

Sleep Deprivation and Mental Stress



Over 80% of Americans have challenges with sleep. Understand what it is doing to your health and how you can alleviate the problem to restore your health and increase your vitality, naturally!

SLEEP DEPRIVATION AND MENTAL STRESS

There are many things that can have a negative impact on your health, but what's the main ingredient to a healthier life?

Getting a good night's sleep.

Researchers are still discovering information about why humans sleep and what happens when we aren't awake, but the general consensus is that sleep is more important than many people realize. Studies have tied sleep to our physical, mental, and emotional health.

These realizations have led to increased awareness surrounding sleep deprivation. The issue has become so widespread that the CDC now considers insufficient sleep to be a public health problem. The organization notes that insufficient sleep has been linked to industrial disasters, car crashes, and occupational errors that cost people their lives.

Sleep has to come first if you want to live a healthier life!



PHYSICAL EFFECTS OF SLEEP

It's known that the body repairs itself during sleep. Increased blood supply to the muscles aids in tissue repair and growth. All the way down to the cellular level, sleep is the period when the body is most active in undoing damage accrued during the day.

INCREASED RISK OF HEALTH CONDITIONS

People who are chronically sleep deprived are at an increased risk of several health conditions including:

- Hypertension
- Obesity
- Diabetes
- Stroke
- Heart attack
- Hormone Imbalance
- Anxiety and Irritability
- Premature Aging



HEART DISEASE

Heart disease is one of the most serious health concerns connected to sleep deprivation. Regardless of other factors such as age, smoking, and exercise, studies have found that people over 45 who get six hours or less of sleep each night are twice as likely to have a stroke or heart attack, according to the National Sleep Foundation. Doctors are still examining the connection, but disruptions in biological processes such as inflammation and blood pressure likely play a role.

HORMONAL IMBALANCE

During sleep, various hormones are released throughout the body. These hormones play a critical role in regulating bodily functions including appetite, growth, and muscle development. This is the primary reason why lack of sleep can lead to obesity. People who sleep six hours or less have elevated levels of ghrelin, the hormone that stimulates hunger.

EMOTIONAL EFFECTS OF SLEEP

Sleep deprivation has a profound effect on mood. The National Academy's book *Sleep Disorders and Sleep Deprivation* is one of many references that note people who lack sleep are at an increased risk of depression.

When a person doesn't get adequate sleep it can alter parts of the brain that are associated with behavior and controlling emotions. In addition to depression, this can also increase a person's risk-taking behavior. Given this information, it isn't surprising that sleep deprived people often have anger management issues and mood swings.

HOW MUCH SLEEP DO YOU NEED?

Gallup polls over the last few decades have found that 40% of U.S. adults don't get the recommended amount of sleep. The National Institute of Health has created a sleep guide based on age that outlines how much sleep people should get each night.

| How Much Sleep Do You Really Need? | |
|------------------------------------|----------------|
| Age | Sleep Needs |
| Newborns (0-2 months) | 12-18 hours |
| Infants (3 to 11 months) | 14 to 15 hours |
| Toddlers (1-3 years) | 12 to 14 hours |
| Preschoolers (3-5 years) | 11 to 13 hours |
| School-age children (5-10 years) | 10 to 11 hours |
| Teens (10-17) | 8.5-9.25 hours |
| Adults | 7-9 hours |

