The 2017 Nobel Prize in Medicine was awarded to three Americans for their groundbreaking work on circadian rhythms, the predictable 24-hour fluctuations in heart rate, blood pressure, metabolism, hormones, body temperature, and other functions. Synchronized with the earth’s rotation and day/night cycles, these natural rhythms orchestrate the timing of behaviors such as sleep, alertness, eating, and physical activity.

Initially working with fruit flies, the trio discovered how specific genes encode proteins that accumulate in cells during the day and dissipate at night. They went on to identify other “clock genes” that work together to control circadian rhythms in all living organisms. These breakthroughs paved the way for volumes of research on the links between biological rhythms and health.

Programmed Sleepy Time

Sleep is tightly regulated by circadian rhythms. We’ve all experienced the misery of jet lag—crossing time zones throws our internal timekeepers off-kilter, making us sleepy during the day and wide-awake at night. Jet lag aside, one in three Americans fails to get adequate sleep, in large part because of the mismatch between our molecular clocks and modern lifestyles.

Light plays a central role in circadian signaling. The pineal gland begins releasing melatonin (the “sleep hormone”) around 8:00–9:00 in the evening and peaks during the middle of the night. Nighttime exposure to artificial light, especially short wavelength blue light emitted by TVs, computers, tablets, and smartphones, suppresses melatonin production and messes with our biological clocks.

Studies have found, for example, that people who read on light-emitting devices are more alert at bedtime, stay awake longer, produce less melatonin, get less REM sleep, and are sleepier the next morning, compared to those who read printed material. If you watch TV or use your digital devices for hours on end night after night, as many people do, it alters the body’s natural 24-hour cycles, leading to “social jet lag” and adverse effects that extend far beyond daytime sleepiness and fatigue.

When your body clock is out of sync, inflammation, blood pressure, and other markers of cardiovascular and metabolic dysfunction increase. Hormones that signal hunger and satiety are desynchronized, which can lead to nighttime eating, weight gain, and insulin resistance. Mood changes, cognitive problems, and some neurological disorders are also linked with circadian rhythm disturbances. Chronic disruption, which occurs with nighttime work or rotating shifts, is associated with increased risk of depression, obesity, cardiovascular disease, diabetes, and cancer. In fact, the World Health Organization has classified shift work as a probable carcinogen!

continued on page 3
Dear Reader,

The holiday season is in full swing, and although I'm relegated to hauling boxes and heavy lifting, my wife is busy decorating, shopping, cooking, and party planning on top of her usual activities. I'm sure Connie isn't the only person who is burning the candle at both ends this time of year, so let's look at what you can do to conserve energy—and get an extra boost when you need it.

I don't need to tell you about the importance of a healthy diet, exercise, and adequate sleep. You also know that over-scheduling, overspending, and overdoing it in general increases stress and saps energy. But don't overlook nutritional supplements. Several micronutrients are involved in mitochondrial metabolism, and a 2016 study found that daily multivitamins significantly increased energy as well as cerebral blood flow. Coenzyme Q10 100 mg, L-carnitine 1,500 mg, and vitamin D 2,000–5,000 IU per day also enhance energy and are great additions to your supplement program.

When you're really dragging and need a quick lift, nothing beats a 20- to 30-minute nap. Red Bull, 5-Hour Energy, and similar products provide a blast of caffeine-fueled energy, but most are loaded with sugar or artificial sweeteners, so I suggest sticking with coffee. Not everyone can tolerate coffee, however. My wife loves coffee's taste and benefits, but it upsets her stomach and makes her jittery. So I began looking for an alternative a few months back and came up with something I'm pretty excited about.

Mighty Mocha Energy Essentials contains some caffeine (70 mg, the amount in a very small cup of coffee) derived from organic coffee berries, the nutrient-rich fruit that surrounds coffee beans. An additional energy boost is provided by theobromine, a “cousin” of caffeine found in chocolate. But I took special care to avoid the edgy, wired feeling some people experience with stimulants by adding 100 mg of L-theanine commonly derived from green tea, which has a unique ability to calm the brain, improve focus and mental energy, and work synergistically with caffeine. Better still, because all these ingredients are natural botanical extracts, they're loaded with antioxidants and protective phytonutrients.

