

# Health Hunters Newsletter

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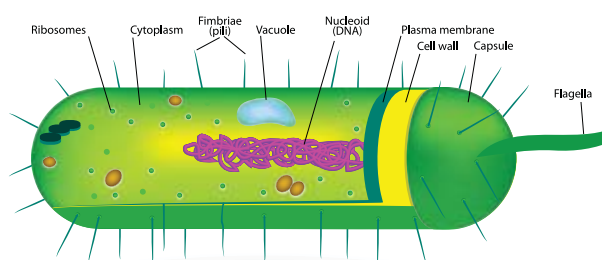
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## The Super Probiotic

by Ron Hunninghake, MD



### Are we human, or are we bacteria?

Bacteria are the oldest living organisms on the planet. As simple single-celled microorganisms, they absorb nutrients from their environment, grow until they have doubled in size...then they divide. They have only one long strand of DNA that encodes all their traits and genetic functions. When they divide, this strand is replicated. Given a

nutrient rich environment, bacteria can multiply very rapidly to large numbers.

Most people know that their digestive tracts are home to what are commonly referred to as "the friendly bacteria." The actual number is over 100,000,000,000,000 (100 trillion) bacteria including other symbiotic microbes. Counting the gut, the bacteria in anatomical cavities such as our sinuses, and then the large numbers on our skin, these microbes outnumber human cells by a factor of 10 to 1!

Even more striking is that the microbial genes of this "human microbiome" (as renamed by the National Institutes of Health in 2007) outnumber human genes by a factor of 100 to 1! Since all life is carried out by genetic information, this amazing statistic begs the question—are we more bacterial than we are human?

The biomass of the human microbiome actually outweighs the human liver. As previously unsuspected functions of the human microbiome are being discovered, scientists are now speaking of it as the body's "forgotten organ." Unlike medicine's strictly anatomical understanding of what and where an organ is located, the human microbiome is "disseminated." This word refers to the amazing fact that microbes occupy every square millimeter of our skin. They live in all the nooks and crannies of our body (sinuses, vagina, and ear canals, etc.) as well as the entire surface area of our gastrointestinal tract—which is estimated to be equal to that of two tennis courts!

This evolving picture of the human microbiome is challenging our antiquated ideas of the "location" and origins of various diseases and disorders. For instance, "neurological/brain-based" disorders such as depression or autism may very well have their true root origins in the gut! Science now knows that there are more neuronal cells in the GI tract than in the human brain, making the gut a kind of "second brain." These second brain neurons are tightly wired to the first brain.

All neuronal cells "talk" to one another through the production of chemical messages called



The Super Probiotic continues on page 2...



# Letter from the Editor:

by Amanda Hawkinson

How many of you have had yogurt in the past week? Past month? Past year? Yogurt is one of many ways for us to add healthy bacteria (Probiotics) to our bodies. According to a survey conducted by Professor Glenn Gibson:

- Only 21% of people surveyed currently take probiotics
- 46% would consider taking a probiotic supplement
- 54% of people do not think that probiotics should be taken every day
- 83% of participants were unaware that stomach acid can reduce the number of probiotics

Probiotics are defined as "good" bacteria that promote the healthy function of the digestive system. The intestinal microflora (involved in a number of digestive processes) in human beings contains about 100 trillion bacteria belonging to 400 different species.

There are many misconceptions about probiotics, what they do, and where to get them. This issue of the *Health Hunters Newsletter* takes a closer look at probiotics and their sources.

So sit back and fall in to the wondrous world of probiotics and find out how you can incorporate them into your daily nutrition plan.

To a Happier, Healthier, 2013!

**Amanda Hawkinson**  
Editor

[newseditor@riordanclinic.org](mailto:newseditor@riordanclinic.org)

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*The Super Probiotic continued from page 1...*

neurotransmitters, such as serotonin and dopamine. The big discovery here is that the microorganisms in our gut also make these neurotransmitters! During times of stress, our gut bacteria may be talking to our "first brains" through the neurons located in lining of our GI tract! Anxiety may indeed be a "gut feeling" coming from our human microbiome.



