Riordan Clinic

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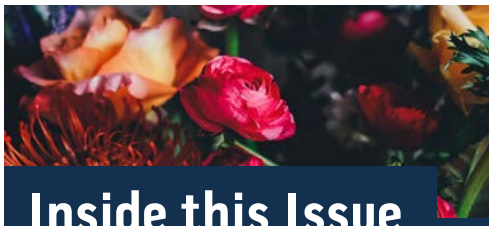

Inside this Issue

Riordan Clinic is a not-for-profit 501(c)(3), nutrition-based health facility in Wichita, Kansas co-founded in 1975 by Olive W. Garvey and Hugh D. Riordan. We have integrated lifestyle and nutrition to help you find the underlying causes of your illness. Since our inception in 1975, the mission has been clear and unwavering to "…stimulate an epidemic of health."

High-dose Intravenous Vitamin C as a Successful Treatment of Viral Infections

AUTHOR

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Do you know that injections of vitamin C were successfully used in treating polio, diphtheria, herpes zoster (shingles), herpes simplex, chicken pox, influenza, measles, mumps, and viral pneumonia in the middle of the 20th century?

Most of these treatments are described in the book "Injectable Vitamin C: Effective Treatment for Viral and Other Diseases." This book is a tribute to and acknowledgment of the important thinking and work of Dr. Fred R. Klenner and other physicians and researchers who worked in medicine from the 1930s to the 1970s. They made the pioneering efforts on the medical use of injectable vitamin C in the treatment of viral infection. One of the first studies in the inactivation of poliomyelitis virus in an in-vitro setting using crystalline vitamin C (ascorbic acid) was designed by C. W. Jungeblut, MD in 1935.

IN 1949, DR. KLENNER REPORTED SUCCESSFUL TREATMENT OF POLIO, DIPHTHERIA, HERPES ZOSTER, HERPES SIMPLEX, CHICKEN POX, INFLUENZA, MEASLES, MUMPS, AND VIRAL PNEUMONIA WITH INJECTIONS OF LARGE DOSES OF VITAMIN C.

"The results," he wrote, "which we have reported in virus diseases using vitamin C as the antibiotic may seem fantastic."

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In the poliomyelitis epidemic in North Carolina in 1948, 60 cases of this disease came under his care. The treatment employed was vitamin C in high doses. It was given like any other antibiotic every two to four hours. The initial dose was 1000 to 2000 mg, depending on age. This schedule was followed for 24 hours. After this time the fever was consistently down, so the vitamin C was given 1000 to 2000 mg every six hours for the next 48 hours. All patients were clinically well after 72 hours.

In the treatment of other types of virus infections, the same dose schedule was adopted. In herpes zoster (shingles), 2000 to 3000 mg of vitamin C was given every 12 hours; this was supplemented by 1000 mg in fruit juice by mouth every two hours. Eight cases were treated in this series, all adults. Seven experienced cessation of pain within two hours of the first injection and remained so without the use of any other analgesic medication. Seven of these cases showed drying of the vesicles within 24 hours and were clear of lesions within 72 hours. They received from five to seven injections. Chicken pox gave an equally good response, the vesicles responding in the same manner as did those of herpes.

WHEN SUBJECTS ARE EXPOSED TO A VIRAL INFECTION, THE NEED FOR VITAMIN C IS INCREASED, DEPENDING ON THE BODY'S IMMUNE FUNCTION.

In addition, Dr. Klenner treated many cases of influenza with vitamin C. The size of the dose and the number of injections required were in direct proportion to the fever curve and to the duration of the illness. Further the response of encephalitis virus to ascorbic acid therapy was dramatic. Six cases of encephalitis were treated and cured with vitamin C injections. Two cases were associated with the pneumonia virus; one followed chicken pox, one mumps, one measles and one a combination of measles and mumps. In all these cases definite evidence was found to confirm the belief that frequent injections are necessary in treating virus infections with vitamin C.

Dr. Klenner published all studies of a variety of diseases successfully treated through injections of vitamin C and suggested that due to effectiveness of injectable vitamin C, this vitamin can be considered as a super antibiotic.