This product is not for everyday use. You take a capsule only when you need quick and sustained energy to power through an afternoon of holiday shopping, gift-wrapping—or whenever you could use a safe, healthy pick-me-up. Connie loves it, and I think you will too.

Happy holidays to you and yours,
Honor Your Circadian Rhythms

Virtually every organ and cell in the body has its own clock genes. We’re most alert and focused in the mid-morning and experience an early afternoon dip in energy and concentration. Coordination, muscle strength, and cardiovascular performance are at their best in the mid- to late afternoon. Blood pressure is highest, arteries least flexible, and blood stickiest in the early morning—making it prime time for heart attacks and strokes. Glucose tolerance declines in the evenings, and testosterone levels peak in the early hours.

Do your best to sync your activities with your body’s innate rhythms. Tackle work that requires concentration first thing in the morning, take a nap or energy booster after lunch, and exercise in the afternoon. Avoid eating late in the evening, and go to bed at a reasonable and regular hour. I won’t go so far as to suggest you have sex in the mornings, but for men that is the ideal time.

Turn off your TV, smartphone, computer, and other devices a couple of hours before bedtime. Light aside, news, social media, etc., are highly stimulating and can lead to poor sleep, which perpetuates circadian rhythm alterations. If you simply can’t pull the plug on your light-emitting devices, opt for the evening settings, get a blue light-blocking app, or view on the dimmest setting.

In the morning, turn on the lights, open the shades, and let the sunshine in. Just as darkness signals melatonin release and sleep, daylight also regulates circadian rhythms. It helps you wake up, jumpstarts metabolism, and boosts mood and energy.

Resync With Light and Melatonin

Light is actually used therapeutically to help reset circadian rhythms. Several minutes of bright full-spectrum light exposure is a safe and effective treatment for jet lag and certain sleep disorders, as well as dementia, disease-related fatigue, bipolar disorder, and depression, especially seasonal affective disorder (the “winter blues”).

Supplemental melatonin also helps keep your biological clock ticking. Production of this important hormone tends to decline with age and is often accompanied by changes in sleep patterns. I’ve been recommending melatonin to my patients and Health & Healing subscribers for decades. In addition to facilitating sleep and promoting normal circadian rhythms, it is also a potent antioxidant that protects DNA against free radical damage. Although it is most often used for insomnia and jet lag, melatonin has also been studied as a therapy for fibromyalgia, cancer, radiation damage, and some types of headaches.

Not surprisingly, Big Pharma has come up with a handful of drugs to restore circadian rhythms. These pricey meds work by binding to melatonin receptors. One of them, Circadin, is simply extended-release melatonin. My advice: Use safe, inexpensive melatonin, which is available over the counter without a prescription. The usual dose is 1–3 mg, taken 30 minutes before bedtime. If you don’t get good results with regular melatonin, try the extended-release form, which mimics natural melatonin secretion.

Chronotherapy/Chronotypes

The study of biological rhythms has unearthed a plethora of fascinating findings. Researchers have discovered that syncing medications with the body’s internal clock increases efficacy and reduces side effects. For instance, taking certain antihypertensive meds at bedtime reduces early morning blood pressure spikes. Antihistamines work better when dosed at night or early morning. Some chemo drugs are much more effective and less toxic when administered at specific times of day.

Circadian rhythms may even affect surgical outcomes—but in this case, it’s more about the doctors than the patients. Focus and energy dip between 3:00 PM and 5:00 PM, and when you add in fatigue as the day wears on, late afternoon may not be the ideal time for surgeons to be performing intricate procedures.

Each of us has our own genetically determined “chronotype.” Some of us are early risers while others are late sleepers, some adjust easily to jet lag and others have a hard time recovering from sleep loss. Whether you’re a lark or a night owl, I hope you understand the importance of working with, rather than against, your body’s natural rhythms. Optimal health depends on it.

