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Riordan Clinic is a world-renowned, academic medical center that has led the world in integrative oncology and complex chronic illness care since 1975. The Riordan Clinic was established as a 501 (c)(3) non-profit organization with missions in research, provider education, and patient education. The Health Hunter Newsletter has been published since 1986 as an educational resource to providers and patients.

Ultraviolet Blood Irradiation: New Hope for Chronic COVID



AUTHOR

Thomas Levy, MD, JD

Ultraviolet (UV) irradiation of the blood is a very old but highly effective therapy for a wide range of infections and medical conditions. Early to moderately advanced infectious diseases were shown to be curable nearly 100% of the time. Both bacterial and viral infections have been readily resolved. Wound healing is strongly enhanced, and many different diseases and chronic medical conditions have also been shown to respond very well.

Just as important as the ability of UV irradiation to rapidly resolve infections is its ability to inactivate toxins. Such toxins include those of diphtheria and tetanus, as well as of snake venom. Nearly any toxin comprised of protein can be inactivated by UV irradiation, as it is able to denature (breakdown) proteins as well as cause them to “unfold,” which partially or completely blocks their function by changing their three-dimensional configuration. Also, once partially denatured, many proteins can then be metabolized completely and eliminated from the body.

The toxic agent that is considered to be the primary reason for most of the morbidity and mortality seen in chronic COVID patients and some patients post-vaccination is the spike protein. The spike protein is that part of the COVID pathogen that attaches to cellular receptors (ACE2)



throughout the body and permits the entry of the entire pathogen into those cells. The ACE2 receptors are so widespread that there appear to be no tissues or organs in the body that are completely spared from the infectious and toxic impact of the spike protein.

The continued presence of the spike protein (Persistent Spike Protein [PSP] syndrome) in patients who have never fully recovered from COVID (chronic COVID) is becoming increasingly common and resulting in increased illness and early

Continued on page 2

death in millions of people around the world. However, PSP syndrome is also commonly appearing in post-vaccination patients regardless of whether the COVID pathogen was ever contracted. This should not come as a surprise, as the purpose of the vaccine is to use mRNA to enter the genome to produce spike protein inside the body, purportedly to stimulate an immune response to the entire spike protein-containing COVID pathogen. However, it is now well-documented that many people continue to produce the spike protein long after the vaccination, resulting in the PSP syndrome. And when the vaccination is given to someone who has also contracted COVID at some point in time, it only results in a higher amount of circulating spike protein in the body. Until compelling data indicates a clear-cut benefit to patient health and longevity, consideration should be given to avoiding any of the booster shots that are designed to stimulate further production and presence of spike protein in the body.

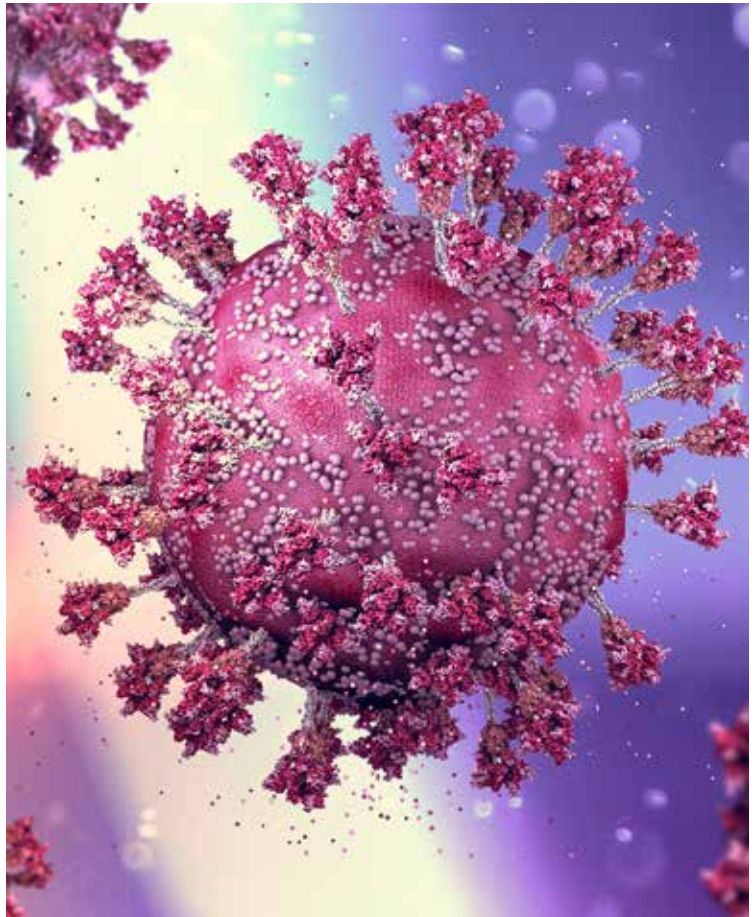
Currently, blood testing for the spike protein is not readily available except for research laboratories. However, the PSP syndrome is closely linked to elevations of D-Dimer in the blood. D-Dimer is a product that results from the breakdown and dissolution of blood clots in the body. When there is an abnormal increase in blood clotting, there is a corresponding increase in the D-Dimer breakdown product. As it is a readily available blood test, D-Dimer testing is an excellent way to better monitor how well a chronic COVID or post-vaccination patient is responding to whatever therapies are being administered. Generally, symptom relief closely parallels the lowering or normalization of an elevated D-Dimer level.

