Female Hormone Testing 101
by Carin Nielsen MD in Hormone Balance

FEMALE HORMONE TESTING 101

Which test is right for you?

Achieving Hormone Balance in women starts with evaluating your hormone levels. While symptoms can often suggest hormonal patterns, I use laboratory data to confirm these patterns, and also to evaluate the safety and effectiveness of prescribed hormones, supplements and lifestyle recommendations.

WHICH HORMONES DO WE TEST?

The term “hormone balance” refers to the interaction and balance of a variety of hormones in the body, therefore when evaluating hormones we need to do so BY keeping all of these interactions in mind. While there are many hormones we are able to test, the hormones I most routinely test in my patients include:

- Adrenal (stress hormones) - cortisol, DHEA-S
- Sex-steroid hormones- estrogen, progesterone, testosterone, DHEA
- Thyroid - TSH and free thyroid hormone levels
- Other - insulin (think blood sugar regulation), pregnenolone (a hormone precursor often referred to as “the mother of all hormones”)
There is no perfect hormone test for everyone.

Hormone levels can be measured in blood, urine or saliva. There are many factors taken into consideration when choosing which test is appropriate for each patient, including:

- patient age
- type of hormone(s) being measured
- the number of samples needed to test
- pre-, peri- or post-menopausal
- whether the patient is currently on hormone therapy
- cost of test

So which test is right for you?

Below I’ve broken down the pros and cons of each test and provided information on the tests I most often order in my practice.

HORMONE TESTING 101

**BLOOD**

**Pros:** Blood testing is simple and cost-effective (covered by most commercial insurance policies as well as Medicare and Medicaid).

I routinely use blood testing for thyroid hormones and fasting insulin regardless of age. Blood testing of DHEA and pregnenolone is useful for both baseline levels and to monitor when supplementing these hormone precursors. For sex-steroid hormones (estrogen, progesterone, testosterone), blood testing can be useful in the following situations:

- Pre-menopause - an early-cycle draw (around day 5) can help evaluate for PCOS (polycystic ovarian syndrome).
- Peri-menopause - a luteal phase draw (day 22-24) helps to evaluate PMS imbalances and estrogen: progesterone balance.
- Post-menopause - blood hormone levels can be used to confirm menopause and also to monitor hormone levels while on hormone therapy.

**Cons:** Blood hormone testing gives us information on one moment in time. It is not practical to use blood for multiple-day specimens, or for
several samples in one day. Blood measurements are also limited in their ability to provide information on hormone metabolites. Hormone metabolites give valuable insight into which “pathways” hormones take in your body, some of which are healthier than others, and can help stratify risk for hormone-related cancers.

Click HERE to read my previous blog on estrogen metabolite testing.

**SALIVA**

**Pros:** Saliva tests can be performed and shipped from anywhere, bypassing a trip to the laboratory. Saliva tests are convenient when multiple specimens are needed and can be kept in your freezer if testing over a month cycle.

I routinely use saliva hormone testing to test adrenal hormones. I also use saliva sex-steroid hormone testing in pre- or peri-menopause to look at cyclical trends and hormone fluctuations, testing anywhere from 5-28 day periods.

**Cons:** While Medicare covers saliva hormone testing, most commercial insurance companies do not. Saliva hormone testing does not provide hormone metabolite information. While saliva testing can be useful for adrenal and sex-steroid hormones, it is not used to measure thyroid hormones or insulin. Some patients have trouble producing enough saliva for testing, especially if they have chronic dry mouth or are on medications that reduce saliva production.

**MY MOST ORDERED SALIVA HORMONE TESTS BY GENOVA DIAGNOSTICS:**

- **Adrenocortex Stress Profile** (a one-day measurement of adrenal hormones)
- **Menopause Check Plus** (a five-day measurement of sex-steroid and adrenal hormones)
- **Rhythm Plus** (a 28-day measurement of sex-steroid and adrenal hormones)

**URINE**

**Pros:** Urine hormone testing can be done and shipped from home, bypassing a trip to the laboratory. One of the biggest benefits of urine hormone testing is the ability to get an abundance of information on hormone metabolites (see above and my prior blog). Hormone metabolites are especially useful in stratifying risk for hormone-related cancers and also in evaluating the efficacy and safety of hormone replacement therapy.