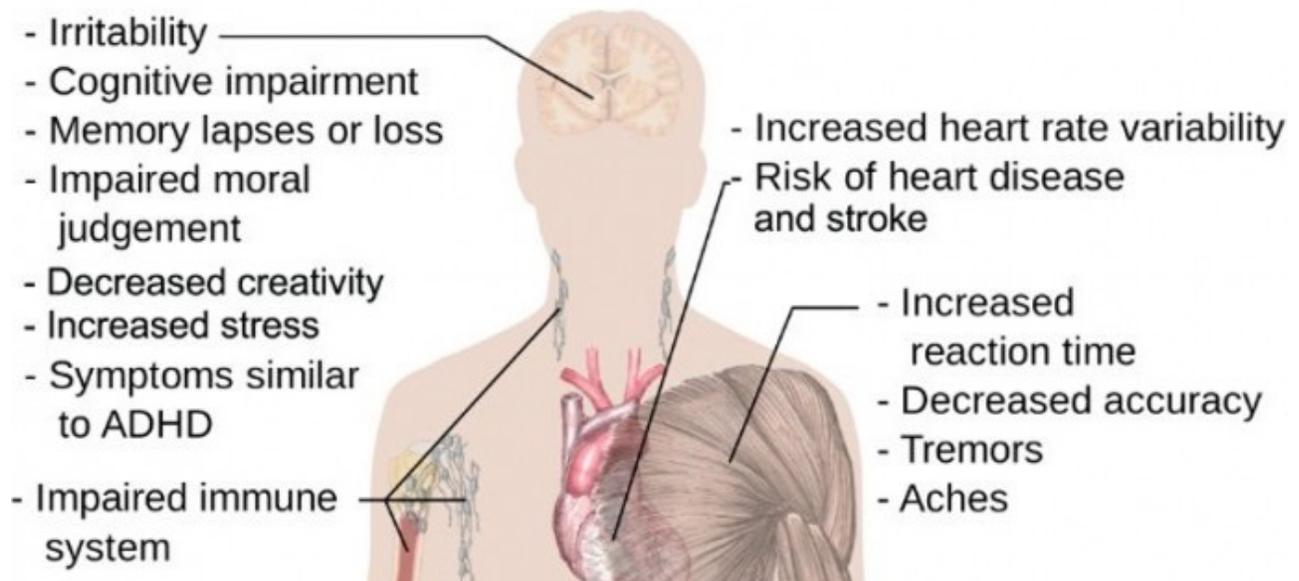
Source: National Sleep Foundation

For adults (19 and older), the recommended amount is 7-8 hours of sleep a night. Teens should get anywhere between 9-10 hours of sleep while school-aged children need at least 10 hours every night. Children four and under need between 11-12 hours of sleep, and babies should sleep between 14-18 hours.

Bottom line? Everybody could stand to get more shuteye in their lives. So do yourself and your health a favor by hitting the sack early tonight. Ask any adult to list the top five things lacking in their life right now and there is a

good chance that sleep will be at the top of the list. Unfortunately, sleep deprivation is something most of us are all too familiar with. And while we know that getting a good night's rest is important for our health, few of us find enough hours in the day to get at least eight hours of uninterrupted shut-eye.

SIDE EFFECTS FROM MISSING SLEEP



WHAT EFFECT DOES THIS HAVE ON OUR HEALTH?

Besides the hilarious or slightly more embarrassing moments of losing your keys only to find that they are in your hand or leaving the house in your slippers, research shows that chronic lack of sleep can have more serious side effects such as:

Increased accidents and injuries

Decreased mental alertness, concentration, reasoning and problem solving

Decreased mood

Weight gain

Decreased immune function

Increased risk of chronic disease

SLEEP LOSS: SHORT-TERM VS. LONG-TERM EFFECTS

Because sleep loss is so commonplace, we have become adept at functioning in a tired state. With coffee and energy drink consumption at a record high, it seems as though we have found a quick fix for our daily run-ins with brain fog and forgetfulness. Success? I think not.



Though minimizing these relatively minor side effects might increase your productivity short-term, the less visible consequences of sleep loss are far more detrimental to your health and shouldn't be taken lightly. Here is why:

WHAT'S HAPPENING INSIDE YOUR BODY?

Increased Oxidative Stress

As noted above, sleep is a time for your body to repair damage caused by external and internal stressors, to recharge, and to regulate its internal systems. Without adequate sleep, we get a build-up of free radicals which damage the cells and tissues of the body. This cellular damage will likely go unnoticed for some time; however, long-term exposure to excessive free radicals has the potential to cause permanent damage to your health.

Decreased Brain Function

Ever wonder what goes on in your brain during sleep? More than you can imagine! It is working hard to process the day's events. From creating and consolidating memories to forming neural connections and integrating

complex information, your brain is anything but inactive during those non-waking hours.

And not only is your brain working to create a scaffold for your knowledge, it is also busy clearing out toxins that have accumulated from exposure to the stresses of everyday life. So, by skipping out on hours of precious sleep, you are preventing your brain from performing these important housekeeping tasks that keep it functioning at an optimal level.

Hormonal Imbalances

Did you know that sleep deprivation can result in a significant alteration in metabolic and endocrine function? If you knew that this could affect your ability to maintain a healthy weight or increase your risk of chronic disease, would you make sleep a higher priority? I sure hope so!

