Making Friends with Stress

Stress is an inescapable part of the human existence. No one can deny this fact. Even our distant ancestors experienced stressors, and although the types of stressors may have changed throughout the generations, the effects of stress on our minds and bodies remain similar.

The human body can handle short-term stress such as running from an animal or taking a difficult exam through adaptive mechanisms designed to combat these events. It’s the prolonged stress that our body wasn’t designed to tolerate. This type of prolonged stress can cause a lot of damage and can even be fatal. According to the American Psychological Association, chronic stress is linked to the top six causes of death: cancer, lung ailments, accidents, suicide, heart disease, and cirrhosis of the liver.

Recognizing that stress is a killer and dangerous to our health is an essential first step to preventing stress-induced illness and suffering. While most stressful situations are challenging, we can all agree that some events are weighted heavier than others. The University Hospital blog listed the top 5 most stressful life events: death of a loved one, divorce, moving, major illness or injury, and job loss.

The U.S. National Library of Medicine defines stress as a “feeling of emotional or physical tension. A feeling, thought, or event which makes you feel the emotions of frustration, anger, or nervousness. Stress is your body’s reaction to a challenge or demand.” Some of the physical symptoms of stress include aches and pains, heart racing, chest pressure, elevated blood pressure, headache, shakiness, stomach ache, muscle tension, trouble sleeping, and sweating, to name a few. The emotional signs of stress may include feeling withdrawn, crying, yelling, and trouble concentrating, among others. Each person reacts differently physically and emotionally.

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Perhaps your stress response is a partially learned behavior from parental reaction to stress, genetic influences that enhance or impair the body’s ability to process stress, or a loss of reserve physically and mentally to combat intense situations. Those are all valid reasons why one individual seems to handle stress better than the next person.

It would be reasonable to think most everyone is trapped in a never-ending cycle of uncontrollable events stimulating stress that negatively impacts our lives and even contributes to death. Could it be possible not to fear stress but to make friends with stress? Yes! We sure can’t avoid it, but we can acknowledge its role in our lives, and we can start to change how we view the day-to-day stressors, even life’s biggest challenges. Even if we lack control over some events, we have the power to control how we value those events and process our reactions. Research validates that it’s not the actual stressor but the individual’s perception of the stressor and their confidence to handle it that determine the positive or negative effects of the stress.

This concept was put to the test during a study conducted by the National Health Interview Survey, which tracked 30,000 adults for eight years in the U.S. Models were defined to assess the impact on all-cause mortality from the perception that stress affects health. Some of the questions included: How much stress have you experienced in the last year? In the last 12 months, how much effect has stress had on your health? The results showed that 33% of participants reported higher levels of stress and perceived that this stress was associated with an increased likelihood of adverse health outcomes.

Another conclusion that emerged from this study, showed that people who experienced a lot of reported stress and believed it would harm them physically or mentally had a 43% chance of dying sooner than those participants who did not perceive high levels of stress nor associate the stress as harmful. When you change your mind about stress, you reduce the risk of dying and having adverse effects.

There is a fancy term for making friends with stress, and it is called the adaptive mindset. Individuals who have a stress-is-enhancing mindset exhibit more adaptive physiological responses and more approach-oriented behavioral responses in the face of stress. Specifically, participants who rated themselves as having a stress-is-enhancing mindset experienced moderate cortisol reactivity and were more receptive to feedback than those with a stress-is-debilitating mindset when exposed to an acutely stressful situation.

Instead of viewing the stressor and emotions as harmful, visualize your body and mind rising to the challenge. View the event or situation as positive, and think about what you are going to learn and how you are going to grow from overcoming the experience. The body was designed to process stress.

We have hormones such as cortisol, catecholamines, and thyroid hormones designed to control our body’s reaction to stressors. These hormones can increase breathing, heart rate, and blood glucose levels, slowing digestion and sharpening our thinking skills. Understanding that thoughts and perceptions have a direct physiological impact can help and improve the body’s response to stress and decrease negative health effects.

Adopting protective beliefs and a proactive mindset surrounding your old pal, stress, will prepare you for better health outcomes in the future. A great practice is reframing your perception of stress with the three R’s – Recognize, Reframe and Repeat.

Recognize that stress is part of the human existential experience and everyone experiences similar types of stressors in their lives. Therefore, try not to add more value to the stressor.

Reframe your body’s stress response as helpful, not harmful. Imagine that a challenging situation is not causing harm emotionally or physically. Visualize your energy reserves, enhancing your response to the situation.

Repeat positive affirmations regarding stress. Such as, “This challenge will help me grow and learn. I will be better able to handle similar situations or experiences in the future.”