Bio-oxidative therapies, such as vitamin C, hydrogen peroxide, ozone, hyperbaric oxygen, and ultraviolet light have all been shown to be highly effective in the inactivation and/or killing of nearly all pathogens. The COVID infective agent has been shown to be very susceptible to these therapies as well.

Very recent clinical research now shows the UV light irradiation (wavelength 254 nm) can promptly reduce and even normalize D-Dimer levels in chronic COVID patients. As expected, the normalization of the D-Dimer level is typically also accompanied by dramatic symptom relief. Currently, the D-Dimer level laboratory reference range is 0 to 500 ng/cc, or 0 to 0.5 mg/L. While UV irradiation and other effective therapies should be continued as long as the D-Dimer level is greater than 500, it is also reasonable to continue them long enough to see if the level can be dropped even further, to 300 or less, assuring a more comfortable degree of normalcy and eradication of the spike protein.

Because of the nature of the spike protein and its ability to be generated inside the cells, especially after vaccination, it is not possible at this time to regard a normalization of D-Dimer and resolution of COVID symptoms as being a definitive cure with a complete elimination of spike protein from the body. However, the Ultraviolet Blood Irradiation Protocol as established at the Riordan Clinic for some years now can be repeated as needed if symptoms recur and D-Dimer levels again rise.

Proteolytic enzyme therapy is recommended by many clinicians



now to minimize or eliminate circulating spike protein. These include nattokinase, lumbrokinase, serrapeptase, and bromelain taken with N-acetylcysteine. These agents have multiple beneficial effects on health, and one or more of them should still be taken when a D-Dimer level has normalized with UV irradiation and/or other therapies. As noted earlier, UV irradiation clearly can breakdown the spike protein present in the blood. However, even spike protein fragments have been shown to be potent inflammatory and disease-causing agents. Because of this, oral proteolytic enzyme administration is still a good idea to help further breakdown any remaining protein fragments into their constituent amino acids or to a degree where phagocytic white blood cells and the immune system can then clear them out completely.

Ozone therapies and intravenous vitamin C administrations are also very important in reaching a complete clinical recovery from PSP syndrome, both of which are available at the Riordan Clinic.

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VA Adopts New Guidelines for Breast Cancer Screening



AUTHOR

Dr. Stacy Dunn, ND, LAc,
FABNO, FABORM

In late July, the Department of Veterans Affairs (VA) announced new guidelines for breast cancer screening for women whose toxin exposure may put them at increased risk for developing breast cancer. This new policy allows women exposed to burn pits and other toxins during their service, to begin breast cancer screenings and mammograms regardless of their age, symptoms, or family history. The policy change sheds light on an alarming rise in aggressive breast cancer among military veterans, particularly among younger women. [1]

The guidelines were developed in response to a growing concern regarding the health risks of burn pit exposure. Burn pits are large areas (up to 10 acres!) of open-air waste disposal used in military operations. The waste products may include trash, plastics, metal, wood, paints, solvents, ammunitions, and medical and human waste. Jet fuel (containing benzene, a known carcinogen) is typically used as the accelerant. The resulting fumes contain high volumes of toxic particulate matter (PM) in the air that includes metals, benzene, polychlorinated dibenzo-p-dioxins and dibenzo-p-furans (PCDD/Fs), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and other known or suspected carcinogenic compounds. [2]

The Department of Veterans Affairs' announcement regarding



breast cancer in female veterans exposed to burn pits is a critical wake-up call, highlighting the urgent need for further research, support, and healthcare for those affected. It also serves as a reminder that breast cancer is a multifaceted disease influenced by a range of environmental factors, many of which we are exposed to on a daily basis.

