



Riordan  
Clinic

# Health Hunters

November  
2017

Vol. 31  
No. 11



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Riordan Clinic is a not-for-profit 501(c)(3), nutrition-based health facility in Wichita, Kansas cofounded 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."

## Lectins: The Foods You Are Eating That Are Making You Fat, Inflamed, and Tired

We live in an incredible time in history. At no other point has life been so comfortable for humans. We don't have to forage for our food, we live in temperature-controlled environments, we sleep on soft mattresses, and we have vehicles to transport us to where we need to go. Yet, we are in the midst of an epidemic of chronic diseases.



AUTHOR

Anne Zauderer, DC

2.1 billion people are overweight or obese. That is one-third of the world's population<sup>1</sup>. Inflammation-related conditions are on the rise<sup>2</sup>:

- Almost 10 percent of young children are affected by allergic dermatitis (eczema).
- More than 25 million Americans have asthma.
- Over 24 million Americans, 8 percent of the population, have diabetes. Estimates are that by 2025, the number of Americans with the disease will be close to 50 million.
- Arthritis and joint disease affect 43 million people in the United States, almost 20 percent of the population. This number is expected to surpass 60 million by 2020.
- More than 5 million Americans have Alzheimer's disease.
- Depressive disorders occur in approximately 18.8 million American adults, or about 9.5% of the US population age 18 and older.

People are stressed, tired, anxious, depressed, disconnected, in pain and angry. We are quick to want to medicate our symptoms away without asking what could be the root of all of those symptoms. I can't speak to your exact condition, but what my experience has taught me is that **inflammation** is at the root of most chronic diseases.

There are common causes of inflammation in our diet (that we all know we should avoid) such as sugar, white flour, chemical additives and preservatives, high fructose corn syrup, trans fats, and many more. However, what if I told you that there was a protein embedded in many of the healthy foods that you are eating that could be triggering your inflammation? The proteins I'm talking about are called **lectins**.

**Lectins**, not to be confused with lecithin (an emulsifying agent) or leptin (a hormone that



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## Foods High in Lectins:

- Wheat
- Corn
- Rice
- White potatoes
- Oats
- Quinoa
- Soy
- Seeds (pumpkin, sunflower, chia)
- Legumes (including peanuts and cashews)
- Cucumbers
- Zucchini
- Pumpkins
- Squashes (of any kind)
- Tomatoes
- Eggplant
- Peppers
- Goji berries

regulates fat storage and appetite), are proteins that are found in high quantities in grains, beans, and certain fruits and vegetables. These proteins are made by plants as a defense mechanism against predators. Lectins create an inflammatory response in the predator that eats them. When most animals, apart from humans, eat something that doesn't make them feel good, they try to avoid it!

How do lectins work? They are large proteins that are very sticky and bind to carbohydrates (sugars), especially polysaccharides, in the animal's body after it consumes the plant. These sugar molecules are primarily on the surface of cells and disrupt messaging between cells by creating a toxic or inflammatory response. One example of a sugar molecule that lectins bind to is sialic acid, which is found in the gut, the brain, between nerve endings, in joints, in bodily fluids, and in the lining of blood vessels. This is why people who consume a lot of foods that are high in lectins are inflamed and can have achy joints, brain fog, and fatigue.

In his book, *The Plant Paradox*, Dr. Steven Gundry says that, "Lectins facilitate the attachment and binding of viruses and bacteria to their intended targets.... Some people – those who are more sensitive to lectins – are therefore more subject to viruses and bacterial infections than others." This makes me curious about people who have chronic infections, such as Lyme disease, which causes fatigue, achy joints, and brain fog – all the same symptoms as a sensitivity to lectins.

Another effect that lectins have is that they can stimulate weight gain. One specific type of lectin, wheat germ agglutinin (WGA), is especially responsible for this. One of the ways it does this is it bears a striking resemblance to the hormone insulin. Insulin is what makes sugar available to our cells so that they can burn it for energy. Because WGA mimics insulin, it binds to the insulin receptor sites on cells, which blocks the action of insulin. This results in poor energy utilization (fatigue) and more sugar being pumped into fat cells, stimulating weight gain and insulin resistance, which is the precursor to diabetes.

Lectins can also stimulate leaky gut. Because the lining of our digestive tract is only one cell layer thick, when lectins attack the mucosal lining of the gut, they create inflammation and pry apart the tight junctions in the intestinal wall.