References


Dear Dr. Whitaker

Q My question is about dental X-rays. I get my teeth cleaned every six months, floss and brush daily, and my gums are in great shape. However, the office wants me to get X-rays every year. They are always normal—I have not had a cavity in decades. I am a little concerned about radiation but my main issue is that yearly X-rays just don’t seem necessary.
— Donna H., Huntington Beach, CA

A American Dental Association (ADA) guidelines recommend that patients at risk of cavities and other dental problems receive X-rays every six to 12 months. However, when no problems are present, the ADA says every two to three years is sufficient—and some experts believe that with good dental care you could go 10 years between full-mouth X-rays. Don’t be afraid to decline yearly X-rays if you don’t feel they are warranted. Also, rest assured that with proper precautions (a lead drape, thyroid collar, up-to-date imaging equipment, etc.) radiation exposure from dental X-rays is minimal—comparable to the amount you’re naturally exposed to on a typical day.

Q I have a sensitive question. A coworker of mine is a heavy breather. All day long his breathing is audible. I don’t mean to be petty, but it’s distracting. I am also wondering if it could be a health problem. He’s a friend and I feel as though I could talk to him about it if I knew how to approach the subject. Any ideas? — A.F., Chicago, IL

A Heavy breathing that occurs in the absence of exercise or physical exertion is usually a sign that your body is having to work harder to get the oxygen it needs. Causes can range from a stuffy nose triggered by allergies or a cold to more serious concerns such as asthma, chronic obstructive pulmonary disease (COPD), or heart failure. Being overweight can put undue pressure on the lungs making it more difficult to breathe, and anxiety can cause rapid, loud breathing as well. If the heavy breathing is constant and has been going on for some time, I’d advise your friend to see his doctor. Treating the underlying problem will likely clear up the noisy breathing.

Q Everybody talks about spring allergies but I swear mine get worse in the winter. Is there anything natural I can try? — Josh G., Severna Park, MD

A Winter allergies are actually quite common, since we spend more time indoors with recirculated air and allergens such as dust mites, animal dander, and mold. In addition to frequent vacuuming, laundering of linens, dusting, and changing air filters, one of the best natural products I’ve come across is Natural D-Hist. This combination of several allergy-fighting ingredients (vitamin C, quercetin, bromelain, stinging nettles, and N-acetyl-cysteine) helps dampen inflammation, promotes a normal mucus response, and clears nasal passages. Order Natural D-Hist online or by calling the clinic at 800-810-6655.

Antibiotics for Pink Eye? Not So Fast…

Pain, irritation, swelling, redness, discharge: Every year, 6 million children and adults experience these and other symptoms of conjunctivitis (pink eye). According to a new study in Ophthalmology, 60 percent of people who consult a doctor get a prescription for antibiotic eye drops—and 20 percent of those eye drops also contain steroids, which can extend the life of the infection or make it worse. This is yet another example of antibiotic overuse. Most cases of conjunctivitis are viral (some are allergic), and antibiotics can only cause harm. The best treatments for viral infections, which usually clear up on their own within a week or so, are saline rinses, warm compresses, homeopathic eye drops, and other natural therapies. If the discharge is thick and pus-like as opposed to clear and watery, it’s likely bacterial and should be checked by a doctor. An eye specialist is your best bet for getting a proper diagnosis.

Get the rest of this story at drwhitaker.com.
Works for Me…

► **Weight Loss** I lost 10 pounds in three months just by eliminating sugar. — L.L., via email

Proof that cutting out sugar and excess calories can make a big difference in a short period of time! Speaking of, I’ll be sharing results of our 10-day sugar-free challenge soon. Stay tuned.

► **Oral Lichen Planus** For the past year, I was struggling with an autoimmune illness called oral lichen planus. I suffered from painful ulcers on my cheeks and gums, was unable to eat most foods, and had lost 25 pounds. With Dr. Stivi’s help, I regained the weight and could eat again. The ulcers in my mouth have completely disappeared. Monthly vitamin C infusions at Whitaker Wellness—and Dr. Stivi—have helped me get my life back.

— Christine D., via email

IV vitamin C is a remarkable therapy we use at the clinic for a variety of hard-to-treat infections, immune challenges, and other health concerns. To learn more, call 800-488-1500.