HOW DOES SLEEP LOSS AFFECT YOUR HORMONES?

During waking hours, your body releases hormones vital to the maintenance of homeostasis. These hormones include cortisol, adrenaline, and glucagon—all of which work to regulate the following functions:

- Energy metabolism
- Immune function
- Anti-inflammatory actions
- Cardiovascular and central nervous system function

When we sleep, levels of these hormones drop and our body starts to release a set of hormones (e.g., human growth hormone) that are involved in growth and repair processes. Without adequate sleep, we are exposed to higher and prolonged levels of hormones like cortisol which has been shown to have widespread negative effects on the body.

These effects include (but are not limited to):

- Increased muscle protein breakdown
- Elevated blood pressure
- Lowered immune function

Additionally, hormones regulating appetite are profoundly influenced by sleep duration. Sleep restriction is associated with reductions in leptin

(appetite suppressant) and elevations in ghrelin (appetite stimulation). This results in increased feelings of hunger and, in the face of abundant food, likely leads to overeating.

SO WHAT CAN YOU DO IF YOU ARE ONE OF THE MANY THAT SUFFERS FROM HOURS OF LOST SLEEP?

First we suggest trying to catch a few more hours of sleep. Consider these simple tips for a better nights rest.

Keep a regular sleep schedule

Try to go to bed and get up at the same time every day. This helps to regulate the body's sleep-wake cycle.

Consider your intake right before bed

Avoid eating too much or too little as GI discomfort can interrupt your sleep. Try to reduce the amount you drink before bed so that you avoid waking up in the middle of the night to make a trip to the bathroom.

Limit your intake of caffeine, nicotine, and alcohol right before you go to sleep. Both caffeine and nicotine have stimulatory effects and though alcohol might make you sleepy initially, it can disrupt your sleep later in the night.

Turn off your electronics!

The light from your electronic devices stimulates your mind and can suppress melatonin production, a hormone that controls your sleep-wake cycle.



Make your bedroom more sleep friendly

Reduce noise by wearing earplugs or by creating background noise with a fan. Keep your room cool and dark. Most people sleep best in a dark room at temperatures around 65°F.

Increase your physical activity

Regular activity is associated with better quality sleep. Avoid exercising too close to bed as it may leave you feeling more energized, thus, making it difficult for you to fall asleep.



But, we get it. Finding eight hours in your day for uninterrupted shut-eye isn't always possible. So, what can you do to take care of the less visible side effects of sleep loss?

An Alarming Trend

There's an eye-opening trend that's happening in the fascinating world of sleep: sales of over-the-counter sleep aids are up—way up. Some research suggests that transient insomnia might be affecting up to 80% of the US population. That's alarming.

It's especially alarming because sleep might be the single most important thing we do every day. It's a critical component of our overall health. If you're chronically sleep deprived, you increase your risk for heart disease, obesity, higher blood pressure, and developing a much weaker immune system.

But with so much riding on the line, why are people struggling to get more than six hours of sleep a night (doctors recommend a minimum of 7-9)? There are probably a lot of answers. Our culture puts a greater emphasis on busy-ness and productivity than rest. People who sleep a lot (i.e. the exact amount they should) are often labeled as lazy or unmotivated when

nothing could be further from the truth. It's also no surprise that we're loading our diets with sugar and caffeine that can keep us up at night.

Additionally, a lot of the new technology that's woven its way into our lives is interfering with our natural sleep cycles that have evolved over thousands of years. Toss light pollution, noise pollution, and a lot of other factors on the pile, and you end up with the perfect recipe for a sleep epidemic.

Whether you have difficulty falling asleep, waking up multiple times during the night, or just feel extra tired in the morning, it might be time to take back control of your sleep with a few tips to help you biohack some shuteye.



6 Essential Points to Add to Your Nightly Routine

1. DARK, DARK, DARK

Try sleeping in complete darkness. And no, we're not talking about turning off your light. Think DARK. Like Bat Cave dark. Why? That's how our bodies evolved. Back in the day, there wasn't ambient light, and now the overabundance of light actually messes with our pineal gland's ability to produce melatonin. Think of melatonin as your body's secret sauce to enabling blissful sleep.

So yes, turn out the light. But beyond that, shut your curtains, toss the night lights, put your phones face down, and tape up your windows if you have to.