The following chart represents a current sampling of human microbiome functions in regulating and maintaining health:

<b>control of unwanted pathogens in the gut</b>	<b>synthesis of many neurotransmitters</b>
<b>regulation of inflammation and immunity</b>	<b>liver health and detoxification pathways</b>
<b>synthesis of vitamin K and biotin</b>	<b>regulation of hormonal metabolism</b>
<b>enhanced mineral bioavailability</b>	<b>blood sugar and appetite regulation (weight control)</b>

### Probiotics Are "For Us"

The first yogurts and kefir probably occurred in the milk-filled goat stomach bags draped over the backs of camels in the hot deserts of North Africa. Temperatures reaching 110°F were ideal for lactic acid-producing bacteria found in the stomach linings to go to work. Since this early period in human history many races have fermented dairy to improve "shelf life" and to enjoy diversified tastes.

Nobel laureate Metchnikoff, in the early 1900s, reported on the enhanced health effects and improved longevity of those consuming fermented milk products. Because these bacteria were found to be working symbiotically "for us" instead of "against us" the terminology of "probiotic" was introduced by Lilly and Stillwell in 1965. Probiotics are found in fermented milk products and in food supplements that add to and promote healthy bacteria in the gut. Antibiotics are pharmaceutical agents used to kill disease-causing bacteria, but inevitably they disrupt the healthy microbiome. The following chart lists typical symptoms that can be improved by the regular consumption of probiotics.

<b>diarrhea</b>	<b>flatulence</b>	<b>constipation</b>
<b>vaginitis</b>	<b>lactose intolerance</b>	<b>food allergies</b>
<b>bloating</b>	<b>indigestion</b>	<b>"brain fog"</b>

Because the gut is considered to be the largest organ of the immune system, it is not surprising that probiotics are associated with better immune function. How do bacteria in the gut help our immunity?

### The Mighty Macrophage

The defensive linebacker of the cellular immune system is the macrophage. These "Pacman" cells not only gobble up invading viruses and bacteria, they generally direct the other elements and various cell types in a synchronized immune defense.

There are two branches of the immune system in which the macrophage functions: the innate (non-specific immune defense) and the adaptive (specific immune defense mechanisms).

Macrophages are themselves signal-directed. The signal that activates macrophages (and subsequently the whole immune response) is a glycoprotein (a molecule made up of a sugar and a protein) called "Gc protein-derived Macrophage Activating Factor." The abbreviation for this long name is GcMAF.



*The Super Probiotic continues on page 3...*

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# Patient Profile

by Nichole Kunkel, RN, BSN

In the spring of 2011, a young female in her early 30's visited the Riordan Clinic seeking a life change through nutrition. Initially, she decided to take the first steps towards change by going through our HCG program in attempt to learn to eat better. During consultations, she quickly realized a supplemental nutrition change was also needed in her diet.

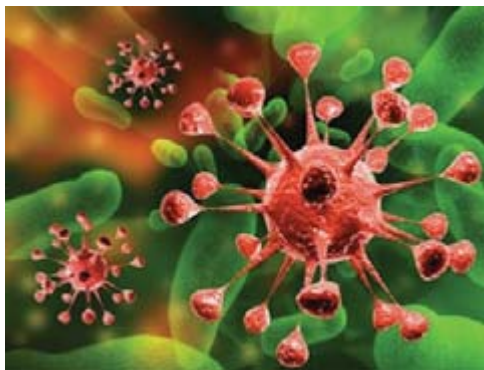
In the past, this patient had been diagnosed with Irritable Bowel Syndrome with a possible missed diagnosis of Crohn's disease. Due to an inflamed gut, her body did not absorb many essential nutrients well. Vitamin C and probiotics were immediately prescribed. An excellent antioxidant that helps cleanse the gut so it can kill bad bacteria and viruses, vitamin C also decreases inflammation while boosting the immune system. Good probiotics, with high specific culture counts, aid in building the good bacteria the gut needs for proper digestion. The gut is the body's second brain. Without a healthy gut, the body cannot be told how to function properly.

After only a couple of weeks on probiotics, the patient experienced tremendous change in her overall gut and body wellness and function. In the past her gut could not handle any vitamin C at all, let alone other supplements. The probiotics built up the normal flora (the good bacteria) in the gut to properly digest foods and nutrients. This allowed for essential nutrients that were deficient to be absorbed, which quickly improved the overall function of her body.

By seeing and experiencing first-hand the importance of gut function and the role it plays in the overall well-being of the body, this patient began introducing the practices she learned here, at the Riordan Clinic, within her practice as a veterinarian. She quickly witnessed the same positive improvements within the health of the animals she treated.

To find out more or to make an appointment, call **316-682-3100** to start your journey to a healthier you.

The Super Probiotic continued from page 2...