► **Toenail Problems** I have had more than my share of toenail problems, but the advice I got from my current podiatrist has really helped. Instead of over-the-counter or prescription anti-fungal products, which he does not have much faith in, he recommended spraying apple cider vinegar on the nails after cleaning and drying, and applying Vicks VapoRub every night before bedtime. I was amazed that Vicks improved the appearance within a couple of days, although he said you have to wait for the nail to grow out to really get rid of the fungus. He also advised removing toenail polish after a week or so to allow the nails to “breathe.” I used to keep my toenails polished all the time, but since I started following this advice, my nails have been much healthier.

One final thing that has helped heal and prevent ingrown toenails (I have had four that required surgery to remove part of the nails) is wearing specific shoes: Birkenstocks, which have better protection than most sandals, and ASICS GEL-Nimbus running shoes, which are soft and well padded with a larger toe box. I hope this will help others as it has helped me. — Olivia S., TX

Do you have a Health Tip to share? We’d love to hear it! Send it to worksforme@drwhitaker.com.

Health Hack: How to Cut Calories During the Holidays

It’s no surprise that we eat more during the holidays—an alarming 619 extra calories per day, according to one study. One way to avoid this pitfall is to skip breakfast. Intermittent fasting not only lowers caloric intake but also triggers fat burning and improves insulin sensitivity, blood sugar, and immune function. Holidays aside, skipping breakfast (mini-fast) and other intermittent fasting regimens are a healthy, proven way to control weight, diabetes, and disease risk factors. Visit drwhitaker.com to learn more.

Monthly Health Quiz

**Vitamin D Data: True or False?**

A) Vitamin D works best when other nutrients are present.
B) Salmon is a good source of vitamin D.
C) Everyone manufactures similar levels of vitamin D with sun exposure.

**Answer:**

A and B are true. People with obesity, diabetes, deficiencies of nutrients which enhance absorption of vitamin D, and people who are older or have lower blood levels require more sun exposure, and tend to have lower blood levels. D is fat soluble, so body stores remain constant from season to season, and are not replenished daily. People need to consider the amount of vitamin D they need in order to maintain a healthy level in their body.

Now Available at drwhitaker.com

- Manage Your Sugar Intake With These Healthy Sweeteners
- 4 Steps to Strong Bones

Visit drwhitaker.com and enter the article names into the search bar at the top. Click on the Content tab to find your results.

Notable Quote

“[It is health that is the real wealth and not pieces of silver and gold.]”

— Mahatma Gandhi, “Father of India,” 1869–1948

No computer? Mail your question or health tip to Health & Healing, 6710-A Rockledge Dr., Ste. 500, Bethesda, MD 20817.
Getting a Handle on Inflammation

Everybody recognizes inflammation when they see it: swollen joints; inflamed, congested nasal passages; painful, red abrasions; raised bumps and bruises. But there’s more to inflammation than meets the eye.

Acute vs. Chronic

Acute inflammation is a chief component of the body’s response to injury or infection. It’s a complex process that involves blood vessels, immune cells, pros-
taglandins, and other compounds that contribute to the characteristic swelling, redness, pain, and warmth. Once healing is complete, these symptoms subside.

Chronic inflammation is another story. It isn’t triggered by an obvious injury or infection—in fact, you may not even be aware of it. But some underly-
ing factor is putting the immune system on high alert. It could be a low-grade or undetected infection such as periodontal or Lyme disease, or a food or environ-
mental allergen like gluten or mold. Perhaps it’s exposure to toxic pollutants, smoke, excessive alcohol, or drugs. Poor diet, nutritional deficiencies, imbalances in gut bacteria, and obesity are other common culprits.

Whatever the stimulus—and it’s often difficult to detect—chronic inflammation contributes to a broad range of serious health challenges.

Serious Consequences

Heart attacks generally occur when inflamed arterial plaques erupt, attracting blood clots that block blood flow to the heart. C-reactive protein (CRP), a marker of inflammation measured by a simple blood test, is an independent risk factor for cardiovascular disease that is more predictive of heart attacks than elevated cholesterol.