2. SLEEP PREP

The bed might be something you jump into but getting ready for it shouldn't. Most sleep experts agree that you should start winding down about two hours before bedtime. This means limiting your use of electronic devices and dimming those computer screens. If this bums you out and you need something to keep you entertained before bed without your phone, try curling up with a good book, have a stimulating conversation with someone, or break out a board game.



3. KEEP IT COOL

It's easier to sleep in a colder environment. How cold? 60-68 degrees is optimal. Scientists believe that this phenomenon occurs because a colder room mimics the body's temperature drop that occurs when we sleep. Give it a try.

4. LIMIT EMFS

Electromagnetic fields (EMFs) come from all the manmade devices in our houses and on our person. These devices have a higher rate of oscillation (vibrate at a higher number of cycles) than the natural electromagnetic fields of your body at rest. The electrical current in your home is generally between 50-60 Hz. In contrast, the ideal frequency in your brain during sleep drops to as low as 2 Hz.

This discrepancy messes with your sleep cycle. And EMFs cause big problems when it comes to the production of melatonin and serotonin, which is essential to falling asleep and staying asleep. Limiting your exposure to these devices during the night will help you sleep better. A lot better.

5. DEVELOP A ROUTINE

Start taking your sleep seriously with a bedtime routine. It doesn't have to be elaborate or time-consuming. The only rule here is to make it relaxing. Try meditation, deep breathing, or aromatherapy. Not only will it help you relax, a bedtime routine will send a strong message to your brain that it's time for bed.

6. DON'T SKIMP ON THE GOOD STUFF

We're always big fans of frugality, but sometimes it pays to pay. And sleep is one of those instances. Make sure your pillows, sheets, and mattresses are high quality. Please don't go into debt to afford a luxury bed setup. But it's also important not to lump these items into the "frivolous expenditures" category. They're important.



If you want to biohack a better night's sleep, it's important to remember the principles underlying biohacking. These suggestions aren't cookie-cutter solutions for everyone. Our bodies are all completely different, so they will respond differently. Experiment, measure, and adjust.

For example, try cutting off your caffeine intake at different points during the day and see what your body responds to. Sleep with socks on if that's your thing. Hacking your biology is a unique, individual effort that comes with a lot of trial and error. If you approach every night with a biohacker's mentality, you'll sleep better at night and feel better during the day.

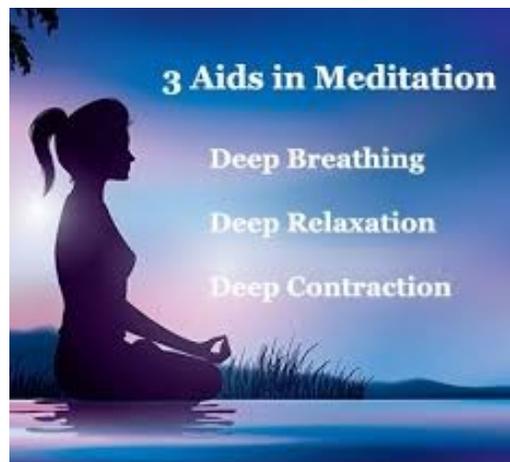
Essential Tasks to Add to your Nightly Routine:

It's no secret we live in a fast-paced world. Because of this, we're often left lying awake in the middle of the night hoping that we'll eventually doze off to sleep. But there's a remedy for the sleep fight: incorporating a nightly routine into your life will give you structure, better sleep, and even more time.

HERE ARE 4 SUREFIRE WAYS TO SLEEP BETTER AND LEAD A HEALTHIER LIFE:

MEDITATION

Research suggests that meditation can improve quality of life in a multitude of ways. For example, meditation appears to increase your brain's ability to repair gray matter, which is responsible for allowing nerve cells to communicate with one another which is important for learning and memory.



The positive effects of meditation are numerous and integrating it into your schedule is worth it.

Meditation is a practice used to clear your mind and absolve you from your needs and desires. This is achieved by clearing your mind and focusing on your breath, a sensation, or your empty mind. It sounds daunting, but it's not—you can easily start your practice by utilizing an app that will guide you through the meditation. This is a simple and cost-effective method to reduce stress and acquire a better nights sleep tonight.