The important precursor to GcMAF is "Gc", a big protein with 458 amino acids containing three domains. The first domain of Gc binds vitamin D. For this reason Gc is sometimes called "vitamin D binding protein". There's a small sugar attached on the threonine amino acid at position 420 of Gc. This makes position 420 "glycosylated."

When injury, inflammation, or any immune challenge is detected in the body, the sugar at position 420 is then "deglycosylated" by enzymes produced by B and T-lymphocytes. The result is the conversion of Gc into GcMAF—one of the

most powerful activators of the entire immune system discovered to date.

## The Nagalase Nemesis

Why doesn't our innate GcMAF do a better job of protecting us? Why are there so many vexing immunologic disorders?

The following chart is a summary of the many medical mysteries that involve significant immune dysfunction:

<b>AIDS</b>	<b>Cancer</b>	<b>Autism</b>	<b>Crohn's Colitis</b>	<b>Psoriasis</b>
<b>Chronic Fatigue</b>	<b>Fibromyalgia</b>	<b>Candidiasis</b>	<b>Rheumatoid Arthritis</b>	<b>Heart Disease (?)</b>
<b>MS</b>	<b>Lupus</b>	<b>Severe IBS</b>	<b>Parkinson's</b>	<b>Obesity (?)</b>

It turns out that there is a nemesis enzyme at work that is also activated by viruses, cancer, and the very causes of chronic inflammation in the first place. The very conditions that are begging for a more effective natural therapy actually sabotage the Gc before it can be activated to GcMAF. This nemesis enzyme's technical name is: alpha-N-acetylgalactosaminidase—mercifully abridged to the name NAGALASE.

Nagalase inactivates Gc—the precursor of GcMAF. So, ironically, when the body needs immune support the most, it is often left with inadequate "ammunition" to arm and activate its troops, the macrophages.

Nagalase activity has been used as a biomarker for tumor activity (i.e. melanoma). Nagalase levels are elevated in AIDS patients. Nagalase levels also correlate with Chronic Fatigue Syndrome.

The good news here is that GcMAF is itself NOT inactivated by nagalase. This fact opens the door of possibilities for treating the myriad of chronic immune disorders weighing on humanity.

GcMAF has been synthesized in the laboratory and can be given by injection with excellent results. However this approach is expensive and unlikely to be used by the masses for a long term treatment.

Is there a way to economically and safely get GcMAF to those who need it?

## Enter the Super Probiotic

Interestingly, the same enzymes used by the immune system to transform Gc into GcMAF appear to occur during fermentation of milk.

Perhaps Metchnikoff's observation of "favorable health effects" in those people consuming fermented milk products was, in actuality, the first documentation of enhanced GcMAF formation in the body from a natural food source. (Please note that this is the author's speculation.)

It is reasonable to assume that the many and various strains of bacterial cultures in fermented dairy and the ever-growing list of probiotic bacteria probably represent different levels of effectiveness in the



The Super Probiotic continues on page 4...

Happy New Year from

**Marie's Cafe And Bakery**  
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**Cafe Hours** 9:00 am – 3:00 pm M–F

**Bakery Hours** 9:00 am – 3:30 pm M–F

(Located on the lower level of the  
Riordan Clinic Supplement Store)

It may not seem like another year has slipped by, but it's renewal time once again. Yes, that means knocking off the holiday cheer around your waist line and thighs, and relieving the mental stresses from 2012. This month and throughout the year Marie has a featured dish just for those who have committed themselves to a healthier year, and for all the calorie counters.

**"Caring for the whole person has always been our focus."**

—Marie Hunt, Owner

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production of these Gc-to-GcMAF transformative enzymes.

This thinking leads to an intriguing question: would it be possible to create a "super probiotic food" made from an original sequence of milk fermentation processes to take optimal advantage of nature's method of making GcMAF?

This has been the working hypothesis of Dr. Marco Ruggiero, an Italian MD with a PhD in molecular biology, who for the last three years has been diligently attempting to "crack the code" so as to harvest this potential bounty of enhanced natural immune function. Marco has rounded up bacterial ferments from all over the globe, skillfully combining the art and science of milk fermentation to create a special "medical food" which holds tremendous possibilities for humankind.

