigarette smoking in epidemiologic studies of the health effects of selenium exposure’. (Hunter 1990) Zeegers et al used nail analysis as a prediagnostic tool for the evaluation of bladder cancer (Zeegers 2011) and Ohgitani et al concluded that ‘Nail mineral content may be utilized as one of the indicators of bone mineral metabolism’. (Ohgitani 2005).

In summary, nail analysis may be more than an alternative to hair mineral analysis because it has less potential to be environmentally influenced.

References


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**How to Smoothly Transition Off the Keto Diet**

by: Robert G. Silverman, DC, DACBN, DCBCN, MS, CCN, CNS, CSCS, CIISN, CKTP, CES, HKC, FAKTR

Whether you’re considering trying the keto diet and want to know what lies ahead for you, or you’ve reached your goal—weight loss, performance, or otherwise—while on keto and are ready to adopt a different diet, here are some key details you should know to smoothly transition off the keto diet.

**What is the keto diet?**

The keto diet is based on the idea that eating mostly healthy fats, consuming high-quality protein in moderation, and restricting carbohydrates to less than 50 grams per day, provides your body with the fuel you need to lose body fat without hunger, weakness, and fatigue. The reduction in carb intake puts your body into a metabolic state called nutritional ketosis. During keto-sis, your body no longer relies on glucose as a primary energy source. Instead, your liver converts fat into ketones—which are a great source of fuel for both your body and brain.

**Why would you transition off the keto diet?**

To achieve the shift from glucose to ketones as a primary fuel source, you have to restrict your intake of carbohydrates—avoiding foods high in carbs, limiting fruit consumption as it’s higher in sugar content, and foregoing fruit juice altogether. You would also avoid grains or starchy products such as rice or pasta; beans or legumes; root vegetables; and any low-fat or diet products, as they are typically highly-processed and high in carbs. That being said, many people come off the keto diet when their health goals have been achieved, or their functional medicine practitioner has recommended a dietary change to achieve new health or performance goals.

**How to transition off keto safely/ What to expect**

While it is difficult to predict what physical effects an individual will experience when transitioning off keto, here are some common effects to look out for—and how you can best support your body and immune system during this time.

1.) **Blood sugar fluctuations.**

While some people may experience minimal effects, others may find that their blood sugar spikes then crashes after reintroducing carbs to their diet. To support your body in this dietary transition, reintroduce carbs gradually. Rather than going straight for pasta or bagels, reach for plant-based carbs such as whole grains, beans, legumes, fruits, and non-starchy vegetables. As a rule of thumb, you should still limit your daily carb intake as part of a healthy diet. To support your insulin levels, taking a natural supplement called alpha-lipoic acid (ALA) may improve insulin sensitivity while transitioning off keto. Varying blood sugar levels can cause jitteriness, mood changes, hyperactivity, and fatigue, so be sure to consult with your practitioner if you experience any of these symptoms.

2.) **Weight fluctuations.**

A variety of factors can dictate whether you will experience weight gain or weight loss when transitioning off keto. Depending on how long you’ve been on keto, how your body metabolizes carbs, what the rest of your diet looks like, how often and what type of exercise you do, and more, all play a role in your weight. To proactively combat weight fluctuations, I recommend a gradual transition from the keto diet either to a paleo diet then to a Mediterranean diet, or straight to a Mediterranean diet. These diets are high in fat, moderate in carbs, and make for an easier transition off keto. Another option is to introduce—or continue—intermittent fasting. Many people who adopt the keto diet have also incorporated intermittent fasting to maximize the benefits the combined approaches provide.

Haven’t heard of intermittent fasting? While there are different types of intermittent fasting, such as daily, weekly, and alternate day intermittent fasting, the most common involves only eating during a specified window of time each day. That window typically spans between four and seven hours of feeding during the day, but it can be reduced or expanded depending on your dietary needs. Of its many benefits, intermittent fasting works on both sides of the calorie equation. It increases the amount of calories you burn by boosting your metabolic rate and reduces the amount of calories you consume by limiting the food you eat. According to a 2014 review, intermittent fasting can cause weight loss of 3-8% over 3-24 weeks. A study also showed that intermittent fasting caused less muscle loss than continuous calorie restriction.
3.) Bloating:

Two of the most common issues that people experience when transitioning off keto are bloating and intestinal issues due to the re-introduction of fiber. To help with the discomfort of bloating, I recommend incorporating probiotics in your new diet. Probiotics work in a wide variety of ways to improve your overall health. They crowd out “bad” bacteria, break down toxins, help with digestion, and combine certain essential nutrients such as folic acid and vitamin K. Probiotics aid those transitioning off keto by supporting intestinal health, and can help give your immune system the extra boost it needs while its under stress. Whether you consume probiotics by food or supplements, strain and diversity are the key elements to maximizing their benefits.

4.) Hunger:

The combination of high-fat and moderate-protein key to a keto diet make it both filling and satisfying. When you transition off keto, you will likely feel hungrier after meals as they start to contain less fat and more carbs. To combat this and smooth your transition, you can implement one of the above transitional diets (paleo or Mediterranean), or focus on pairing carbs with both protein and fat. Doing so can help slow digestion and boost satiety, while also limiting blood sugar spikes and crashes. I also recommend avoiding ‘GPS’—gluten, processed foods, and sugar—to help stave off hunger while you’re transitioning off keto.

With the support of probiotics, a blood sugar supplement and transitional diet options, you can smoothly make the switch to another health-promoting diet. Whether you have reached a weight loss or performance goal, or you’ve been otherwise instructed to adjust your lifestyle, I hope you’ll use these tips as a guide to continue making health-conscious choices as you transition off keto.

References


Dr. Olivier: Gluten (continued from page 98)

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