SILENCE YOUR ROOM

Even if you don't live in the city, noise pollution is common within a sleeping space. Whether you have an analog clock ticking, an air conditioner humming, or water dripping, your quality of sleep could be negatively affected. Contrary to popular belief, sleeping with a sustained noise does not encourage high quality sleep. In fact, the opposite occurs.

Unless you are thinking about incorporating white noise, which is essentially radio static, any additional noise will negatively affect your sleep by unconsciously waking you up. Decreasing noise will increase the depth of your sleep, which will give you a better quality of life when you're awake.

Of course, soundproofing a bedroom can be a difficult and expensive task, so it's much easier to use the following:

- ~Ear plugs
- ~White noise with some color ("brown" noise and "pink" noise, for example)
- ~Noise cancelling headphones
- ~Soundproof just your bed

All of these methods serve as a way to increase your quality of sleep, so incorporate as many as you see fit. Soundproofing your bedroom will allow you to reach a deeper level of sleep and decrease the likelihood of waking up at night.

READING NONFICTION OR LITERATURE

Most people fall asleep right next to their cell phone, tablet, or computer. Falling asleep near the blue light of your electronic device increases the amount of work your body must do before falling asleep. This is due to the disruption of our circadian rhythm (the part of our brain that tells us when we are tired).



Fortunately, reading a nonfiction or literature book helps extinguish this problem (the key here is to make sure the book isn't scary or exciting—go for math textbooks). You can spend your last hours learning, imagining, or improving yourself instead of stressing out your body with blue light.

WRITING OR REVIEWING YOUR DAY IN A NOTEBOOK

You can increase productivity by reviewing your actions every day. It's a tactic many successful CEOs use, and integrating this activity into your routine will be a method to hold yourself accountable. If you're trying to optimize your nightly routine, taking inventory of what you did correctly or incorrectly will help you reach your goals faster

A great way to remind yourself to complete this task is by setting a notebook next to your bed. Every time you climb into bed, you'll notice the

notebook and feel drawn to recollect your day. Furthermore, this task will move you away from using your electronic devices and help you focus on what objectives you wish to achieve and how to get there.

All of these tasks serve as a way to improve your quality of life. Improving your life begins with optimizing your sleep. Instead of distracting yourself with your phone at night, you can spend the time optimizing your body and mind through beneficial tasks that have been proven to enhance your life.

What About Herbal Sleep Aides?

You might consider certain herbs can help calm anxiety and tension for a few hours, like Valerian, Lemon Balm, Holy Basil, and Magnolia. But if you experience chronic stress, you might need to get to the underlying root cause for long term effects.

I have used numerous herbal sleep aids over the years, some with melatonin, some included 5Htp or l-theanine, which can be very helpful for calming stress. I also like the chewable, fast-acting Pharma-GABA during the night, which can help you get back to sleep quickly. It relaxes tension, worry and stress in the mind. These can all certainly help and are much better than over the counter or prescription sleep aides.

Prescription sleeping pills have one major problem. They may force you to sleep but they do not give you the quality REM sleep your brain requires. They can also cause sleep-walking and other problems.

I often recommend using Lavender essential oil as it is known to reduce anxiety and stress, plus it is pain relieving. Put a few drops on your fingertips and place just under the ears. Then slide down the neck on each side, or use on the back of the neck to relax the nervous system.

To get to the underlying cause, which is accumulated oxidative stress damage and inflammation, reversing these conditions may help bring back the natural cycle of sleep for you like it has for me. This is what I highly recommend if you are serious about changing the pattern long term...

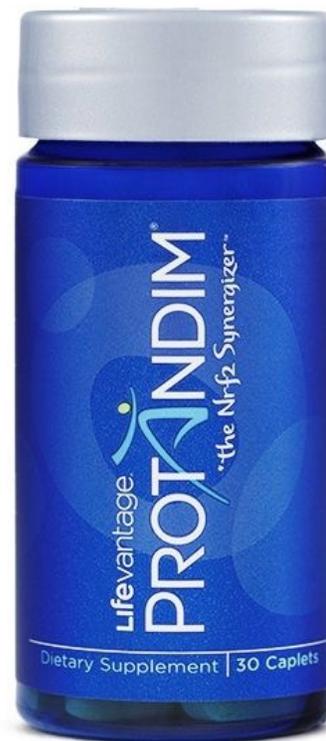
Try taking Protandim Nrf2® and AXIO®. Listed below is a description of how these products work to keep your body functioning at an optimal level.

