Leaky Gut Implicated in Autoimmune Disorders

Reducing gut inflammation may relieve some disorders and improve overall health.

Leaky gut has been associated with a wide range of disorders, including asthma, food sensitivities, psoriasis, allergies, and inflammatory bowel diseases. At its most basic, leaky gut is like having large holes in what is supposed to be tightly woven fabric. The holes allow particles, such as toxins and harmful bacteria that would normally be eliminated from the body to enter the bloodstream, where they can create health problems.

“In our gastroenterology practice we use the scientific term ‘intestinal permeability,’” explains gastroenterologist Guy A. Weiss, MD, UCLA Celiac Disease Program Leader, Department of Digestive Diseases. “It refers to a dysfunctional epithelial barrier (gut lining), which may expose our immune system to bacteria and food allergens, and result in inflammation. At the same time, intestinal permeability is also the direct consequence of gut inflammation and the abnormal function of the proteins that keep the cells in our gut close together.”

The medical community is just beginning to understand the health problems that may be associated with leaky gut, and why they may be happening.

Zonulin Controls Gut Lining Gaps

Zonulin is a type of protein that is referred to as a “tight junction regulator” because it controls the size of the gaps between the intestinal cells. It also manages the passage of nutrients, water, and cells into and out of the gut.

Scientists have found that zonulin is produced and released by triggers such as intestinal bacterial infections and gluten (establishing a link between zonulin and celiac disease). In the presence of zonulin, the normally tight junctions between the intestinal cells remain open. On the positive side, this function of allowing particles to pass through can rid the body of pathogens. But, too much zonulin (as a response to gluten in those with celiac disease, for example) creates bowel leakiness and starts an inflammatory cascade that eventually damages the intestinal wall.

At the 23rd United European Gastroenterology Week (held in 2015), scientists from Italy announced the results of their latest research linking zonulin with two common inflammatory bowel conditions. They found that blood levels of zonulin were almost as high in patients with non-celiac gluten sensitivity as in those with celiac disease.

“While complementary medicine practitioners often measure the levels of antibodies against zonulin, this new small study is the first to suggest that zonulin expression is also elevated in non-celiac gluten or wheat sensitivity, and to a lesser extent in irritable bowel syndrome, IBS, diarrhea predominant,” says Dr. Weiss. “Although further studies are needed, zonulin might possibly become a biomarker of non-celiac gluten or wheat sensitivity in the near future.”

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**Reconstructing Nerve in Neck Improves Breathing**

A study led by UCLA researchers found that in people with breathing difficulties caused by phrenic nerve injury, surgical reconstruction of the nerve can improve breathing and lead to an increase in regular physical activities. Some people develop the injury after a major operation, such as neck dissection for head and neck cancer, lung surgery, coronary bypass surgery, heart valve or other vascular surgery and thymus gland surgery. After the surgery, sometimes scar tissue forms in the neck and compresses the nerve. Injuries can also result from nerve block injections and chiropractic manipulation of the neck. The phrenic nerve controls voluntary and involuntary breathing (such as during sleep) by transmitting signals from the brain and spinal cord to the esophagus. The signal originates in the C-3 through C-5 cervical spinal roots in the neck, and then travels through the chest between the heart and lungs to the diaphragm, which is the primary muscle involved in breathing. People with phrenic nerve injury experience difficulty breathing and, depending on the severity of the injury, may become winded after climbing a flight of stairs or even tying their shoes. For some, difficulty in breathing while lying down can interfere with sleep, causing insomnia. Symptoms can include lethargy, headaches, and blue-tinged lips or fingers. The researchers report there are up to 10,000 new cases of phrenic nerve injury each year. The study appeared in the *Journal of Reconstructive Microsurgery*.