My next article will continue the discussion by focusing on environmental carcinogens we are most commonly exposed to in our everyday lives, and how these chemicals may contribute to cancer. And I will discuss how the Riordan approach of root cause analysis provides a framework for testing and treating exposure to these compounds.

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Studies Give Guidance about Foods for Cancer Patients



AUTHOR

Dr. Kirsten West, ND, LAc, FABNO

In the years I have been in practice, it is clear that diet and nutrition are key factors in cancer treatment, prevention, and long-term survival. Two important studies that have been released recently are reinforcing the link between diet and nutrition and long-term breast cancer survival specifically.

Not surprisingly, they together point to a diet high in vegetable and fruit intake and mindful of the amount and quality of carbohydrates. It is important to remember that no one diet fits every survivor's nutritional needs, but these studies offer some good basic guidance.

Both studies were long-term studies that were funded in part by the American Institute for Cancer Research (AICR) and were led by nutritional epidemiologist Maryam Farvid, PHD. Approximately 250,000 women participated through large Nurses' Health studies. Participants joined the studies in either 1976 or 1989. All women were cancer-free at the time they participated in the study and 55 or younger when they joined the study, which means that some of the women had been participating for up to 30 years at the time of publication. By 2011, nearly 9,000 study participants had been diagnosed with breast cancer, and about 2,500 had died. [1]

Fruits & Vegetables

Women in both studies regularly answered questions about their dietary habits, family history, activity, and other cancer risk factors. One of the studies was published in the journal *Cancer Research* and focused on the link between overall vegetable and fruit intake.

The article showed that women who ate the greatest amount of fruits and vegetables after their breast cancer diagnosis had an overall lower risk of dying from any cause compared to those who ate the least amounts. [1]

Predictably, overall vegetable intake had the greatest effect on survival rates, with cruciferous vegetables (such as broccoli, cauliflower, and Brussels sprouts) and green leafy vegetables being among the best. Women who ate a full serving of cruciferous vegetables daily had a 13% lower risk of dying from any cause during the study than those who didn't eat any.

The study showed that whole fruits alone didn't have much impact on mortality, with the exception of blueberries. The study showed that whole blueberries may be linked to a lower risk of dying from cancer or any other cause. In the AICR article, Maryam Farvid said that it could be due to the antioxidants and other nutrients in the berries, but relatively few study participants were eating high amounts of blueberries. More research is needed in



this area, but it is an interesting result. [1] This is not the first time blueberries have achieved accolades in cancer research.

Furthermore, the study drew a specific link between drinking apple juice and an increased risk of dying from breast cancer. The study participants who were considered to consume the highest amounts of apple juice drank an average of one cup each week. Apple juice was separated into its own category for evaluation, and all other juices were combined into a second juice category. Apple juice clearly increased the risk of dying from breast cancer compared to other types. [1] I do believe that it is the high sugar content found in juice that leads to metabolic imbalance and therefore, hastened disease. Even vegetable juice, is high in sugar.

The study separated women into subgroups to evaluate habits and dietary patterns based on different intake levels. Those characteristics included total fruit intake, total vegetable intake, age at diagnosis, BMI, physical activity, daily alcohol consumption, daily fiber consumption, daily animal fat consumption, total fat intake as a percentage of overall calories, total calorie intake, and whether or not participants were current smokers or had ever used oral contraceptives or postmenopausal hormones. Participants completed questionnaires every four years after being diagnosed. [2]

Carbs

The second study was published in *Cancer Epidemiology Biomarkers & Prevention*. It focused on the types and amount of carbohydrates study participants consumed. We know that carbs, and the resulting insulin release, may promote cancer growth. [3]

This study measured the impact of glycemic index, glycemic load, insulin index, and insulin load on breast cancer survival.



One Size Does Not Fit All

It is important to remember that each individual's breast cancer and dietary needs are unique. Every person is different. Every cancer is different, and the interaction between each creates a unique dynamic. The most effective way to identify what food intake is best for each person is through labs, epigenetics (tying closely to ancestry), and tumor characteristics.