Another pioneer in the therapeutic use of injectable vitamin C, Dr. W.J. McCormick, notes that while until 1952 vitamin C had been used "primarily and solely" to counteract deficiencies of the vitamin, it also has potent chemotherapeutic properties when given in large repeated doses, preferably intravenously or intramuscularly.

In 1954 the article, "Treatment of hepatitis with infusions of ascorbic acid: comparison with other therapies," by H. Baur and H. Staub was published in a Swiss (German) medical journal. The article reported that injectable vitamin C was used successfully to treat 11 hepatitis patients at the University of Basel Medical Clinic between 1951 and 1952. Results compared favorably with those obtained in 195 patients who were treated by other means. The vitamin C injections were 10 grams per day.

Later in 1962, Dr. W.L. Dalton described treating a severe case of acute hepatitis in his article, "Massive doses of vitamin C in the treatment of viral diseases." This study reports on the successful use of a preparation for intravenous administration consisting of 2000 mg of ascorbic acid per dose fortified with certain B-vitamins to treat several different viral-caused diseases including hepatitis, mononucleosis, and pneumonia.

Despite all these studies, there was resistance by the medical profession to the use of large amounts of vitamin C in treating viral disease. As Linus Pauling complained, "the medical community requires rigorous evidence supporting vitamin C but accepts flimsy evidence against it."

According to recent knowledge, people with viral infections have low serum levels of vitamin C, which may be due to increased utilization of vitamin C for the detoxification of reactive oxygen species (ROS) during inflammation caused by infection. Viral infections produce severe oxidative stress, contributing to cellular damage and disease progression. Low serum vitamin C in these individuals may be due to the increase in inflammatory and oxidative processes that take place during a pathological state.

When subjects are exposed to a viral infection, the need for vitamin C is increased, depending on the body's immune function. It was therefore proposed that in the clinical Flu virus management of viral infections, especially in the early stages, considerable benefits will be noticed from antioxidant repletion with dosages substantially above recommended daily allowances.

In recent years, vitamin C has been under investigation for its role as an antiviral agent, either by itself or as an adjunctive therapy to be administered in company with a conventional treatment. It was shown that vitamin C at sufficiently high doses can prevent viral disease and greatly speed recovery from an acute viral infection.

Most studies use an in-vitro (outside of a living organism) setting. In vivo studies (those using a live organism) are scarce because the use of animals that have the ability to synthesize ascorbic acid is problematic.

Several mechanisms for vitamin C's antiviral effect are known or suggested from these studies. First, the antioxidant property of vitamin C promotes a reducing environment in the bloodstream and

tissues, enhancing the body's response to oxidative stress from inflammation, thereby helping to fight microbes and viruses that propagate in stressful conditions.

Viral infections often lead to oxidative stress to the infected cells, and therefore, antioxidants are expected to suppress oxidative stress and work as antivirals or 'drugs,' improving inflammatory symptoms. Among these substances, the protective effect of ascorbic acid has been assumed due to its powerful scavenging and anti-oxidative property.

Vitamin C is also involved in enhancing several functions of the immune system. Cells of the immune system have one of the highest concentrations of vitamin C: white blood cells have an 80 times concentration of vitamin C in their cytoplasm, allowing them to create a vitamin C concentration surplus at the site of infection. Vitamin C can also enhance the production of interferon, which helps prevent cells from being infected by a virus, stimulate the activity of antibodies and cytokines, and in mega-doses, play a role in mitochondrial energy production. It can enhance the ability of specialized immune cells to ingest bacteria.

In addition to this general neutralizing effect, vitamin C interferes with the assembly of viral RNA and DNA. In a recent study (2012), in vitro experiments showed ascorbate's ability to kill isolated influenza viruses, as well as viruses from normal human bronchial epithelial cells. There was a dose dependent effect—a concentration of 2.5millimolar was able to eliminate 90% of the virus present and a 20 mM solution completely stopped the replication of the virus. The antiviral effect of ascorbate is greater when introduced in the early stages of infection.