Rheumatoid arthritis, multiple sclerosis, lupus, Crohn’s, and scores of other autoimmune disorders are quintessential inflammatory diseases. Type 2 diabetes is associated with chronic inflammation, and a high CRP may signal an increased risk of developing dia-


My Recommendations

- Have your CRP tested. Optimal level is less than 1 mg/L. Above 3 is consid-
ered high risk, and steps should be taken to lower it.
- In addition to diet, weight loss, exercise, and stress reduction, I recommend fish oil 1,000 mg EPA/DHA, curcumin 400–1,000 mg, high-potency probiotics, vitamin D 2,000–5,000 IU, vitamin C 1,000 mg, magnesium 500 mg, aspirin 81 mg, and LDN 3–4.5 mg. LDN requires a prescription and should be taken at bedtime. Talk to your doctor before starting aspirin.

Fight Inflammation

You can see why it’s critical to get a handle on inflammation. Start by cleaning up your diet. Salmon, sardines, and other omega-3–rich fish, olive oil, nuts, avocados, berries, leafy greens, cruciferous vegetables, tomatoes, onions, and other high-fiber vegetables and fruits dampen inflammation, while processed and fried foods, sugar, and excessive red meat and alcohol promote it. Moderate (not heavy) exercise and stress management have proven benefits, and weight loss—especially if you have belly fat, which churns out inflammatory chemicals—is particularly important.

Nutritional supplements also make a difference. If you don’t get enough dietary omega-3s (few Americans do), take EPA/DHA, which inhibits an enzyme that triggers inflammation. Probiotics help correct imbal-
ances in gut bacteria, a common source of inflam-
mation, and curcumin reduces several inflammatory markers. Studies show that vitamins C and D are also beneficial, and a recent meta-analysis found that magnesium supplements lower CRP.

I also recommend two medications: aspirin, which blocks production of prostaglandins that fuel inflammation, and low-dose naltrexone (LDN), a prescrip-
tion drug that modulates the immune response.

It’s premature to promise that decreasing your inflammatory burden will stave off heart disease, Alzheimer’s, etc. But I can tell you that therapies aimed at reducing inflammation are among the most exciting treatments being tested for these stubborn and debili-
tating conditions. Don’t wait until conventional medi-
cine catches up. Adopt these measures now and douse the harmful flames of inflammation.
Dear Dr. Whitaker,

As a perfectly healthy 29-year-old, the idea that anything could be physically wrong with me had never entered my mind. That is why I was barely fazed when I woke up one morning to find my right elbow locked at a 90-degree angle and my right foot swollen and sore. I moved on with my day easily enough, but by the next day, my right knee was also swollen and throbbing with pain. I called my primary care physician and was told I would have to wait weeks for an appointment. I was still unconcerned because I was certain that whatever this was would be gone before then.

I had no idea how wrong I was. Within days the pain on my right side had become so severe I wasn’t able to walk. I still had to care for my five-year-old son, so I started hopping from place to place and occasionally crawling. I didn’t realize that the additional stress on my unaffected joints would cause them to flare as well, leaving me with painful, hot, swollen joints on both of my ankles, knees, and wrists. All the while, my elbow remained unmoving, locked in place. This made absolutely no sense to me. Up until this point in time I had separated injuries/body pain from illness and had never heard of rheumatoid arthritis…that was all about to change.

The following week I was finally seen by my physician, blood work was ordered, and a very long process began. I found out that I had a high sedimentation rate and rheumatoid count. I was told over the phone that I had rheumatoid arthritis and would need to see an internal medicine doctor, but could not get an appointment for another week. I immediately called Whitaker Wellness.

After consulting Dan Farrier, MD, at your clinic, I started oral supplements and daily intravenous vitamin drips. I also came in twice a day for hyperbaric oxygen treatments. While working through these therapies, I went to see the internist, who suggested that I go on methotrexate, a drug used to treat breast, skin, head, neck, and lung cancer, as well as rheumatoid arthritis.

From my research, I understood that methotrexate was typically only used in cases like mine after other treatment options had been tested. The side effects seemed more severe than what I was already dealing with, ranging from hair loss and vomiting to confusion and seizures. The most devastating consequence would be that I could not have more children while taking this medication. I decided to forgo it and rely on my doctor and treatments at Whitaker Wellness. That was the single-best decision I have ever made.