When we do not have the best information from testing, I generally recommend a low-carb, Mediterranean diet. It alone heralds the best research to date. Simply put – it is a dietary intake rich in whole foods, high amounts of olive oil and olives, nuts and seeds, herbs and spices, clean proteins, some fruits, and many vegetables. Furthermore, the above studies clearly show diet does matter, and steering clear of sugars and processed carbs is key.

There are many other therapeutic forms of eating, including but not limited to the ketogenic diet, a vegetarian diet, a paleo diet, and a carnivore diet. I think the ketogenic diet can be quite therapeutic as an alternative option.

However, it must be done wisely, with the help of a well-versed ketogenic practitioner, and must make sense given epigenetics and a person's unique terrain. If for specific reasons, a ketogenic diet does not make sense, there are other ways to reach ketosis. One well-proven routine is intermittent fasting, a practice I believe we should all incorporate into our lives. It can be helpful despite individual differences, and there are many ways to incorporate intermittent fasting.

Dietary intake plays a big role in breast cancer survivorship and prevention. We can identify the best nutritional intake for a given individual and any individual cancer through testing and assessment.

For example, triple-negative breast cancer is often referred to as “diabetes of the breast.” Hormone-positive cancer is likely driven by metabolic issues and stress – both play a big role in glucose management. We often see patterns that point to these issues once testing and assessments are complete. However, there is no single cause, but we know that the interaction of terrain with the environment may either lead to “dis-ease” or wellness.

We must also remember that food is meant to be communal and shared with those we love. It ties emotions and nurture, which begin in childhood. Fostering that connection is important. What we eat should not be separate from who we share it with.

The bottom line is that dietary intake must be individualized, as there is no one-size-fits-all diet. Test, assess, and address! And when in doubt, pretend you live with those you love most – your tribe – enjoying a meal on the shores of Greece.

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As with the previous study, participants completed a dietary questionnaire every four years.

As I stated in September's Health Hunters, quality foods matter, and highly processed foods including sugar – and sugar substitutes – contribute to obesity and health problems linked to inconsistent blood sugar and insulin levels. The study found that women who ate foods with a higher glycemic load and glycemic index were at a higher risk of dying from cancer or any cause during the study. [3] The glycemic load measures food's impact on blood glucose and takes into account all carbs in food. The glycemic index assigns a numeric score from 0 to 100 to a food based on how dramatically it increases blood sugar.

For glycemic load, a low ranking is 10 or below. Medium is 11-19, and high is 20 or more. For example, raw broccoli has a glycemic index ranking of 15 and a glycemic load rank of 0.5. Compare that to a slice of processed white bread, which has a glycemic index ranking of 90 and a glycemic load of 43.9. [4] Glycemic load can be sneaky. For example, carrots have a higher glycemic index than ice cream. Subsequently, carrot juice carries an even higher glycemic load.

The insulin ranking index showed similar findings, with higher insulin-raising diets associated with women dying from any cause compared to those who ate lower insulin-raising diets. Fiber also may have contributed to longer survival during the study period. [1]

The studies identified some limitations, which do warrant additional research. The study participants were primarily White, so findings may not apply as directly to other racial and/or ethnic groups. The studies also did not directly take into account how a cancer recurrence or another disease may have affected what women ate. [1] However, it is helpful guidance for the more than 3 million breast cancer survivors living in the United States today.

Business Journal Recognizes Two on Riordan Staff

The Wichita Business Journal has recognized two Riordan Clinic staff members for their contributions to local healthcare.

Melissa LaBarge, RN, BSN, was nominated in September for the list of Young Professionals in Healthcare. Bio-Center Laboratory Director Dr. Charles Hinshaw, MD, was nominated in October for the Excellence in Healthcare recognition.

About Dr. Hinshaw

Dr. Hinshaw has had a long connection to the Riordan Clinic and its co-founder, Dr. Hugh Riordan. Dr. Hinshaw first met Dr. Riordan in 1968 at an event where another attendee had a medical emergency, and a request was made for assistance. Dr. Hinshaw chuckled, recalling that he and Dr. Riordan – a pathologist and a psychiatrist – were the only physicians to respond. Not long after, Dr. Riordan asked Dr. Hinshaw to help establish the Bio-Center Laboratory and be its first director from 1975 to 1984.