It was also proved that the antiviral activity of ascorbic acid is not virus-specific. The researchers used 3 different types of viruses and measured relative virus yields and fraction of dead cells after the addition of solutions of ascorbic acid or dehydroascorbic acid. The virus yield decreased as the reagent concentration was increased, and in the presence of 30 mM of the reagent, the yields of these viruses were approximately one tenth of those in the absence of the vitamin C. These results show that ascorbic acid inhibits the multiplication of viruses of widely different structures, i.e., regardless of enveloped or non-enveloped, double-stranded DNA or single stranded RNA genome, and regardless whether the replication and transcription of the viral genome occur in the nucleus or in the cytoplasm of the infected cells. For characterization of the mode of action of ascorbic acid, authors suggest that either free radical formation or direct binding to virus, or both, is responsible for the antiviral activity of vitamin C.

Among in vivo studies, we can mention a multicenter prospective cohort study of 16 general practitioners from Germany, involving 67 symptomatic herpes-zoster (shingles) patients that received intravenous vitamin C treatment, with dosage of 7.5g/50ml for 2 weeks, in addition to standard treatment for shingles. The data provides evidence that concomitant use of intravenously administered vitamin C along with the shingles treatment may have beneficial effects on herpes zoster-associated pain, dermatologic findings and accompanying common complaints.

IVC and Epstein-Barr

In the Riordan Clinic, we analyzed the effect of intravenous vitamin C therapy on patients with Epstein-Barr virus (EBV). EBV is a member of the herpes family that targets lymphocytes and epithelial cells. While the infection is usually benign, it can in some cases lead to acute infectious mononucleosis and can impair the immune system. EBV is linked to several malignancies, including Burkett's lymphoma, post-transplant lymph-proliferative disease, Hodgkin's disease, and several autoimmune diseases.

There has been very little success treating acute EBV infection and mononucleosis with drugs. Corticosteroids may be helpful in treating complications of infectious mononucleosis, including central nervous system involvement, myocarditis, tonsillar enlargement causing airway obstruction, and hemolytic anemia. However, a double-blind study showed that acyclovir had no significant effect on symptoms of EBV-related infectious mononucleosis.

Our data provides evidence that high dose (7.5 to 50 grams) intravenous vitamin C (IVC) therapy may have a positive effect on disease duration and may reduce viral antibody levels. The benefit seems to be dependent upon the number of IVC treatments given, as patients given ten or more IVCs had significantly greater reduction in viral antibody load when compared to untreated controls.

Further research and clinical studies are warranted in finding the effect of ascorbic acid on boosting of the immune system, stimulation of anti-viral activity of leukocytes (white blood cells) and proving the mechanisms underlying the action of vitamin C in viral disease.

Contact the Editor

Please send any comments or suggestions to newseditor@riordanclinic.org. Thank you for reading.

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Food Sensitivities, Intolerances, and Allergies

So- Which one is it?

AUTHOR
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"Don't bring peanuts to school." "Avoid gluten." "Eat dairy free cheese."

We hear these phrases more and more each year, but as the media exacerbates the true definition of food allergies, we are beginning to lose site of what an allergy really is, and what it means to an individual.

DIFFERENTIATING

First and foremost, there are three classifications of food "allergies". A true Allergy to a food is when exposure to a food triggers a harmful immune response in the body. The immune system attacks the proteins within the food, thinking it is being harmed. From this, we experience symptoms ranging from mild (such as a rash or an itch) to more severe reactions such as difficulty breathing.

A food sensitivity is often a combination of a mild allergy, and perhaps some digestion issues. We often see food sensitivities increase when foods are combined. For example, you may have an asymptomatic food sensitivity to tomatoes, gluten, and dairy, but when you combine all three (i.e. pizza) you may notice symptoms.

In contrast, a food intolerance is a symptomatic response to a food that is usually caused by a digestive issue, such as not producing enough of a certain enzyme to properly break down a food. The symptoms may be like that of a food allergy but does not create an immune response that be seen under a microscope. Food sensitivities are a milder version of a food intolerance, and generally show more mild symptoms. They may also appear non-existent when the foods are ingested in small amounts.