**Acupressure Reduced Fatigue in Breast Cancer Survivors**

Fatigue is one of the most common long-term effects of breast cancer treatment. About a third of women experience moderate to severe fatigue up to 10 years after their treatment ends. A recent study in *JAMA Oncology* found acupressure reduced fatigue by up to 34 percent. Acupressure is easy to learn, and patients can do it themselves, according to study author Suzanna Zick, ND, MPH, associate research professor of family medicine at the University of Michigan. It involves applying pressure to a specific point on the body with fingers, thumbs, or a device. Researchers tested two types of acupressure: relaxing acupressure, which is used to treat insomnia, and stimulating acupressure, which is used to increase energy. The two techniques differ by which points on the body are pressed. Researchers recruited 424 breast cancer survivors and randomized them into three treatment groups: relaxing acupressure, stimulating acupressure, or usual care (which includes typical sleep-management techniques). The women were taught how to find and stimulate the acupressure points so that they could perform it at home once per day for six weeks. At the end of the trial, both acupressure treatments resulted in significant, sustained improvements in fatigue. But only relaxing acupressure also improved measures of sleep quality, such as disrupted sleep, and overall quality of life. Study participants had 15 minutes of training, and were able to accurately locate the correct acupressure points and apply the right amount of pressure.

**Common Skin Bacteria May Protect Against Skin Diseases**

According to research from Lund University in Sweden, common bacteria on human skin secrete a protein which may help protect against several skin diseases. The protein, called RoxP, is thought to be as strong as known antioxidants, such as vitamin C and vitamin E. “This protein is important for the bacterium’s very survival on our skin, explains researcher Rolf Lood. “The bacterium improves its living environment by secreting RoxP, but in doing so it also benefits us.” Oxidative stress is considered to be a contributing factor in several skin diseases, including atopic dermatitis, psoriasis and skin cancer. The bacterium is present in both healthy individuals and people with skin diseases. According to Lood, however, people have different amounts of the bacterium on their skin, and it can also produce more or less of the protective protein. Lood and his team will next compare patients with basal cell carcinoma, a pre-cancerous condition called actinic keratosis, and a healthy control group to see if there is any connection between the degree of illness and the amount of RoxP on the patients’ skin. If the study results are positive, they could lead to the inclusion of RoxP in some topical medications and sunscreens, according to researchers. The findings appeared in *Scientific Reports’ Nature journal.*
Managing Caregiver Stress
Self-care will help you get through the difficult times.

For many people, the stress of caregiving can be exhausting, especially when a loved one has a progressive disease such as Alzheimer’s. Decisions must be made around living arrangements, financial and legal matters, and home health care. For many caregivers, these demands can lead to feelings of frustration, helplessness, depression, and anxiety.

“It is normal for family or other informal caregivers to experience occasional stress due to the responsibilities associated with providing care and supervision for a loved one,” says Randall Espinoza, MD, Clinical Professor and Muriel Harris Endowed Chair of Geriatric Psychiatry in the Department of Psychiatry and Biobehavioral Sciences Geffen School of Medicine at UCLA. “Pressure may come from sudden and unpredictable situations or from a person feeling alone and unsupported. Fortunately, most of these feelings are usually short-lived and often related to identifiable situations, meaning they can be handled before becoming chronic and problematic for the caregiver.”

Create Calm Through Knowledge and Preparation
While it’s impossible to predict all that will occur, it is helpful for both the patient and the caregiver to learn as much about the illness as possible. Health care providers can explain what to expect from a particular illness so that you can better understand what is happening, why it is happening, and whether it will get better or worse. This knowledge can help guide you toward appropriate treatment options and resource needs.

Be prepared for emergencies by having vital phone numbers saved in your phone and posted somewhere obvious such as your refrigerator. Include on that list physicians as well as neighbors and friends that can help out in a pinch. Keep a list of medications and medical directives readily available as well. Coordinate caregiving tasks among different family members and friends. Schedule regular times for visits so that you know when a break is coming.

Take Time for Self-Care
No matter how much you prepare, caregiving is an unpredictable experience and is likely to be an emotional rollercoaster. At times, it can feel good to be helpful to someone in great need; at other times fatigue and frustration set in. Self-care is crucial so that you can ride out the challenging situations, recharge your energy and spirit, and provide your loved one with the best care possible.

Self-care can take many forms. Physical activity is a great way to burn off stress and restore calm. A hike in nature can be especially restorative, as can a vigorous workout at the gym. Similarly, a soothing bath, relaxing massage, or a night out with friends can be a welcome break.

It’s also helpful to have a support group, compassionate family members and friends, or a spiritual community that can provide solace and understanding.

When Stress Overwhelms
When self-care is ignored and stress spirals out of control, your own health can be compromised. Anxiety, depression, hypertension, irritable bowel syndrome, and migraines can all result from or worsen with overwhelming stress.