Dr. Hinshaw established a private practice in environmental medicine in 1984 but maintained a personal and professional relationship with Dr. Riordan and returned to the clinic in 2010 and has served as lab director since then.

Under Dr. Hinshaw's watch, Bio-Center Lab has received no markdowns in its certification process by the Clinical Laboratory Improvement Amendments (CLIA), a federal certification process. This achievement places the laboratory in the top 99th percentile. He has been elected president of the American Academy of Environmental Medicine three times, president of the Kansas Society of Pathology, and Secretary of the Advisory Council to the American Society of Clinical Pathologists. He is certified by the American Board of Pathology in Anatomic and Clinical Pathology.

He was inspired to pursue a career in healthcare by his father, who was a pediatrician. He is a 1958 graduate of the University of Kansas School of Medicine (KUMC). He completed an internship at Kansas University Medical Center before serving as a general medical officer and flight surgeon in the United States Air Force. Following his military service, he returned to KUMC and was a resident-fellow in pathology from 1961-1965. He began his first practice in pathology in Hutchinson.

About Melissa

Melissa has worked at the Riordan Clinic for two years. She started her career in healthcare in 2008 as a massage therapist and began working in nursing in 2015 after graduating from nursing school at Wichita State University.

"Being a healthcare professional is very rewarding. I have finally reached a place in my nursing career where I am truly helping people help themselves," she told the Wichita Business Journal.

Melissa also said that one of the challenges she sees in healthcare today is prevention and patient participation in taking care of themselves.

"Health should be more about prevention rather than treatment of disease. Seeking out the underlying causes and symptoms and adjusting one's lifestyle is the key to health," Melissa said.

Melissa grew up in Miltonvale, Kansas, about two hours north of Wichita in Cloud County. She and her husband, Jacob, moved to the Wichita area in 2012, and she said she enjoys being close to the city and her family. The couple have three children.

Melissa enjoys outdoor activities in her free time, including hiking, running, and kayaking.



Happy Thanksgiving!

The Riordan Clinics in Wichita and Overland Park
will be closed Thursday, November 23,
and Friday, November 24.

Regular hours will resume Monday, November 26.



Tofu Squash Curry



INGREDIENTS

1 1/2 Tbsp. olive or avocado oil
1/2 red onion
1 yellow pepper, chopped
3 cloves garlic, minced
3 tsp. minced or grated ginger
3 Tbsp. red curry paste
1 (14-ounce) can coconut milk
1 cup water or vegetable broth
1 Tbsp. coconut sugar

1 tsp. sea salt
1/4 tsp. pepper
2 cups peeled and chopped pumpkin or butternut squash
16 ounces extra firm tofu, pressed and chopped into chunks
5 ounces baby greens or baby spinach
Fresh basil, limes, and cashews for serving
Brown or cauliflower rice for serving

DIRECTIONS

1. Heat oil in a large skillet over medium heat. Add onion, bell pepper, ginger, and garlic, stirring until fragrant, about 3 minutes. Stir in the curry paste and tofu. Toss and saute for another 2 minutes.
2. Add the pumpkin or squash, coconut milk, water or broth, sugar, salt, and pepper. Stir to combine. Bring the mixture to a

simmer, cover, and cook until the pumpkin is tender and cooked through, about 15 minutes.

3. Stir in the baby greens and cook until just wilted, 1 to 2 minutes.
4. Remove from the heat and stir in the lime juice. Serve warm over rice.

Serves 3. Prep time 10 minutes. Cook time: 20 minutes.

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EPISODE 67

TIPS FOR REDUCING THE RISK OF BREAST CANCER

Dr. Stacy Dunn, ND, LAc, FABNO, FABORM
In this episode of the Real Health Podcast, Chief Medical Officer Dr. Ron Hunninghake, MD, talks with fellow integrative oncologist and co-worker Dr. Stacy Dunn, ND, LAc, FABNO, FABORM, who shares thoughts and practical tips for breast cancer prevention.



EPISODE 66

BUILDING A FOUNDATION IN INTEGRATIVE ONCOLOGY

Dr. Paul Anderson, NMD, educator, clinician, and author
In this episode of the Real Health Podcast, Chief Medical Officer Dr. Ron Hunninghake, MD, talks with Dr. Paul Anderson about his roots in general practice, naturopathic, and integrative oncology and how patients can build a foundation to help themselves.

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