Stress no longer has to be the enemy that we once perceived it to be. Stress in whatever form, such as driving in traffic, the loss of a loved one, deadlines at work, or the ending of an important relationship, can be viewed from a more positive perspective.
Reframing our negative beliefs about stress can blunt or prevent the stress hormones from increasing, blood pressure from rising, the mind racing, and blood sugar from spiking in the short term but can have far-reaching effects for the long term, such as prolonging your life.

REFERENCES:

Products that help with adrenal fatigue

**Adrenal Adapt**
60 Capsules | $31.95
Adrenal Adapt is designed to support the correction of cortisol levels and can help strengthen resistance to stress.

**Adrenal Revive**
60 Capsules | $53.95
Adrenal Revive is designed to help maintain cortisol levels and encourage a sustained level of energy against stress.

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease. Please discuss with your provider before adding supplements to your daily regimen.

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Hormesis – the “Good Stress”

Isn’t Stress Always Bad?
Most people think of stress as being a bad thing. Being overbooked, behind in your home and work duties, short on sleep, fatigued, irritable, anxious, or even seriously depressed - these are undoubtedly undesirable states of “bad stress.” Just running into another highly stressed family member or co-worker can be enough to bring you down! Stress is “bad” ... unless you learn how to “dose” yourself more effectively.

Hormesis To the Rescue
Hormesis is a dosing concept taken from toxicology. Exposure to a large dose of an unfamiliar toxic chemical can make you sick. However, given intermittently, small doses of that same toxic chemical can stimulate and gradually “train” your body to neutralize it so that you don’t get sick, even when you are hit with a larger dose! Hormesis is the process of learning how to properly “dose up” various threats over time in a way that strengthens your physiology, thus making you more immune to the adverse effects of the threat.

Examples of Hormesis in Daily Life

EXERCISE
Walking, lifting weights, jogging, and riding bicycles are excellent exercises that hermetically strengthen your bones, build muscles and stamina, increase your immunity, and stimulate endorphins that help you feel happier.

SAUNAS OR COLD SHOWERS
Heating up your body to a mild fever causes sweating and many other adaptive responses. Alternating a sauna session with cold showers may not sound comfortable, yet it triggers wonderful hormetic benefits to your health.

MEMORIZING LINES IN PLAY, A SONG, OR STUDYING FOR A TEST
We typically don’t think of this as hormesis. Yet, it truly is a process of “repetitively stressing your memory” until more permanent neural pathways are laid down in your brain: the result - a successful performance or a higher score on your test.

Interval Training - High-Level Hormesis
A daily walk is great for your overall health. If you want even better health benefits from your walk, try doing it as interval training. Start your walk with a 5-minute warm-up where you take your time to get limbered up. Now ramp up your pace to “as fast as possible, yet safe” for about one minute. Then slow your walking speed back for 2-3 minutes. This “one minute fast followed by 2-3 minutes slow” is considered one interval. Carefully work up to a total of 5-7 intervals during the training phase of your walk. Finish your session with 3-5 minutes of cool-down easy walking. It’s best to practice interval training only 2-3 days a week, with normal walks between training days.

Hormesis and Appropriate Alcohol Use
Most of us are unaware that alcoholic beverages are considered a “Group 1 carcinogenic agent” by The International Agency for Research on Cancer (IARC) of the World Health Organization*. Although this agency recommends complete abstinence from alcohol, it does concede that one alcoholic drink per day (using alcohol as a hormetic) may reduce your risk for heart disease.

However, chronic overuse of alcohol is NOT hormetic and can lead to the development of all kinds of chronic and sometimes fatal diseases.

Colorful Phytonutrients are Hormetic
The 5 A Day for Better Health program is a National Cancer Institute-funded program to educate and encourage everyone to eat five servings of colorful vegetables and fruits for better overall health and a reduced risk for cancer. These “colors” are poisonous phytochemicals that the plants synthesize to protect themselves from molds, fungi, certain insects, and other predators. Over the course of time, through a process of evolutionary hormesis, early humans developed detoxification pathways in their liver that made them tolerant to these “poisons.”
Today, we know over 1000 of these phytochemicals fall into various categories of polyphenols and carotenoids. These phytochemicals can stimulate the immune system, slow the growth rate of cancer cells, and prevent DNA damage that can lead to cancer and other diseases. By consciously choosing colorful vegetables and low glycemic fruits, we are using the power of hormesis to become more resilient to the development of cancer.