What foods in the American diet are high in lectins? To the left you will find a list of foods to avoid. For a more comprehensive list, I would recommend Dr. Gundry's book, *The Plant Paradox*. The reason for the title of his book is that, paradoxically, there are a lot of healthy foods that contain vitamins, minerals, and antioxidants that are essential for our health but are also high in lectins. We need to be aware of how we prepare foods, the quantity we consume of certain foods, and the way food makes us feel.



For full details please visit [RiordanClinic.org](http://RiordanClinic.org).  
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## ANOTHER VERY IMPORTANT POINT TO CONSIDER IS THAT YOU ARE WHAT YOU EAT, BUT YOU ARE ALSO WHAT YOUR FOOD ATE.

This means that if you are consuming animal protein from an animal that was fed a corn and soy-based diet, you will be getting lectins in the milk, fat, and protein from that animal. In addition, if you consider the fact that farmers feed animals grains to fatten them up, you can start to see the inflammatory effect of lectins at work in those animals. Because cows are forced to eat an unnatural diet of corn and soybeans, this causes heartburn in the cows. The heartburn is such an issue that farmers have to put calcium carbonate in their feed to prevent it, otherwise they stop eating. Half of the world's calcium carbonate is fed to livestock for this very reason.

If you want low-lectin meat, you need to consume animal proteins that are pasture-raised, pasture-finished. You need eggs that are completely pasture-raised. Certain labels on foods are meant to lure you into a sense of security, when all they are is a marketing ploy. A few labels to be aware of are:

1. **"CAGE-FREE OR FREE-RANGE"** This only means that a door was left open for a minimum of 5 minutes per day. Most chickens are in such crowded conditions, that they never see the light of day.
2. **"VEGETARIAN-FED"** Animals were fed an (unnatural) diet of grains, most likely GMO. This is commonly found in poultry. Chickens are insectivores, not grain eaters.
3. **"ALL NATURAL"** This term is basically meaningless and has not been defined by the FDA or USDA.
4. **"HEART HEALTHY"** This was a label devised by the food industry to make you feel better about choosing highly processed foods. Froot Loops have been labeled as "heart healthy" by the FDA.

Before I close this article, there is one thing that I would like to highlight. Each of us is at a different place in our health journey.



I applaud anyone who makes better food choices! It can seem overwhelming for most people to think about eating a low lectin diet. I hope this information will empower you to really look at your food choices and make connections between what you are eating and how you feel. If you are already eating a healthy diet and yet still feel fatigued, have joint pain, can't lose weight, or have any of the chronic inflammatory conditions listed above, I would encourage you to explore removing lectins from your diet. If removing all lectins is too overwhelming, I would encourage you to start with removing processed grains and sugar from your diet. Once you experience an improved sense of well-being, hopefully that will be encouragement to dive in a bit deeper.

**THE FOOD YOU EAT CAN BE EITHER THE SAFEST AND MOST POWERFUL FORM OF MEDICINE OR THE SLOWEST FORM OF POISON.**

— ANN WIGMORE

### References

1. <http://www.healthdata.org>
2. <http://www.genesmart.com>
3. Gundry S. The Plant Paradox: The Hidden Dangers in "Healthy" Foods that Cause Disease and Weight Gain. New York, NY: Harper Collins (2017).

# BLACK FRIDAY NUTRIENT SALE

ALL Nutrients. Online only.  
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# Green Smoothie

Total Time: 5 Minutes

Serves: 1



## INGREDIENTS

- 1 cup chopped romaine lettuce
- 1/2 cup baby spinach
- 1 mint spring, with stem
- 1/2 avocado
- 4 tablespoons freshly squeezed lemon juice
- 3 to 6 drops stevia extract
- 1/4 cup ice cubes
- 1 cup tap or filtered water

Place all the ingredients in a high-powered blender and blend on high until smooth and fluffy, adding more ice cubes if desired.

*Add a little more water if the smoothie is too thick. You can make a triple batch and refrigerate for up to three days in a covered glass container.*



## Spinach Pizza with a Cauliflower Crust

Prep Time:  
30 Minutes

Cook Time:  
35 Minutes

Serves: 2

Rice the cauliflower. You will have approximately 3 cups. Transfer to a microwave-safe dish and microwave on high for 8 minutes, until cooked. Allow to cool, stirring occasionally.