**Cons:** Most commercial insurance companies do not cover the cost of urine hormone testing. Some urine hormone tests in postmenopausal women require a 24-hour urine collection, which can be cumbersome for patients. While I use urine hormone testing to measure adrenal and sex-steroid hormones, I do not use urine to measure thyroid hormone or insulin.
MY MOST ORDERED URINE HORMONE TEST BY GENOVA DIAGNOSTICS:

Complete Hormones (either 24-hour or first-morning urine, depending upon patient age)

MY NEW FAVORITE TEST BY PRECISION ANALYTICAL INC. COMBINES BOTH SALIVA AND URINE:

DUTCH Complete and DUTCH Plus testing
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions, including many that are linked to unhealthy hormone imbalance. Treating symptoms simply by prescribing medication as a “band-aid” does not address the underlying factors that contributed your problems in the first place, and is not likely to provide lasting results. My approach involves getting “under the surface” (using assessments like estrogen metabolite testing) to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.

Advanced Laboratory Spotlight: The NutrEval Plasma® Test
by Carin Nielsen MD in Integrative/Functional Medicine

ADVANCED LABORATORY SPOTLIGHT:
THE NutraEval PLASMA® TEST
The NutrEval® laboratory test by Genova Diagnostics is one of the most commonly ordered specialty laboratory tests in my practice. This test serves as an excellent starting point for evaluating nutritional status and investigating the root causes of chronic illness, as well as a useful follow-up tool to measure how well lifestyle changes and supplement regimens are working.

OVERVIEW
The NutrEval® test is an advanced nutritional analysis designed to reveal nutritional imbalances or inadequacies. NutrEval Plasma® evaluates the functional need for antioxidants, B-vitamins, minerals, essential fatty acids, amino acids, digestive support, and other select nutrients. The test also provides insight into gut health, heavy metal toxicity, mitochondrial function and more.

YOUR REPORT INCLUDES:

Metabolic Analysis (urine organic acids)
Urine organic acids are not something I learned about in Medical School. This analysis, often utilized by Naturopathic Physicians, measures metabolites in the urine that reflect processes going on in your body. This analysis provides insight into:

- Digestion
- Bacteria and/or Fungal Overgrowth in the Gut
- Mitochondrial Function (cellular energy production/Krebs Cycle)
- Neurotransmitter Balance (stress/mood)
- Functional B-vitamin Need (not measured values in your body but rather a measurement of how your body is utilizing these vitamins)
- Need for Detoxification Support

Plasma Amino Acid Analysis (essential and non-essential amino acids, plus intermediary metabolites)
The Amino Acid Analysis represents a 21-day “window” into your protein intake and amino acid balance. I use this section most often to:

- Evaluate protein intake, digestion and absorption.
- Evaluate amino acid balance in relationship to mood disorders.

Essential and Metabolic Fatty Acids (red blood cell essential and non-essential fatty acids, including Omega-3 and Omega-6 fatty acids)
The Fatty Acid Analysis is a red blood cell measurement, representing approximately 100-120 days prior to testing. When interpreting these results with patients, I am able to accurately identify what type of diet they are following, which types of oils they are cooking with, and whether or not they are supplementing with fatty acids. This section can provide valuable insight for diet and supplement recommendations for:

- General Wellness
- Inflammatory Disorders
- Cardiovascular Risk
- Mood and Brain Disorders

Oxidative Stress Analysis (blood and urine biomarkers indicative of oxidative stress) Oxidative Stress represents the balance of antioxidants and free radical damage in the body. When describing Oxidative Stress to patients, I often describe it as “rusting” on your cells and DNA. This analysis measures markers of this “rusting”, as well as levels of Glutathione, a powerful antioxidant that plays key roles in healthy aging and detoxification (learn more here). Our levels of Glutathione are determined by both our genes and our lifestyle, so if low levels are detected, we can implement protocols for improvement.