Metabolic Hormesis

Every night most of us engage in intermittent fasting for at least 8-10 hours. That is unless you can’t sleep through the night without a bedtime snack, or a 2 am treat. Suppose you are unable to make it through the night without a snack. In that case, this could be due to your blood sugar plummeting - nighttime hypoglycemia, which is a common sign of insulin resistance, the dreaded precursor to Metabolic Syndrome and Type 2 Diabetes. By training yourself to extend the time that you do not eat during the night and into the early morning, you are engaging in the good stress of metabolic hormesis! Over time, you should be able to work up to 12-16 hours of intermittent fasting. Your body’s metabolism will gradually shift into better fat-burning, also known as ketosis. Not only will you gradually lose excess fat and re-normalize your blood sugar levels, but you will also be reducing your risk for heart disease and cancer. Hormesis saves the day again!

Summary

As you can see, hormesis plays a pivotal role in developing better health through the adaptive tendencies of the human body when adequately exposed to just the right amounts of progressive “good stress.” Keep this method in mind as you work to develop better daily habits of health. Become a Hormetic Health Hunter!

1. Group 1 Carcinogens in Food – Alcoholic Beverages
2. Functional and Preservative Properties of Phytochemicals; 2020
As we’re in the throes of the winter season, this is an excellent time to look at our diet and lifestyle and how it’s serving us. What do I mean by that? Winter is the time of year when we catch colds, contract the flu and other viruses, and potentially spread it amongst others. While there is a LOT of education on how to minimize exposure and increase sanitation, there is not much emphasis on building our terrain. So what helps keep our immune system robust and thriving?

**Using Food-as-Medicine: What to Remove**

Let’s start with the diet. We want to begin with removing processed foods and eating natural, whole foods as much as possible. Processed foods have added sugars, industrialized oils, additives, and chemicals that cause a lot of inflammation. These types of foods feed harmful bacteria, compromise the intestinal lining allowing undigested foods, viruses, bacteria, etc., into the bloodstream where they don’t belong and set off inflammatory response. While inflammation is important because it’s the body’s way of attacking foreign invaders, we don’t want it to become chronic. We don’t want it to be left “on.”

The immune system has two main jobs. The first is to attack whatever foreign invader is causing the problem. The second is to keep the entire system reigned in, so once the foreign invader is vanquished, the system will turn off. This second part is vital. Otherwise, we could catch a cold, and our immune system would never turn off again! Normally, the immune system activates an acute response. For example, when we get a cut or a sliver, acute inflammation is started. When we’re exposed to a virus, the adaptive immune system is triggered. While this is going on, the rest of the immune system stays restrained, making sure things don’t get out of hand.

In the case of chronic inflammation, our bodies lose the ability to balance the two separate functions, causing them to go awry.

When we have chronic stress, persistent infections, or eat pro-inflammatory foods, the signals to produce inflammation become chronic. Then when we add in nutrient deficiencies and poor sleep, the part of the immune system that keeps it regulated becomes inefficient. This is when we can get widespread body inflammation, damaging healthy tissues along the way.

While Chronic inflammation isn’t necessarily the cause, it contributes to ALL chronic diseases: Heart disease, diabetes, autoimmune diseases, and cancer.

This is where our diet and lifestyle come into play. How much inflammation we have is a direct result of how we eat, how we sleep, how active we are, how much stress we’re under, the amount of toxins we’re exposed to, and if we have any underlying infections that aren’t being addressed.

**Using Food-as-Medicine: What to Add**

Circling back to our diet, we know what to remove and why, so now the question becomes, what do we add?

It’s important to understand that the immune system is a nutrient hog, especially the part responsible for turning it off. It needs a vast array of nutrients, including essential fatty acids, essential amino acids, vitamins, minerals, and plant phytochemicals.

**YEAR-ROUND, WE WANT TO EAT WHOLE, NATURAL FOODS, WITH THE MAJORITY OF THEM PLANT-BASED. SO, WHEN CONSTRUCTING A MEAL, THINK OF:**

1. Nutrient-dense proteins: 4-6oz, high-quality meats/fish (pasture-raised, grass-fed, wild-caught).
2. Tons of veggies: aiming for 2-3 servings/meal.
3. Eating the rainbow: choose vegetables of different colors.
4. Mixing up raw vs. cooked: vary how you prepare your veggies (juices, salads, steamed, roasted, sautéed).
5. Slow-burning carbs: choose starchy roots and tubers.
6. Phytochemical-rich fruits: berries and citrus pack more antioxidant bang for your buck.
7. Nuts and seeds as condiments: aim for up to 1 oz of nuts and seeds/day.
8. Choose high-quality fats for cooking and dressing: olive oil, avocado oil, coconut oil, or grass-fed butter or ghee.
9. Use fresh herbs and spices: they provide a ton of flavor and are packed with vitamins and minerals.
10. Cook at home most of the time: take control over your food quality; when eating out, choose farm-to-table restaurants.