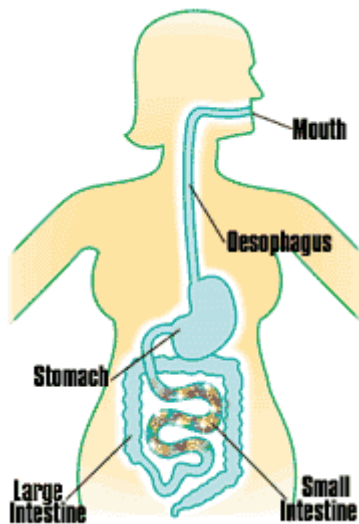


### MAF314®

Dr. Marco came to the United States this past October and made a presentation at the 3rd Riordan Symposium on IVC and Cancer. Marco introduced us to over 40 published studies from different research groups that document the effects of GcMAF in vitro and in patients with cancer and other diseases. He discussed the human microbiome and GcMAF's potential role in helping humankind re-establish a healthier relationship with its "bacterial heritage."

Since October, the Riordan Clinic has the opportunity to serve as a test site for these discoveries in the re-formulation of milk fermentation with the explicit purpose of optimizing the production of GcMAF from a natural food. In order to set this food apart from table yogurt or kefir, this healthy (or functional) food is designated MAF314®, a name that underlines the precise algorithm used to obtain the final product.

Currently the Riordan Clinic Research Institute is initiating a comprehensive program to study MAF314® from both a basic science and a clinical science perspective. Phase one will be designed to compare participants consuming MAF314® to a control group consuming a more standard fermented milk preparation.



A broader study looking at the long term effects of MAF314® on nagalase levels, CRP, CD4, and other inflammatory markers is currently being structured.

We are excited about this new research and will continue to provide updates.

### Conclusion

A famous naturopathic truism goes like this: "Death begins in the gut." As I grow in my knowledge of natural medicine, I have learned to appreciate the profound truth of this warning. As the digestive system goes, so goes the patient's health. Digestive health is highly influenced by the health of the living organisms that occupy it.

So, take good care of your gut bacteria...science is showing that they're as much you as you are!





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# Know Your Nutrients—Probiotics: Are All Yogurts Created Equal?

by Amanda Hawkinson



Yogurt is a good source of probiotics. At least that is what popular health magazines would have us believe. I can't tell you how often I talk to someone about probiotics, and they reassure me that they are getting probiotics by eating yogurt daily. When this is brought up I am often intrigued and ask "what kind of yogurt?" Which usually gets the response, "Yoplait."

Unfortunately, not all yogurts are created equal. While it is true that probiotics are used when turning milk in to yogurt, many natural occurring bacteria in milk are killed off during the pasteurization process. This process increases shelf life and reduces potential pathogenic microbial contamination,

but due to heat-sensitivity, most probiotics are destroyed by the process.

Luckily, there are some yogurts out there that are labeled with live, or active, bacteria that have not been heat-treated. However, it is hard to know the real amount of bacteria that is being consumed, along with what strain is being consumed. Without knowing the strain being eaten, it is difficult for us to know how much of the probiotics are resistant to gastric or bile acids, or which specific health benefit they offer. This leads to a list of unknown variables between yogurts.

So what kind of yogurt should you indulge in? I personally prefer to consume foods with the least amount of processing or number of ingredients and additives. For general health benefits, a plain yogurt (not your typical grocery store flavored yogurt with granola) with active bacteria would be a wise choice. Adding fresh fruit at home can be an effective way of making plain yogurt more desirable.

With the introduction of pasteurization, and other processing (including added sugar), the decline of probiotics in our food sources quickly followed. It is vital to carefully make the right selection when hunting for the perfect yogurt.

### Some great examples to look for are:

- Homemade yogurt from raw milk
- Plain Greek / Kefir
- Dannon All Natural
- Stonyfield Farms
- Horizon
- Organic yogurt from health food stores

**Note: Steer clear of any "lite" yogurt!**



# Kombucha: A Fermented Tea Drink

by Anne Zauderer, DC



This month we are spotlighting probiotics, which are "good" bacteria that reside in and on our bodies. I would like to introduce you to another way to introduce these bacteria to your body beyond taking a supplemental dose of probiotics.

**KOMBUCHA!** (pronounced: kom-BOO-cha) is a fermented tea drink that has grown in popularity over the past five years.

The origins of the drink can be traced back to ancient China over 2000 years ago where it was worshipped as an elixir for

immortality. The process of making the drink involves fermenting tea with sugar using a SCOBY (symbiotic colony of bacteria and yeast). The process of fermentation produces colonies of good bacteria that can help with the break-down of food particles within the digestive system. The resulting drink is bubbly, sweet, and slightly acidic with a vinegar-like taste. Other health benefits

Know Your Nutrients continues on page 6...