DIAGNOSING

Food sensitivities and allergies are quite easy to diagnose. Allergies can be diagnosed by exposing a person's blood to a food and watching for a reaction under a microscope or via enzyme- or fluorescence-linked immunosorbent assays. Laboratory companies will then rate the response to each food on a scale, that typically is equivalent to severity of symptoms. There are four main forms of food testing (though others may exist): IgG, IgE, and IgA, and cytotoxic (cellular). Immunoglobulins (Ig) are antibodies that fight off foreign invaders in the body, such as viruses, bacteria, and in this case, foods our body may be allergic to. Immunoglobulin G is the most common antibody found in the blood and other bodily fluids and is often used when screening for food allergies. Immunoglobulin A are found in the respiratory and digestive tracts and can be used to screen for food allergies. Immunoglobulin E exist

in the blood stream on a consistent basis and are found in more concentrated amounts when fighting an allergen. These are most used via allergists and referred to as a "Prick Test" and are also used for environmental allergies such as cats, dogs, grass, and pollen.

Foods that do not show up on an allergy test may be the result of a digestive issue instead, and therefore we can perform lab tests to see what bacteria are living in the gut, what digestive enzymes are being (or not being) released, enzyme concentrations, pH levels, and other important markers may be imbalanced, collectively referred to as gut dysbiosis or exocrine pancreatic insufficiency. Gut Dysbiosis, an imbalance in gut bacteria. Exocrine pancreatic insufficiency, meaning a lack of enzyme production. Both can be primary conditions that can cause a multitude of secondary conditions, including high blood pressure, insulin resistance, vitamin deficiencies, and brain fog.

ACCURACY IN DIAGNOSING

Your doctor may recommend that you re-screen for allergies after 6 months of treatment. This is because as the body's inflammatory response decreases overall, the reaction to certain foods may also increase. Think of it this way, a co-worker may be even more irritating to you on a day that you are already in a bad mood, than when you are in a good mood. We often see some of the less severe food allergies (lower on the severity ratings previously mentioned) decrease into negligible ranges after 6 months of successful treatment.

Conversely, some individuals may indeed not be allergic to the food itself but may be allergic to the chemicals used on the food processing. This is extremely common when screening for gluten, the primary reacting agent in wheat. When individuals test results come back inconclusive, the next step is to begin eliminating toxic exposures such as glyphosate and other pesticides and herbicides.

TREATMENT

There are many options for treating food allergies. At the Riordan Clinic, we recommend an elimination diet where foods are completely removed from the diet for a period of time, and slowly one by one a food may be reintroduced, carefully watching for symptoms of allergies or sensitivities. If a symptom appears, the food is eliminated again, and is typically avoided for a determined period before trying to reintroduce once again.

Rebalancing gut dysbiosis typically involves prebiotics and probiotics (healthy gut bacteria, and the food they need for energy), as well as vitamins you may be deficient in. It may also include a dietary modification such as the Auto-Immune Protocol (AIP), an anti-inflammatory diet, or even a gut cleanse.

SUCCESS WITH TREATMENT

50 million Americans experience allergies each year[1]. They are the 6th leading cause of chronic illness in the U.S., and cost nearly $25 billion each year[2]. With these statistics rapidly increasing each year, we are seeing significantly higher quantities in food allergy testing, and thus, have more case studies to base our success rate on. While a food allergy in an adult may not simply "disappear", the symptoms and imbalances within the body caused by this allergy often do with successful dietary modifications.

WHERE TO START

If you are interested in food allergy testing, call us at **(800) 447-7276.**

For existing patients, we will schedule an appointment for a blood draw with our nurses and call you for an in-person appointment with one of our providers after your results are back.

This appointment will include going over your results and creating a plan of action for addressing your symptoms, including dietary modifications, supplements (if needed), and additional testing (if needed).

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Finding Calm in the Midst of Chaos

AUTHOR
Gael Wheeler, DO

With the unwelcome entrance of COVID-19 in our lives, we find ourselves in a tidal wave of uncertainty regarding the evolving impact of the virus both personally and as a society at large, leaving many to feel overwhelmed by worry and stress. Vigilance and concern are certainly warranted but it is important to be conscious of the tipping point where this becomes chronic stress and can affect our health.