For example, constant worry can trigger anxiety symptoms, which can include a wide range of physical and psychological complaints, such as feelings of panic, fear, and uneasiness, problems sleeping, cold or sweaty hands or feet, shortness of breath, heart palpitations, not being able to be still and calm, dry mouth, numbness or tingling in the hands or feet, nausea, muscle tension, and dizziness. “Everyone has a different capacity or tolerance for anxiety symptoms,” explains Dr. Espinoza. “Many of the above reactions can be seen in situational anxiety, so fixing the situation will often help resolve anxiety symptoms. However, persons with pre-existing anxiety or depressive disorders may have a higher susceptibility to experiencing a worsening of anxiety symptoms when becoming caregivers.”

Caregiver Counseling
Whether they are dealing with anxiety, depression or other emotional reactions, caregivers who receive counseling experience less stress and are better able to care for their loved ones, research has found. “The first people to contact should be both the caregiver’s own primary care physician (PCP) and also the patient’s PCP,” recommends Dr. Espinoza. “Both these individuals play an important part in helping a caregiver manage stress related to care.”

Your PCP may refer you to individual counseling. Support groups are also valuable. Care2caregivers.com is a free nationwide service.
Looking for an Energy Boost?

Know what depletes and what restores to make revitalize choices.

There’s no shortage of drinks, foods, and supplements promising a quick burst of energy. Problem is most will give you a jolt and follow with an energy crash. While an occasional extra cup of coffee may not be harmful, if you’re constantly reaching for an energy boost, it’s time to look beyond the quick fix.

“If you’re tired and fatigued look for the underlying cause instead of going for caffeine or supplements,” says registered dietitian Nancee Jaffe, UCLA Digestive Health and Nutrition Clinic.

Figuring out what depletes your energy can be very obvious, or take some investigation. Jaffe recommends the following questions as a guide to help you determine your particular cause of fatigue:

- Am I getting seven-plus productive hours of sleep per night?
- How is my stress level on a scale from 1-10?
- Am I making enough time in my life for play, family, friends, enjoyment?
- How is my diet quality?

Choose Energy-Boosting Foods

What you eat can make a huge difference between feeling energetic and feeling fatigued. An energy-boosting diet includes a balance of vegetables, fruits, proteins, and complex carbohydrates. If you’re just nibbling on dry toast in the morning, or eating mainly convenience or fast foods, those choices deplete energy. For example, heavy foods, such as pasta slathered with cream sauce and meatballs, can be difficult to digest, causing you to feel sluggish. Fried and convenient foods are typically highly processed, and contain a lot of fat, sugar, and salt. Those foods lack nutrition, and hence deplete rather than boost energy.

If you’re not very hungry during meal times, try eating smaller meals throughout the day to keep your energy steady. Nutritious high-energy snacks include those that have both protein and fiber. For example, a banana with a tablespoon of nut butter, carrots and string cheese, or sugar-free yogurt topped with berries.

Be sure to vary the foods you eat. If you always eat the same foods, you won’t nourish your body properly. A poor diet leads to vitamin and mineral deficiencies, which can cause health issues, including fatigue.

Avoid Dehydration

Not getting enough fluids is a common cause of fatigue for seniors. Water is an ideal hydration choice, though unsweetened fruit teas, juices, and milks also provide appropriate hydration. Foods with high water content such as watermelon, celery, and citrus fruits, also help. Soda, energy drinks, and coffee cause dehydration. The same is true of alcohol.

While the rule of thumb has been to drink 64 ounces of water per day (eight eight-ounce glasses), it really does depend on your body size, how much you perspire, and where you live. People who live in hot climates may need more water than those in colder climates.

Reduce Stress Levels

Bottled up anger, irritation, and even depression can rob you of energy. It’s important to take a time out to notice how you feel. Some people aren’t aware they’re stressed until they stop and mentally scan their bodies to check for tension. A tense jaw and elevated shoulders are common places for holding stress.

Get a Good Night’s Sleep

Lack of quality sleep can certainly drag down energy. Insomnia affects almost half of adults over age 60. Before reaching for sleeping pills, try these simple adjustments. Keep your bedroom cool, quiet and dark; avoid caffeine late in the day; turn off all lighted screens in the bedroom; and establish a regular sleep schedule.