While this is a year-round template, sometimes we need to give it a boost if we get sick. A few things we can add:

PROBIOTICS
Probiotic supplements and foods populate beneficial bacteria. Beneficial bacteria collaborates with immune cells, and it’s response to infection. Fun fact: 80% of our immune system resides in our gut. What we feed it has a direct impact on our immunity. Some examples are:

1. **Dairy-free yogurt**
   Dairy drives phlegm and mucous, so coconut-based or cashew-based are also options that still contain a creamy consistency.

2. **Kombucha**
   Kombucha is a fermented tea that contains live cultures of healthy bacteria and usually has an ingredient, like ginger, that works as an expectorant to loosen mucous.

3. **Fermented vegetables**
   Sauerkraut, pickles, carrots, beets, or other fermented veggies provide a broad range of beneficial bacteria.

GARLIC
Garlic has a compound called allicin that gives it antiviral, antibacterial, and anti-parasitic effect. It’s a very powerful fighter to help boost our WBC production to attack foreign invaders. We can use garlic as a base to almost any recipe by sautéing it with a bit of onion before adding other ingredients. It’s an excellent base for any soup, sauce, cooked veggies, etc., and it works well with many flavor profiles. Another option would be to roast a whole head of garlic. Just cross-section it at the head of the bulb and expose each of the cloves. Then add a pat of grass-fed butter with a sprinkle of sea salt, wrap it in foil, and roast it at 350 degrees for about 15-20 minutes. After it has cooled a bit, squeeze out the cloves. You can eat it whole or mix it with a little grass-fed butter to make a spread.

CHICKEN BONE BROTH
Making a simple bone broth does wonders for our gut health and immune system. Bone broth is rich in amino acids. Two particular amino acids found in the bones are cysteine and glutamine. Cystine mimics acetylcysteine, which is a compound found in bronchitis medications to relieve chest congestion. And glutamine improves the intestinal lining, making it less permeable, and reducing infection risk.

**TO MAKE CHICKEN BONE BROTH:**
1. Start by filling a pot with water and adding a rotisserie chicken carcass that has a little bit of meat on the bones.
2. Quarter an onion, chop 3-4 carrots and celery into thirds and add to pot.
3. Add 1-2 tablespoons of apple cider vinegar to leach the minerals out of bone to get optimal mineral content.
4. Add 1-2 tablespoons of sea salt. Sea salt helps to thin our mucous ducts keeping the mucous moist to discourage bacteria build up.
5. Bring pot to a boil, reduce it to a simmer. Cover and let sit for 10-12 hours.
6. Let cool then strain. Now you have a great bone broth to drink by itself or to use as a soup base!

Final Thoughts
These are only a few examples of food that boost the immune system through the winter season. We also want to optimize our Vitamin D and reduce stress while increasing our resilience. This can be done by exercising, time-restricted eating, getting adequate sleep, meditation, having fun/laughter, and connecting with nature, family, friends, and pets.

I hope by connecting the dots on how diet and lifestyle affect the way our immune systems work, we may become more proactive with our health.
The Latest Information and Top Experts in Functional and Integrative Medicine

EPISODE 21
PATIENT EMPOWERMENT
Patient Jenny Bradley and Dr. Lucas Tims ND, FABNO
In this episode, Patient Jenny Bradley sits down with Naturopathic Oncologist Dr. Lucas Tims to discuss what you as a patient can do to take control over your healing journey. By using the power of hope to build a team of providers, counselors, and friends to empower your choices and stand as a third party to support you with your decisions.

EPISODE 20
ARE PROCESSED FOODS MAKING YOU DIABETIC?
Laura Vasquez, MSN, APRN, NP-C
In this episode, Nurse Practitioner Laura Vasquez and host Kim Romig discuss the fundamental question, “Are processed foods making you diabetic?” You will learn what qualifies a food as processed, ways to avoid those foods, and steps you can take to improve your overall lifestyle.

EPISODE 19
TROUBLE WITH GLYPHOSATE
Ron Hunninghake, MD
In this episode, Dr. Ron and Kim Romig talk about new safety concerns around glyphosate, AKA Roundup. Glyphosate is a weed killer used as house hold item as well as a staple product with many farmers, but may be causing some major issues when it comes to your health.

EPISODE 18
PATIENT PERSPECTIVE: JENNY BRADLEY AND DR. LUCAS TIMS
Lucas Tims, ND, FABNO
In this episode, patient, Jenny Bradley sits down with Dr. Lucas and asks some of the hard hitting questions when it comes to cancer. Jenny is the founder of Shrink the Mutant School where she teaches courses for cancer patients and their friends.

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