As an integrative physician, I am acutely aware of the effect prolonged, uncontrolled stress can have on our immune system and our health. In the short term, intense stress can depress our immune system which we so vitally need to be robust right now. In the long term, prolonged stress can lead to blood sugar irregularities, heart disease, and altered brain function, among other concerns. It's important we moderate the physiological effects of stress while we're in the middle of it to avoid a second pandemic of stress-related illnesses down the road. For those who are interested, I will provide another piece discussing the physiology of stress and how it affects us, both in the short and long-term. In the interest of not stressing about stress-related illness, I want to focus today on ways we can moderate our stress response on a daily basis.

Contemplate resilience, personally and globally.

In the past, many of us have been through exceedingly trying times and uncharted waters in our lives personally yet with persistence we found our way through. Many times in human history we collectively have faced challenges and threats that may at first have seemed insurmountable. Yet, step-by-step we found our way through. We can take comfort and find confidence in the fact that we humans are a resilient species. By working on the problem collectively we will find our way through this and we will all be the wiser for it.

Don't feed the fires of stress with information pollution.

This pertains to both the quantity and quality of information. Avoid information overload by limiting your research regarding COVID-19 progression to 30 minutes a day. Secondly, get your information from a few trusted science-based sources. Popular media tends to sensationalize a topic, an approach that can leave you feeling more anxious than informed.

Turn your stress response around with conscious relaxation, meditation and practicing mindfulness in everyday life.

We are wired for survival; when we feel a threat we naturally leap into fight or flight mode. We can catch this and turn it around with conscious effort. The more often you do this the easier it gets.

During stressful times, it's easy to fall into negative thought patterns.

Practice letting go of upsetting thoughts and instead, begin listing in our mind what we are grateful for. Cherish the parts of your life that make you happy when you find yourself caught up in negative thoughts. This may feel like an effort at first but over time helps you realize you have control over your thought processes and you can choose what supports your well-being.

Exercise decreases our stress response by altering brain function, taking us out of fight or flight mode.

Exercise convinces that primitive part of your brain that you've done something physical and didn't get eaten by the saber-tooth tiger, so things must be OK. Find something that you personally enjoy and will do consistently, whether walking, doing yoga, putting music on and moving to it. Exercising in nature gives you an extra boost of positivity.

Lastly, where you can, help with someone in need who's been hit hard by this crisis.

Many have lost their jobs and businesses and are personally going through very difficult times. Whether through your church, a community group or someone you know personally, if you're lucky enough to endure this time in relative security, let's do what we can to help our brothers and sisters who may be struggling. Together, we will all make it through.

In the meantime, check the Riordan Clinic website for things you can do to support your immune function during this time.

Be well, stay safe and cherish your happiness.

Telemedicine: a Win-Win Solution for Everyone

AUTHOR
Gael Wheeler, DO

The coronavirus has changed how we interact with others. We know that the primary transmission of the virus is respiratory droplet and we also know many carriers of the virus may be asymptomatic and not know they have it. We have to behave as though another person may be that asymptomatic carrier and we want to protect our own health; similarly, we could be that asymptomatic carrier and don't want to infect others.

This has implications for the doctor-patient relationship, particularly in a setting such as ours where the patient may be face-to-face with a provider in a confined space for an extended period of time. Most viral infections are dose-dependent. The longer the exposure, the greater likelihood of infection.

Fortunately, this does not mean we must dissolve our doctor-patient relationship. Most practices now offer telemedicine as an alternative to in-person visits. In fact, the Kansas State Department of Health is promoting this as a safer alternative. Patients who have a telemedicine visit will find a number of positive outcomes.

First and most obviously, with the technology available today the patient can receive quality care in a zero-risk environment. No exposure risk for you. Also, the less foot traffic through the clinic, the less exposure to the patients who must come in for treatment (many of whom may be immune-compromised) and to the staff.

Secondly, you don't need to commute to have your visit. You can have your visit in the privacy of your own home, saving the expense and hassle of driving. And fewer cars on the road means a healthier environment!

Third, for many of the issues we address, a hands-on physical exam is rarely needed and will not contribute to the diagnostic or treatment process. When necessary, many aspects of a physical exam can be conducted in a virtual visit.

Telemedicine visits can be via phone or video with Zoom. With a Zoom visit, the office will simply schedule the visit, send you an email with a link that you click on at the appointment time and you will automatically be in a video face-to-face visit with your provider. You can do this on your computer, tablet or even your phone if it has video capability. Even if you want an IV, you can have your visit with the provider through Telemedicine and come in for your treatment later, again minimizing exposure.