Place a rack in the middle of the oven. Heat the oven to 450°F.

Grease a 10-inch ovenproof frying pan with olive oil.

Place the cooled riced cauliflower in a dishtowel, and twist and squeeze to remove all the moisture.

Transfer to a mixing bowl. Add the egg, mozzarella, salt, pepper, and oregano. Mix well. Press the mixture evenly in the frying pan.

Over medium heat on the stove top, crisp the cauliflower crust for a few minutes. Transfer to the oven and bake for 15 minutes, until golden. Let cool for 5 minutes, and add the topping. Scatter the mozzarella evenly over the pizza base and spread the spinach over this. Add any additional vegetables. Sprinkle with the Pecorino-Romano cheese and add a pinch of salt.

Bake for an additional 10 minutes, until the cheese has melted.

## CRUST

- Extra-virgin olive oil for greasing the pan
- 1 small head cauliflower, cut into small florets
- 1 pastured or omega-3 egg, lightly beaten
- 1/2 cup shredded buffalo or goat mozzarella
- 1/2 teaspoon sea salt, preferably iodized
- 1/2 teaspoon cracked black pepper
- 1/2 teaspoon dried oregano

## TOPPING

- 3/4 cup shredded buffalo or goat mozzarella
- 1/2 cup cooked and drained spinach
- Chopped vegetables of your choice (optional)
- 1/4 cup grated Pecorino-Romano cheese
- Pinch sea salt, preferably iodized

Recipes are from *The Plant Paradox: The Hidden Dangers in "Healthy" Foods that Cause Disease and Weight Gain*, by Dr. Steven Gundry, p. 315, 340-341



# UBI: Your Best Defense Against the Flu This Winter

Ultraviolet Blood Irradiation (UBI) is a procedure done at the Riordan Clinic that is used to effectively treat both acute and chronic infections, which makes it an ideal option for wintertime colds and flu.

UBI exposes a patient's blood to light to heighten the body's immune response and to kill infections. With exposure to UV light, bacteria and viruses in your bloodstream absorb five times as much photonic energy as do your red and white blood cells.



This means the fragments of the killed infecting agents create a safe, autogenous vaccination-like response. This further activates and directs your immune system to the specific infections your body is attempting to overcome. The net result is the induction of a secondary kill of these infecting agents throughout the entire body. Treating only 35 cc of blood with UBI induces a beneficial systemic immune response.

**FOR MORE INFORMATION, PLEASE CALL THE RIORDAN CLINIC AT 316-682-3100.**

## PREPARE FOR FLU SEASON

**Vitamin D3/K2 (\$54.95) | Lipospheric Vitamin C (\$39.95)  
Vitamin C Strips (\$10.95)**

- Support your immune system this winter with some of the most powerful supplements in the Riordan Clinic brand line.
- Maintain adequate levels of Vitamin C by checking levels daily with the urine Vitamin C strips.
- Be proactive this winter and give your immune system a boost!



## Contact the Editor

Please send any comments or suggestions to  
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Thank you for reading,



**Dr. Anne  
Zauderer**  
Editor

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## Health Hunters Newsletter

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# The Dirty Dozen: Why Organic is Best

Are you someone who enjoys a smoothie in the morning? If you are, that is great!

We all know that fruits and vegetables are among the healthiest foods that should be consumed daily. FDA recommends adults and children consume at least two servings of fruits and three servings of vegetables daily. However, vegetables and fruits are also among the foods that can be contaminated easily by toxic chemicals widely known as pesticides. Pesticides are used to kill insects or any living organisms that are considered pests and found commonly in conventional crops. Pesticides are toxic to the human body and have been linked to a variety of health problems such as cancer, hormone disruption, and neurotoxicity. Although buying organic produce is preferable, it may not always be accessible or affordable.



**AUTHOR**

*Olivia Nugroho, RN, BSN*

The Environmental Working Group (EWG) has created lists called the “**DIRTY DOZEN**” and the “**CLEAN 15**”, to help you decide which vegetables and fruits to buy organic and which ones are safe to purchase as conventionally grown.

The “**DIRTY DOZEN**” contains fruits and vegetables that have the most pesticide residue when they are bought as conventional produce.