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# Bio-Center Laboratory January Special

## 30% OFF Lipids Profile

**Assess your risk of developing cardiovascular disease or monitor your current treatment.**

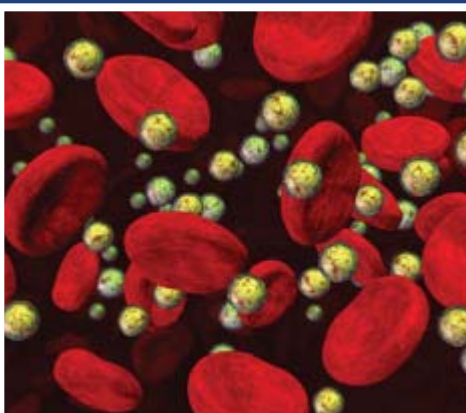
Lipids, along with carbohydrates and proteins, are an important part of living cells. Including substances such as fat, oil, or wax that dissolves in alcohol but not in water, lipids serve as a fuel source. They contain carbon, hydrogen and oxygen and are an important component of the structure of cells.

A person's lipids are greatly affected by many factors, for example, excessive weight. Someone who is carrying excessive weight generally would have high cholesterol or triglycerides (lipids). By losing weight, it is possible for a person's cholesterol and triglyceride levels to decrease, which would also decrease the risk factors for a variety of diseases, including cardiovascular disease and plaque on the arteries.

Take advantage of this month's special offer and receive 30% off a Lipids Profile.

Regular: \$92  
**Special: \$64**

Offer valid January 1–31, 2013



*Know Your Nutrients continued from page 5...*

that have been attributed to kombucha include: improved liver detoxification, increased immunity, and cancer prevention\*.

The drink can be purchased at most health food stores. However, for an adventurous spirit, the drink can also be made at home. The process involves adding a SCOBY, or mushroom, to a batch of sugary tea in a large glass jar. The mixture is left alone for about a week to allow the fermentation process to occur. At the end of the week, you will have your own batch of kombucha! Different flavors can be added to taste the drink as you desire. With each batch that is made, the SCOBY produces another "baby" mushroom that can be passed onto friends to make their own batches. Caution should be used when making the drink on your own, because with any fermentation process, there is a risk for cross-contamination with other bacteria cultures. A few cases of contamination have been reported with home brewed tea that has led to health complications in the individuals producing the tea.



With the excessive use of disinfectants, antiseptics, and antibiotics in our culture, using fermented foods, like kombucha, is an effective way to introduce good bacteria back into our system.

### Other fermented foods:

- Miso
- Soy sauce
- Tempeh
- Kimchi
- Kefir
- Sauerkraut
- Sake

\*Note: The alleged health benefits have not been proven through researched clinical trials.

## Making the Change: Indulging in a Healthy Relationship with Food

*by Jennifer Kaumeyer, ND*

Obesity or excess weight is not a disease but rather a symptom of an underlying cause. Weight loss and acquiring a healthy weight are important to reaching optimal health; however, it is not the answer alone. Weight loss, I would assume, is the number one New Year's resolution. However, over time, because of yo-yo dieting, people begin to lose hope that they ever will lose weight permanently. The question is, why are people yo-yo dieting? The answer is, because most individuals are not looking deeper into the issue of the causes of the weight gain. These causes can be physical, hormonal, social, environmental and especially emotional. Believe it or not, even our emotions can actually change our hormonal expression. Did you know that there are hormones that control your appetite?

Once upon a time, food was scarce and we went through periods of famine and periods of feast. So, when food was plentiful our bodies wanted to make sure our appetite was hefty so we could eat and store plenty of fat for when the famine set in. Therefore, we actually have hormones that increase our appetite when food is plentiful. Because food is always plentiful now for the majority of us, these hormones are always raging but mostly when we overindulge. Sounds counterproductive, right? But, it wasn't for our Paleolithic ancestors. It was actually a survival mechanism. Lucky for us, our ancestors survived the famines due to what is often referred to as the "thrifty gene." But now, we suffer! These hormones are induced mainly when we over-eat sugars and simple carbohydrates, even fruit and fruit juice.



*Making the Change: Indulging in a Healthy Relationship with Food continues on page 7...*

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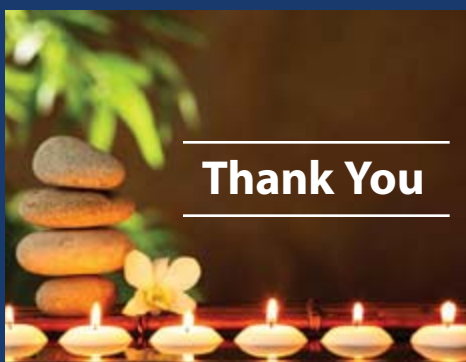
# In Gratitude...