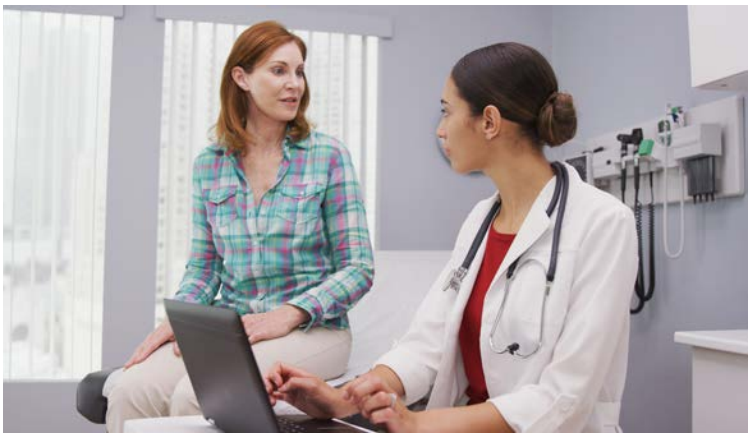
We recommend unless you need to come in for a treatment, try Telemedicine. We know you will find it as good as a visit in person; and in this environment, it is even superior. Join the others who have found this a safe, convenient way to enjoy quality care.

SCHEDULE YOUR VISIT TODAY BY CALLING 800.447.7276.

What to do when your doctor doesn't know what to do

AUTHOR
Gael Wheeler, DO

EACH PATIENT'S JOURNEY TO BETTER HEALTH IS AS UNIQUE AS THEY ARE. EACH PERSON HAS THEIR OWN GENETIC PREDISPOSITION, THEIR OWN ENVIRONMENTAL EXPOSURES AND HISTORY, THEIR OWN HABITS OF LIFESTYLE AND BELIEFS.



Many years ago a seemingly healthy 26 year old woman received a scratch from a rose bush. The resulting infection triggered an autoimmune reaction with inflammation and swelling in the affected arm spreading to the neck, back and legs.

After extensive testing, a Rheumatologist told her that she had a genetic predisposition to this inflammation and now that it had been triggered, nothing could be done. He predicted that before long she would not be able to walk and should plan on being in a wheelchair. And, she'd likely lose her eyesight. She would need to stay on strong drugs to try to control pain, but still would be disabled.

As the mother of a six year old, she decided this prognosis was unacceptable. She searched and found a pain management physician who taught her that a genetic predisposition is not a prediction of what will happen but what could happen. She learned that environmental exposures a person has and choices they make can turn on or off different genes. This knowledge was a game changer.

She found another physician who specialized in a Functional Medicine approach and learned about the power of nutrient and lifestyle choices and how the health of the digestive tract can affect the immune system. She learned about how habits of thought, meditation and stress management can affect the immune system. She learned about the therapeutic effects of targeted exercise and movement.

Within a year of that rose bush scratch, she was pain free and had her life back. Her journey to wellness had many turns and required tremendous commitment. She learned a lot in those few years and below are a few of those lessons. Oh, and by the way, that young woman was me.

First of all, it's important to understand that no doctor knows everything. Each doctor has their own strengths, training and level of experience. Find the value that is relevant to you and then move on if you need more. Shaming a doctor because they don't have all the answers for you is not helpful for you or them.

Second, each patient's journey to better health is as unique as they are. Each person has their own genetic predisposition, their own environmental exposures and history, their own habits of lifestyle and beliefs. All of these play a part in making a person who they are at any given moment. There is no magic bullet, no straight path. It requires curiosity, research and a lot of patience.

Lastly, each person must take personal responsibility to seize their intent and do the hard work to make improvement possible. Moving toward good health is a process. In conventional medicine, people are often passive recipients of symptom control.

In Integrative Medicine, people are often looking for "something natural" to control their symptoms instead of a drug. But, is this real health? To truly improve one's health requires a paradigm shift to being an active creator of health improvement. It requires understanding our physiology and doing what we can to support that. It requires personal commitment; that's what builds Real Health.