The “**CLEAN 15**” contains produce that are deemed safe to buy as non-organic because they have much less pesticide residue.



## Upcoming Events

For more information or to register for any of these events, please visit [RiordanClinic.org/events](http://RiordanClinic.org/events)

### Food as Medicine

Wednesday November 1st and December 6th

11:30am – 1:30pm

Cost: **FREE**

This in-depth course will connect the dots and address some fundamental questions behind how our diet impacts our health and well-being and how it contributes to the progression of chronic disease.  
**PLEASE NOTE:** This course is available in-person at the Wichita campus, and online. For more information please visit: [riordanclinic.org/food-as-medicine](http://riordanclinic.org/food-as-medicine)

### Genetically Modified Foods (GMOs) and How they Impact Your Health

Wednesday, November 8th

12:00pm – 1:00pm

Dr Jennifer Jackson

Cost: **FREE**

The landscape of American agriculture has been changing over the past 25 years. More than 1 billion pounds of pesticides are used in the United States alone each year. What effect is this having on our health and our environment? Join Dr. Jennifer Jackson, owner of Jackson Family farms, as she explores how science is changing food as we know it.

By eating organic produce, we lower our exposure to pesticide and also support environmentally friendly farming practices that help protect the earth from the harm of environmental toxins. It is also highly recommended that you wash all vegetables and fruits prior to consuming, especially when you buy conventional produce. Conventional fruits and vegetables are often waxed after harvest to protect them from many hands that touch them on their journey from farm to market. Washing produce with clean water only removes visible dirt on the surface, but it does not remove the wax on its surface. It is recommended that you wash your vegetables and fruits with white vinegar and water. White vinegar and water help remove wax and therefore also help remove pesticides that sit on the surface of produce. Although peeling off skin may help to get rid of pesticides, it is not recommended since skin often has the most nutrients.

**The FDA lists a few tips on how to properly prepare your produce to protect yourself from the exposure to pesticide.**

1. Wash your hands for 20 seconds with warm water and soap before and after preparing fresh produce
2. Cut away any damaged or bruised areas
3. Gently rub produce while holding it under plain running water
4. Wash produce before you peel it
5. Use a clean vegetable brush to scrub firm produce
6. Dry produce with clean cloth or paper towel
7. Throw away the outermost leaves of lettuce or cabbage

Even though eating organic is the best, eating non-organic produce is still better than not eating fruits or vegetables at all. If you have limited access to organic fruit and vegetables, try using the Dirty Dozen and Clean 15 lists to make your purchase decision. The more you buy organic produce, the better. Dr. Mercola said, "The largest study of its kind found that people who 'often or always' ate organic food had about 65 percent lower levels of pesticide residues compared to those who ate the least amount of organic produce." He also recommends consuming a lot of fermented foods such as kimchi if you think you have been exposed to pesticides. The lactic acid bacteria, that are formed during the fermentation process, help break down pesticides and detox your body.

Finally, getting your produce from local farmers is always the best way to get the freshest and most nutrient-rich food. You can ask your local farmers about how they grow their produce, whether it is sprayed with pesticides or not. If you do not live close to any local farmers or do not have access to a local farmers' market, you can try to grow produce yourself in your own backyard using organic methods.

Reference:

1. <https://articles.mercola.com/sites/articles/archive/2016/04/27/pesticides-fruits-vegetables.aspx>

## Produce Wash Recipe

Keep a batch of this in a spray bottle under your sink and use it to wash your produce before consuming. It will remove a lot of the pesticide residue on the outside of your fruits and vegetables!

- 1 teaspoon white vinegar
- 1 teaspoon lemon juice or 5 drops of lemon essential oil
- 8 oz filtered water



For more information or to register for any of these events, please visit [RiordanClinic.org/events](https://riordanclinic.org/events)

## Upcoming Events

### (Hays) Season of Thanks: An Evening with Dr. Moffitt

Tuesday, November 14th

5:00pm -7:00pm

Cost: FREE

Come visit with us during an evening of mingling as we say thank you to the patients and community that support us throughout the year! We will have food & drinks, and will be offering building tours, a raffle and fun activities.

### (Hays) Lecture: Seasonal Weight Gain & How to Avoid It

Thursday, November 16th

@ Hays Public Library

11:30am -12:30pm

Cost: FREE

The holidays are often a time of falling off the bandwagon, focusing more on the festivities and less on our health. Come learn how to avoid the negative health benefits of the holiday season, while still enjoying every moment of the festivities.