I continued with therapies at the clinic and agreed to take steroids to combat the inflammation. With this combination we were finally able to get the flare under control. My internist told me I could expect another flare within six to eight weeks, at which point I could plan on discontinuing work and being on disability at some point in the near future. Meanwhile, Dr. Farrier told me that we would continue to support my immune system and look for the cause of my symptoms to solve the issue at the root of the problem.

I made significant changes in my diet, began exercising regularly, and started a comprehensive nutritional supplement program. My second son was born two years later, and I have been able to live a medication- and pain-free life. It has been over 11 years now, and I have never had another flare. I will always be thankful for you, Dr. Whitaker, and for Dr. Farrier and the staff and treatments at Whitaker Wellness that made this possible.

Gratefully yours,
Jessica O’Malley
Innovations in Wellness Medicine

Electroacupuncture for Stress Incontinence

Ladies, if the thought of running, jumping, coughing, sneezing, or lifting heavy objects makes you want to hurry to the nearest restroom, you’re not alone. At least 15 million women in the US suffer from stress incontinence, or involuntary leakage of urine when pressure is placed on the bladder. Although severe cases may require surgery, noninvasive treatments are quite effective, including physical therapy, Kegel exercises, pessaries, and other devices that strengthen the pelvic muscles. Another proven treatment, which has just been bolstered by a clinical trial, is electroacupuncture.

In a study published in JAMA earlier this year, 500 Chinese women with stress incontinence were randomly divided into two groups and treated with either electroacupuncture (mild electrical currents are applied to the needles to stimulate acupuncture points) or sham acupuncture three times a week for six weeks. At the study’s conclusion, the women who had been treated with electroacupuncture had significantly less urine leakage, compared to those who received sham treatments.

Astanxanthin for Aging Skin

I recently asked a colleague who looks much younger than her age about her skin care regimen. She told me she’s lax about sunscreen and topical products but thinks her youthful skin may be due to the multivitamins, fish oil, probiotics, and other supplements she has faithfully taken for years. She’s definitely on to something. Scores of clinical trials reveal myriad benefits of oral vitamins, minerals, and other nutrients for skin health and appearance.

One of the latest studies suggests that astaxanthin, a carotenoid that is an exceptionally potent antioxidant, helps ward off wrinkles. Sixty-five healthy women aged 35–60 took astaxanthin (either 6 mg or 12 mg) or a placebo daily for four months. When they were reevaluated, there were no significant changes or skin deterioration in the women who had taken astaxanthin, while those in the placebo group had marked worsening of wrinkles and a significant decrease in skin moisture content. Bottom line: Supplements have the power to heal and protect from the inside out. A good nutritional regimen may be one of your best defenses against aging skin.

Health & Healing Resources

- Renew Your Subscription . . . . 800-539-8219 (M–F 9 AM–5 PM EST)
- Buy Supplements . . . . . . . . 800-722-8008 or drwhitaker.com
- Sign Up for My Free E-News . . . . . . . . . . . drwhitaker.com
- Make an Appointment at Whitaker Wellness . . . . 800-488-1500 or whitakerwellness.com

Did You Know?

- Ten minutes of fast or 20 minutes of slower walking daily cuts heart patients’ risk of death by a third.
- Research shows niacinamide (500 mg twice a day) may protect against melanoma and other skin cancers.
- Loperamide (Imodium) works better than bismuth (Pepto-Bismol) and antibiotics for mild traveler’s diarrhea.
- “Freshman 15” is a myth; first-year college students gain an average of 7.5 lbs.
- Average time spent in emergency rooms is 138 minutes; 279 if patients are admitted.
- Gaining as little as 5 percent of body weight adversely affects the heart muscle.
- Pediatric guidelines for children under age 2 have changed from no screen time to “no solo media use.”
- Studies link loneliness and social isolation with higher risk of premature death.
- Contrary to popular belief, humans have an extraordinarily sharp sense of smell.
- Researchers found that kids whose moms ate a lot of sugar during pregnancy were more likely to develop asthma and allergies.

Coming In Future Issues:

- Rituals for Health
- Could You Benefit From a Course of Chelation?
- The Difference Between Chronological and Biological Age