PROTANDIM: A daily dietary supplement that combats oxidative stress. For those of you suffering from chronic sleep deprivation, Protandim is for you! By helping to minimize exposure to oxidative stress it has the potential to maximize your sleep quality.

WHAT IS PROTANDIM®?

**REDUCES
OXIDATIVE STRESS
AN AVERAGE OF
40% IN 30 DAYS.**

- Protandim is a daily dietary supplement that combats oxidative stress through Nrf2 activation.
- Oxidative stress is inevitable for everyone.
- Protandim significantly reduces oxidative stress through Nrf2 activation.
- Nrf2 helps to regulate survival genes.



Users of Protandim report improved quality of sleep!

HOW DOES IT WORK?

1. Repairs damaged cells

Activates certain genes that work to increase production of internal protective enzymes and proteins.

Helps to maintain proper functioning of the body and promotes optimal health.

2. Helps the brain recharge

Activates protective enzymes and proteins (i.e., SOD, catalase, & glutathione peroxidase) that work to clear out toxins in the brain. May help to reduce wear and tear on the brain that is linked to impaired learning and memory.

3. Regulates hormones

Supports the adrenal and thyroid glands, two key players in regulating hormonal balance.

Helps regulate hormones involved in many functions including: the stress response, energy metabolism, immune function, and blood pressure.

AXIO: Smart Brain Food Energy Drink

A powdered energy drink from LifeVantage optimized to provide a multi-dimensional energy boost for both mind and body, and reduces mental stress. Just mix with water, shake and drink during the day.

A hand is shown holding a glowing, blue energy ball. The background is a dark blue gradient with a network of white lines and dots, suggesting a neural or molecular structure. The text is white and positioned on the left side of the image.

**THE SCIENCE BEHIND
AXIO SMART ENERGY**

People who use AXIO report immediate benefits like enhanced concentration and sharper focus. While AXIO is a short-term solution for energy, mood, and concentration, it comes with long-lasting benefits. AXIO directly addresses the body's response to stress—which is aggravated by our hectic schedules, anxious minds, and poor sleep patterns.

HOW DOES IT WORK?

1. Anti-fatigue

Blocks the activity of a neuromodulator (i.e., adenosine) that makes us feel tired; stimulates the release of a hormone (i.e., adrenaline) that works to enhance mental alertness and increase energy levels.

Helps reduce fatigue and promotes sustained energy without over stimulation.

2. Balanced mood

Increases the transmission of neurotransmitters (e.g., dopamine, acetylcholine, & serotonin) involved in the regulation of mood and emotional stability. Helps promote positive mood.

3. Mental focus

Blocks the action of damaging free radicals; stimulates neural activity by upregulating chemicals in the brain responsible for nerve transmission and normal cognitive function.

Helps boost cellular protection. Promotes normal brain and nervous system function. Helps improve learning performance, focus, and mental acuity.

BENEFITS

- Improves mental endurance, mental acuity, concentration, and memory retention*
- Enhances neurotransmitter function and the brain's resilience to stress*
Reduces mental fatigue and brain fog*
- Increases physical and mental energy while improving positive mood*
- AXIO's clean formula - low-calorie, low-carb, vegan formula is BSCG approved and free of artificial colors, artificial flavors, artificial sweeteners, added sugars, GMOs, and gluten.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent disease.

I hope this information was helpful for you. Now it is up to you to incorporate these recommendations to restore your health and vitality.

This information is not intended to diagnose, cure, treat or mitigate any disease. Each individual has it's own unique needs and imbalances that may need to be restored.

Stress, fatigue and exhaustion all have their different stages and may need to be addressed separately for each person. If you would like a Comprehensive Health Evaluation, please contact Dr. Jane Smolnik, ND, or visit your local Naturopathic or Functional Medicine Doctor.

*When you feel good you can live life to it's fullest,
set and achieve your goals!*



Jane Smolnik is a Naturopathic Doctor and Iridologist specializing in Stress and Fatigue conditions. She is located in Asheville, NC and works with people from all over via phone, ZOOM meeting, or in her office. You may contact her at 828-777-5263 or visit her website at: **UltimateHealing.com.**

To learn more about the products mentioned, please visit:
drjane.LifeVantage.com

For more complete information and a comprehensive webinar, please visit **vimeo.com/drjane**