As a not-for-profit organization, we rely on many to make our vision a reality. **So many come together to provide our patients with a place of hope, health and healing.** Here are just a few we'd like to thank.

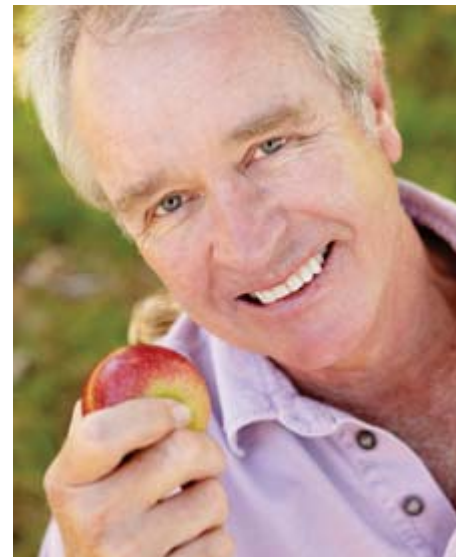
- All individuals and groups who have donated to our cause through financial support, including:
  - Justus Fugate, Wichita, KS
  - Contributor, Clearwater, KS
  - Nancy Norris, Goddard, KS
  - Dolores Yoder, Hesston, KS
- Crestcom International for event/meeting space rental
- Our patients and co-learners who spread the good word about the clinic:
  - "Dears all,  
We are wishing you could join us here in the Hawaiian Islands for an infusion of soft scented air, gentle music, hula stretching, papaya & fresh fish feasting!

It doesn't matter where we are, we continue to sing your praises and hold you in our prayers.

With deep gratitude & fond aloha," —C.R., Wichita



Think about the last time you ate an 8 ounce filet mignon; it probably filled you up or at least didn't leave you starving for more. An 8 ounce filet has about 400–500 calories. Now think about the last time you had a muffin from Starbucks, which has about the same calorie content. Did you feel as full or did it leaving you wanting more? Or how many times have you baked sweets and kept going back into the kitchen for more? This is partly due to your hormones which can cause us to lose self-control, especially when we are unaware of what is really happening. How do we remedy this? Inducing famines again doesn't sound so enticing, but educating ourselves about this phenomenon and learning to control it is definitely manageable. I've witnessed many people learn to successfully control these hormones, and you can too!



This is one reason why I like the HCG program we offer here at the Riordan Clinic; it helps reset these "hunger hormones." We treat each patient individually and not only focus on the diet but also spend time educating the participants on what is happening in their bodies and how to control it. Because it is overseen by a doctor, often times other health problems may be discovered along the journey and can be addressed outside the program. Again, we always want to address the causes of the weight gain as we focus on losing weight. This is the only way to permanent weight loss and overall increase in quality of life. You often hear not to focus on "weight loss" but rather "lifestyle change," but most people do not know what that means or how to make that change. Through education and close guidance, the Riordan Clinic HCG Rx+ program can help you achieve and maintain that lifestyle change you are looking for!

## RIORDAN CLINIC RESEARCH INSTITUTE

**Editor's note:** The following press release was sent out in December regarding this recent important finding by our research team, led by Dr. Nina Mikirova, Director of Research.

### Study Finds High-dose Intravenous Vitamin C Reduces Pain and Inflammation in Those with Rheumatoid Arthritis as Reported in a Recent Paper Published by Riordan Clinic Scientists



Rheumatoid arthritis (RA) is a major inflammatory joint disease that causes cartilage destruction, bone erosions, and joint destruction. In severe cases, it can also lead to rheumatoid nodules, vasculitis, heart disease, lung disease, anemia, and peripheral neuropathy. Oxidative stress is elevated in RA patients implying reactive oxygen species (ROS) are possible mediators of tissue damage. ROS trigger a cascade of events through nuclear factors' activation, which up-regulates gene expression of pro-inflammatory cytokines that mediate the immune responses causing inflammation. Decreasing inflammation and oxidative stress may provide protection for regenerating cartilage within the joint. Control of inflammation in

patients with RA is also the important goal when it comes to the reduction of cardiovascular risk in these patients.