Lastly, Jaffe emphasizes the importance of assessing joy. “Ask yourself if you’re making enough time for play, family, friends,” she says. “Spending time with those you love and doing activities that bring you joy can be a significant way to boost your energy and your mood, too.”
Stop the Itch at the Source
Common culprits and skin care tips to protect and soothe aging skin.

If you have an itch, should you scratch it? For most people, that’s a rhetorical question. It’s virtually impossible not to scratch an itch. And while there may be temporary relief after you do, constant scratching can wreak havoc on the skin. This is especially true for older adults because the skin becomes thinner with age. Excessive scratching can tear delicate skin, potentially causing it to bleed and become infected. The best approach to alleviating itchy skin is to address the underlying cause.

“The most common causes are dry skin, contact dermatitis, and seborrheic dermatitis,” says dermatologist Lorraine Young, MD, UCLA Medical Center.

Fortunately, all of those common itch-inducing culprits are treatable. And most of them by using inexpensive over-the-counter products and adjusting lifestyle practices.

Tending to Dry Winter Skin
Winter’s lower temperatures cause a drop in humidity. The air is dryer both inside and outside the home. With less humidity, skin dehydrates. According to the Environmental Protection Agency, indoor humidity should be within 30 to 50 percent. But, indoor heating can cause humidity to drop as low as 10 percent.

Moisture can be added to the air with a humidifier. There are inexpensive room humidifiers, but it’s important to change filters and clean as directed. As tempting as it might be to take a long hot shower on a cold winter day, hot water will further dry out skin. A quick shower with a soft sponge or just your hands is best.

“Use mild soap, lukewarm water and over-the-counter anti-itch products like Sarna or Aveeno anti-itch lotion,” recommends Dr. Young.

After bathing, gently pat skin dry; avoid vigorous rubbing. Generously apply moisturizers to damp skin as that can help retain some of the water. Check out the ingredient label and avoid those with alcohol or fragrance, as they can irritate sensitive skin. Keep bottles of moisturizers handy, such as at the sink, in a purse, and in the car. Apply whenever skin feels dry.

Allergic and Irritant Contact Dermatitis
Rashes due to allergies and irritants are other common sources of itch. Sometimes the rash arises quickly after contact; in other cases, it can be a delayed reaction. Below are some of the more common contact allergens that may cause rashes in some people:

- **Poison ivy, poison oak, and poison sumac** contain oils that cause rashes to appear in 12 to 72 hours after contact.
- **Nickel** is a common allergen and can be on jewelry, metal buttons, electronic devices, and in foods such as soy products, cocoa powder, and figs.
- **Latex** is frequently used in protective gloves worn at home, in health care or beauty care settings; latex can also be in flexible bands used for physical therapy.
- **Formaldehyde** is in many products including nail polish, glue, liquid hand soap, and pet shampoos.
- **Perfume and fragrances** in detergents, soaps, and moisturizers can cause an allergic reaction.
- **Medications** can also be an instigator, including the over-the-counter topical antibiotic neomycin.

Dermatitis symptoms can include rash, pain, redness, swelling, scales, and blisters. The reaction is the result of an overactive immune system. Because allergic contact dermatitis can occur a day or two after exposure, it can be tricky to pinpoint the irritant. If you suspect contact, wash the area with mild soap and water as soon as possible.

Home Remedies
At-home treatments for itching and other symptoms include cortisone-based creams that reduce inflammation. Calamine lotions, oral antihistamines and oatmeal baths can also be helpful. Blister can be treated with a cool, moist compress held for 30 minutes, up to three times a day. Try not to scratch. If the rash doesn’t get better in a few days or it gets worse, seek medical attention.

**Seborrheic Dermatitis**
Flare-ups of this skin disease are common in winter months. Symptoms vary and include red, oily patches that form around the scalp and hairline, ears, eyebrows, center of the face around the nose and upper lip, as well as other parts of the body, such as the upper back and chest, armpits and genitals. It is not entirely known what causes seborrheic dermatitis, but a combination of factors is suspected. They include yeast that normally lives on the skin, stress, and cold, dry climates. Some medications may also cause it.