The Riordan Clinic will be closed November 23-24th for Thanksgiving and December 25th for Christmas.



# 12 Months to a Healthier You!

## Month 11: Quality Sleep

AUTHOR

Anne Zauderer, DC



One of the most common symptoms that people have today is fatigue. Everyone is tired. We need our caffeine to rev us up in the morning, our sugar and carbs to keep us going during the day, and our sleep aid medication to get us to sleep at night. It's quite the paradox that people who are so tired would have difficulty falling asleep! Yet, transient insomnia affects up to 80% of the population, and chronic insomnia affects about 15%<sup>1</sup>.

Sleep is vitally important to our overall health and well-being. During sleep our body relaxes, our blood pressure drops, and breathing slows down. The body is able to focus on important maintenance processes: muscles and tissues are repaired, hormones that regulate appetite are released (leptin and ghrelin), pathways in the brain for memory and learning are formed, and our detoxification and waste-removing pathways are upregulated. Over time, if the body is not given the opportunity to repair itself at the cellular level, we wake up feeling tired and unrefreshed.

### SOME OF THE PHYSICAL BENEFITS OF QUALITY SLEEP<sup>2</sup>:

- Promotes skin health and a youthful appearance
- Increases testosterone levels
- Controls blood sugar (by optimal insulin secretion)
- Encourages healthy cell division (therefore preventing growth of cancer)
- Increases athletic performance

An important hormone that helps regulate our circadian rhythm by helping us fall asleep is **melatonin**. Melatonin secretion is stimulated by darkness. Prior to the invention of the lightbulb, our ancestors would have to stop working when the sun went down. This was a good time for their bodies and brains to “wind down.” This is why, in the evening, our cortisol levels should decrease and our melatonin levels should increase. This pattern leads to us getting tired and preparing for sleep. However, in the modern world we have the ability to keep the lights on after the sun has set. This additional light (especially from the blue end of the spectrum) decreases the brain's production of melatonin. We get exposed to this additional light not only from our household lights, but also our electronic devices (phones, tablets, computers and TVs). Melatonin production also naturally decreases as we age. Therefore careful attention to light exposure at night and possible supplementation with melatonin might be more necessary the older we get.

In addition to supporting healthy melatonin levels, maintaining proper daytime cortisol levels is also of great importance for quality sleep. Cortisol is one of our main stress hormones. It gets released in



response to a perceived stressor, dysregulated blood sugar, intense and prolonged exercise, sleep deprivation, a viral infection, and caffeine consumption. If cortisol levels are too high or too low during the day, this can impact cortisol levels in the evening and at night. If cortisol remains elevated at night, this will disrupt our sleep. Elevated cortisol levels can disrupt our sleep by either making it tough for us to fall asleep or by waking us in the middle of the night with difficulty falling back asleep.

### TO GET THE BEST QUALITY SLEEP, IT IS IMPORTANT TO MAINTAIN HEALTHY LEVELS AND PATTERNS OF BOTH MELATONIN AND CORTISOL.

*A few strategies to help with this are:*

1. **Turn off all electronics 1 hour before bed.** Smartphones and computers are now equipped with a setting to filter out blue light when it gets dark.
2. **Make your sleeping room as dark as possible.** Get black-out curtains and cover up all light sources (alarm clocks, phones, nightlights). If you need a night-light, find one that filters out blue light.
3. **Turn your phone to “Airplane Mode” while you are asleep and don’t keep it next to the bed.** Electromagnetic radiation given off by your phone can disrupt your sleep.
4. **Limit caffeine intake** (especially in the late afternoon and evening) from coffee, tea, soda, and chocolate.
5. **Take an Epsom salt bath before bed.** Magnesium has a calming effect on the body and brain. You can also take magnesium as a supplement before bed to boost serotonin and melatonin levels.
6. **Do not exercise within 2 hours before going to bed.** Exercise increases cortisol levels, which can keep you awake.
7. **Limit stress-inducing activities 2 hours before bed.** This can vary by person, but could include activities such as: watching the news, doing job-related work, playing video games etc.

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC181172/>
2. <https://blog.bulletproof.com/improve-your-sleep/>