The Riordan Clinic has long been interested in the use of ascorbic acid (vitamin C) at millimolar concentrations (attainable via intravenous infusions) to treat illnesses associated with inflammation, including cancer, atherosclerosis, and viral infections. At high doses, vitamin C has been shown to reduce the production of pro-inflammatory cytokines. Ascorbic acid has other properties that suggest it may be useful in treating rheumatoid arthritis: it is an antioxidant that scavenges ROS and it supports collagen formation and enhances extracellular matrix protein synthesis. Interestingly, RA patients tend to be vitamin C deficient and require high supplementation doses required to maintain plasma ascorbic acid at acceptable levels. In addition, studies show below-normal ascorbic acid concentrations in synovial fluid of RA patients.

Riordan Clinic Research Institute continues on page 8...

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# Invest in the Vision

## Opportunities for Substantial Gifts

Nutrition-based medicine is a solution for true health and wellness, and the Riordan Clinic has taken a leadership role in research, education and clinical services. The following are two ways you can make a substantial gift to the Riordan Clinic. You will receive tax incentives while investing in the growing field of nutritional medicine.

- **Bequest through a Will:** One of the simplest ways to support the continued work of the Riordan Clinic is through your estate, and you do not surrender ownership of the gift during your lifetime. You can make a gift bequest after others have been provided for. You may designate a dollar amount, specific property, a percentage of the estate, or whatever is left (remainder).

- **Gift of Life Insurance:** Another way to make a significant gift is to name the Riordan Clinic as the beneficiary to receive all or a portion of the proceeds of an existing life insurance policy. You will receive a tax deduction in the year of the gift, generally close to the cash surrender value of the policy.

To learn more about these charitable giving options, please contact Paula Smith at the Riordan Clinic: 682-3100 or at [psmith@riordanclinic.org](mailto:psmith@riordanclinic.org).



Riordan Clinic Research Institute continued from page 7...

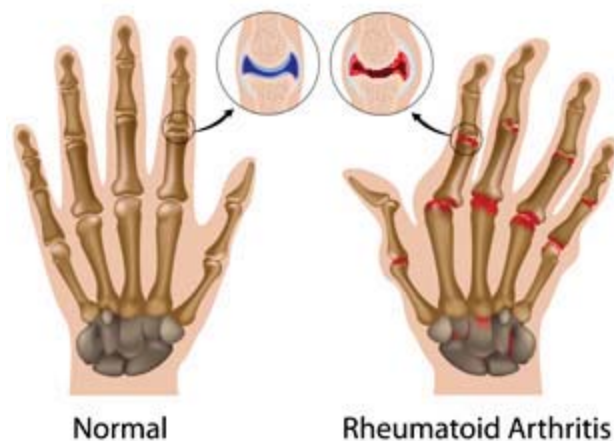
Based on the properties of ascorbic acid to reduce oxidative stress, decrease production of pro-inflammatory cytokines, and suppress the activation of pro-inflammatory nuclear factors, we analyzed the effect of intravenous millimolar concentration of ascorbic acid in RA treatment. The rheumatoid arthritis patients in this study were characterized by moderate to high levels of the inflammation marker CRP accompanying moderate to severe discomfort levels. The effect of intravenous vitamin C (IVC)

treatment on subjects with RA demonstrated that IVC therapy with dosages of 7.5 g–50g can reduce inflammation and the pain levels. The inflammation as measured by C-reactive protein levels was decreased on average by 44 %. The average CRP level before treatment was  $9.4 \pm 4.6$  mg/L, while the average after IVC therapy was  $6.4 \pm 4.6$  mg/L. Examining those subjects who showed a net CRP decrease, we found that the effect of treatment is IVC frequency dependent. Based on this pilot study, it is hypothesized that IVC therapy is a useful strategy in treating RA, and that more research into this possibility is warranted.

This research, conducted by Riordan Clinic scientists Dr. Nina Mikirova, Dr. Joseph Casciari, Andrea Rogers and Paul Taylor, has recently been published in the Journal of Modern Research in Inflammation in an article entitled, "Effect of high-dose intravenous ascorbic acid on the level of inflammation in patients with rheumatoid arthritis."



To read this and other articles written by Riordan Clinic researchers, go to <http://www.riordanclinic.org/research/journal-articles.shtml>, or view the article on the Journal's website at <http://www.scirp.org/journal/mri/>.



## Lunch & Lecture Series 2013

### The Super Probiotic: Medical Food for the Immune System



**Presenter:** Dr. Ron Hunninghake  
**Date:** Thursday, January 24, 2013  
**Time:** 12:00 p.m. to 1:00 p.m.  
**Cost:** \$10—Lunch is included.