There is no cure, but seborrheic dermatitis can be treated. It’s important to consult with a dermatologist if you suspect it because it requires a specific treatment routine. Dandruff shampoos used on the skin and scalp as well as topical medicines and specific creams are the typical treatments. Sometimes it can clear on its own, but it can just as easily reoccur without warning.
**A Failing Heart: Interventions and Preventions**

Cardiac rehab helps heart failure patients stay out of the hospital.

Heart failure occurs when the heart can no longer pump out enough blood to supply what the body needs. The result is fatigue, shortness of breath, and fluid retention—all classic signs of heart failure. Many people don’t realize that heart failure is not actually a disease; rather it’s the result of injury to, or a weakness of, the heart.

While age is a risk factor, the majority of heart failure patients are over age 65 and have pre-existing high blood pressure, which is a manageable, and often preventable condition. Nearly 50 percent of heart failure patients have coronary artery disease and have had a heart attack.

Other causes of heart failure include cardiomyopathy (a disease of the heart muscle), heart valve disease, and congenital heart disease (a heart defect from birth). Unfortunately, once heart failure begins, normal heart function may never return.

Heart failure is among the most frequent causes of hospitalization for Americans over age 65. And more patients are hospitalized for heart failure complications than all cancers combined. However, there is a way that heart failure patients can improve the quality of their daily lives, and also reduce the need for going to the hospital.

“Often after a recent heart event or new heart failure diagnosis, the patient is unsure of when and how to resume physical activity and general activities of daily living,” explains exercise physiologist Lauren Harning with the UCLA Cardiopulmonary Rehab Center. “Cardiac rehab is a medically supervised program that includes exercise training, education on heart-healthy living and lifestyle, and counseling to reduce stress. The program helps patients learn how to self-manage their blood pressure, body weight, sodium intake and stress, all of which helps to reduce hospitalizations, and even some medications.”

According to Harning, patients often report a higher level of energy, stability in blood pressure and body weight, reduced shortness of breath, and better sleep after just a few weeks in a cardiac rehab program.

**Exercise May Extend Life in Heart Failure Patients**

According to research presented at Heart Failure 2016 and the 3rd World Congress on Acute Heart Failure, researchers from the UK reported that heart failure patients who exercised lived longer compared to those who did not—regardless of heart failure severity, age, or gender.

The researchers analyzed exiting data from more than 4,000 heart failure patients. Exercise was associated with an 18 percent lower risk of all-cause mortality and an 11 percent reduced risk of hospitalization, compared with no exercise.

According to the researchers, exercise may benefit patients with heart disease, including heart failure, in a number of ways. Exercise improves the oxygen supply to the heart, and reduces the likelihood of the abnormal rhythms that can cause sudden death. Physical activity also improves circulation in the peripheral vasculature, such as in the leg muscles, which may reduce the workload of the heart and improve patients’ ability to function.

Principal investigator Professor Rod Taylor, chair of health services research and director of the Exeter Clinical Trials Unit at the University of Exeter Medical School in Exeter, UK says, “If heart failure patients are active we can be pretty sure that they will live longer. The simple advice would not be to take up marathon running. This is about increasing one’s routine physical activity, for example walking for 20 to 30 minutes three times a week at an intensity that makes you feel a little bit breathless but not necessarily symptomatic.”

**Heart Failure Is Preventable**

Because heart failure usually results from another disease, it may be preventable when the underlying risk factors are avoided and/or properly managed. This is especially important for African-American men, who are more likely to have heart failure than women or Caucasians. Knowing the risk factors can help you avoid heart failure.
Try an Elimination Diet
A short-term elimination diet can help clarify which foods might be causing digestive distress. These are typically done under a physician’s or registered dietitian’s supervision. The approach is to remove suspected foods for a few weeks, then assess how you feel. Common food allergens include eggs, gluten, dairy, soy, citrus, and corn.

What can you eat? Plenty. Think simply prepared foods such as roasted root vegetables with olive oil and herbs, red beans and whole-grain rice, and lean proteins such as chicken breast, turkey, and tuna. A few weeks off from refined sugar products (e.g. cakes, cookies, candies) will retune taste buds, making fresh fruits like bananas, mangos, and blueberries taste deliciously sweet.

Once common allergenic foods have been eliminated for a few weeks, it’s time to reintroduce them and assess for reaction. “Add one allergenic food back in at a time,” recommends registered dietitian Dana Hunnes, Senior Dietitian Adjunct Assistant Professor, Fielding School of Public Health at UCLA. “It can cause problems with heart function. Getting immediate medical attention at the first sign of heart attack, however, can limit heart muscle damage.”

Medical attention, the less potential damage to your heart.”

Medications in Development
Research suggests larazotide acetate may help keep the tight junctions closed when ingested prior to a meal, thus reducing the inflammatory process in response to gluten. Larazotide acetate may become the first approved medicine to treat celiac disease and has been granted FDA “Fast Track” designation, which expedites the review of drugs to treat serious conditions that fill unmet medical needs.

Gut health requires a wide variety of foods and probiotics.
**SNORING SOLUTIONS...DAILY ASPIRIN...LOW RED BLOOD CELL COUNT**

**ASK THE DOCTOR**

Q Do those nasal strips and over-the-counter sprays that claim to stop snoring really work?

A There's no shortage of products that claim to stop snoring. Some work, some don't. It all depends on why a person snores. The sound is created when something blocks air from freely flowing. Inflamed sinuses, deviated septum, being overweight, and sleep apnea are just a few of the reasons why blockages, and hence snoring, occurs. Treating the cause of the blockage can reduce or eliminate snoring. As for nasal strips, studies have shown that they can work because they open nasal passages. The strips are lined with an adhesive that lifts the skin around the nasal passage, allowing air to pass through more easily. So, if the problem is due to colds, allergies, or deviated septum, the nasal strips can provide some relief from snoring. Snoring sprays claim to work by lubricating the throat to reduce throat vibration or by reducing mucous. It is possible that snoring can be resolved with sprays if it's due to a dry throat or excessive mucous. If snoring is accompanied by excessive daytime sleepiness, morning headaches, or changes in attention, concentration or memory, see a physician, as these can be symptoms of sleep apnea. It's a serious but treatable sleep disorder hallmarked by excessive snoring.

Q What's the right dose of daily aspirin to take to protect my heart without upsetting my stomach?

A That's a good question because studies have shown that regularly taking aspirin can increase gastrointestinal bleeding among some people, including seniors. While taking an aspirin can have a protective effect, not everyone needs to do so. The U.S. Preventive Services Task Force has issued new guidelines regarding the use of aspirin to prevent heart attack and stroke. The main message is to weigh the risks and benefits of taking the drug on an individual basis. The recommendations state that people age 50-69 who have a 10 percent or greater risk for heart attack or stroke in the next 10 years, as well as life expectancy exceeding 10 years, are the most likely to benefit from aspirin therapy. To gain the benefit, a low-dose aspirin (81 mg, such as baby aspirin) needs to be taken daily. A 10 percent or greater risk for heart attack or stroke is defined as having two cardiovascular risk factors, which include your age, high blood pressure, high cholesterol levels, and smoking. GI bleeding risk is higher if you take other nonsteroidal anti-inflammatory drugs (Advil, Motrin, Aleve), or other blood thinners, including herbal supplements like gingko biloba. Symptoms of a bleed include stools that appear darker, lightheadedness upon standing, and vomiting blood. See your doctor immediately if you experience any of these symptoms.

Q I recently had a panel of blood work done and found out that I have a low red blood cell count. Can you shed some light on what might be causing this?

A Anemia, also known as low red blood cell count, can have a number of causes. Blood tests can reveal the source of anemia by measuring iron, folate and vitamin B12. Anemia can be mild or severe, and both should be treated. In older adults, a vitamin B12 deficiency is common. If that is the reason for your low red blood cell count, be sure to include foods such as fish, shellfish, lean meat, poultry, eggs and low-fat dairy—all of which are good sources of vitamin B12. Vegetarians are especially vulnerable to this deficiency as B12 comes mainly from meat sources. Some vegetarian foods are fortified with B12, but typically not enough, making B12 supplements necessary. Folate is another important nutrient for red blood cell production. High-folate food sources include leafy green vegetables such as spinach, broccoli, Brussels sprouts and mustards. Anemia can also be caused by not getting enough iron. Foods rich in iron include leafy greens, tofu, chickpeas, and prune juice.