Have doctors discovered a "Super Probiotic" that has been shown, in the treatment of cancer and other chronic diseases, to have positive effects, such as regulating the immune system, reducing the side-effects of traditional therapies, reducing inflammation, and counteracting nutritional deficiencies?

Enjoy lunch and listen as Dr. Ron unfolds the science behind this new "medical food" and what it may mean to those who suffer from chronic illness.

If you are unable to attend in person check out this lecture on our **live webcast**.

Reservations **REQUIRED**

Call **316-927-4723** or email us at [reservations@riordanclinic.org](mailto:reservations@riordanclinic.org)





# Antibiotics May Not be the Best First Line of Defense!

by Laurie S Roth-Donnell | Master Herbalist and Holistic Health Practitioner

Do you consider antibiotics as your last resort when feeling ill and fighting a flu bug or infection? For over 50 years, antibiotics were the front line defense offered up by your family physician. Studies have shown that 98% of those infections (many being viruses that do not respond at all to antibiotics) would have also likely responded to alternative therapy in conjunction with basic self care that includes plenty of rest, healthy diet and lots of fluids. Today bacteria and viruses have evolved into super bugs where mainstream antibiotics no longer kill the germ, it just mutates.

For centuries, the following natural cures have been used to stimulate the human healing system or assist in fighting these germs.

## Garlic

Garlic (*Allium sativum*) is documented to lower LDL cholesterol, but may also reduce blood pressure, kills fungi, protects against blood clots, heart disease and cancer, has antimicrobial properties, helps with chest infections, and is an excellent

source of manganese. It is also a very good source of vitamin B6 and vitamin C. In addition, garlic is a good source of protein and thiamin (vitamin B1), as well as the minerals phosphorus, selenium, calcium, potassium, iron and copper. Garlic offers anti-oxidant protection with vitamin C, which also aids against cardio vascular disease, prevention of heart disease and lower levels of homocysteine. It protects against cancer and heavy metal toxicity from exposure to selenium. Its general properties are anti-inflammatory, antibacterial, and antiviral and may lower the risk of colon cancer. Garlic is also excellent in fighting Candida yeast. Simply eat one clove of raw garlic each morning for 10 days to kick out a bug! Also, try chasing the garlic with a jigger of raw vinegar and then a glass of fresh water.



## Grapefruit Seed Extract

A grapefruit bioflavonoid concentrate works well to help knock out a cold. Grapefruit seed extract is a bioflavonoid concentrate; taken at the first symptom of an infection, it will help knock it out. Take one 100 mg tablet every four to five

hours or a few drops of the liquid. Women have reported that grapefruit seed extract therapy will effectively cure urinary tract infections.



## Echinacea

The herb Echinacea, sometimes combined with goldenseal in formulas, is an effective immune stimulant, but works best when used early on in an infection. It may trigger allergic reactions, so if you take a dose and feel worse, stop taking it!



## Olive Leaves

Olive leaves have been used medicinally for centuries to treat fever, malaria, colds, and fungal infections. Modern research shows that a bitter constituent of olive leaves called oleuropein has antibacterial, antiviral, and antiprotozoal effects. The best way to take olive leaf as a supplement is as an extract in capsule or liquid form.



## Elderberries

American Indians have a long history of using Elderberries, primarily for the treatment of infections. Elderberries contain anti-inflammatory bioflavonoids that have been shown in test tube studies to inhibit viral growth. Specifically, elderberry flavonoids can stifle the activity of a protein needed by the flu virus to multiply and spread. It is no surprise that elderberry is especially effective against viral infections such as the flu and the common cold.



As always, check these ideas out with your primary care physician and have a Healthy New Year!

## Resources:

*Prescription Alternatives*, Earl L. Mindell

*The Encyclopedia of Healing Foods*, Michael Murray, ND.

## WE ARE EXPANDING!

Are you, or do you know, a like-minded physician (MD, DO) interested in fulfilling the Riordan Clinic's mission of "stimulating an epidemic of health?" Someone who sees patients as equal participants in their health?

Our current doctors are amazing, and due to recent change and tremendous growth, we are looking to add to our team. Dr. Ron Hunninghake, Chief Medical Officer, is looking forward to mentoring the next generation of nutrition minded doctors.

For more information about this incredible opportunity contact

**Donna Kramme, COO**  
[dkramme@riordanclinic.org](mailto:dkramme@riordanclinic.org)  
**316-682-3100.**

*Thank you for your continuous support, believing in what we do, and for spreading the word!*