Learn more about Glutathione [HERE](#).

Elemental Markers (both mineral nutrients and toxic metals in red blood cells or plasma) This section provides direct measurements of minerals and heavy metals. Mineral results can be used to identify mineral deficiencies or excess. Heavy Metal results can be a useful screening tool, if elevated levels are identified, provoked urine heavy metal testing is often recommended. Analyses measured include:
SPECIMENS:
First-morning urine and a blood draw at a participating laboratory.

COST:
- Varies per insurance.
- Covered completely by many Medicare plans.
- Commercial plans require an out-of-pocket co-pay of $200-300.
- Not covered by Medicaid.

Note: I do not profit off of ordering this (or any other) laboratory test. Any co-pay goes directly to Genova Diagnostics.

Visit the Genova Diagnostics Website and view a Sample Report HERE.
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions. Treating symptoms simply by prescribing medication as a “band-aid” does not address the underlying factors that contributed your problems in the first place, and is not likely to provide lasting results. My approach involves getting “under the surface” (using assessments like advanced laboratory testing) to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.

Five Mindful Ways to Enjoy Your Holiday Season
by Katie Winnell RN, BSN, NC in Mindfulness
The holiday season can be full of excitement, family, friends, and...busy-ness. Before your season becomes a blur of things to do and places to go, take some time to create intentional practices to help you slow down and appreciate the inspiration of the season. Here are five ideas to get you started.

1. **CHOOSE AN INTENTION**
Use a word, image, or memory to guide your holiday season. Take some time to think about what you truly want from your experience this year, then allow that idea to become a touchstone for your time and energy. For example, if your guiding word this year is gratitude, think about how you can enliven that word in your life, perhaps through journaling, writing a holiday letter of thanks to your friends and family, or finding opportunities to express gratitude within your community.

2. **GO OUTSIDE**
Getting outside, away from technology, is one of the best ways to slow down and appreciate the here and now. Being in nature calms the body, mind, and spirit, and beneficially affects the nervous system and immune system. Take time to walk in the woods. While you’re there, stop to take notice of what you see, hear, and smell. Feel the ground beneath your feet. Plant yourself firmly and remind yourself that you, too, are part of the natural world.

3. **BREATHE!**
When we become busy and stressed, we change our breathing patterns, taking shorter breaths out of the chest rather than the relaxed, deep breaths that help us feel calm and balanced. Breath awareness techniques can help your mind and body establish a state of relaxation in which you can operate from a state of intentional response rather than stressful reaction. Here’s a quick breath awareness tool you might try when you notice yourself feeling rushed and stressed:

   - Close your eyes if you can.
   - Breathe in and feel a touch of cool air at the tip of your nose.
   - Breathe out and feel a touch of warm air.
   - Notice how in each moment of breath awareness you are just here, just now, in the present moment.

4. **CREATE AND ENJOY A HOMEMADE MEAL**
In our focus on “getting it all done,” we can forget to nourish ourselves. Whole, minimally processed food can reduce our stress levels, provide the energy we need to stay balanced, and remind us of the comfort of a good, healthy meal. Choose colorful veggies and fruits, savor the smells and sights of your meal, and enjoy it mindfully, one bite at a time.

5. **BECOME DELIBERATE WITH YOUR BEDTIME**
Nothing can take away from enjoying the season like sleep deprivation. Sleep is the time when our bodies rest, restore, and gather the resources necessary to wake up focused and ready for an intentional day. Especially during the busy holiday season, your body needs this time to reset. Adequate sleep helps the body to recover from stress, fight off illnesses, balance hormone levels associated with appetite and food cravings, and improve mood, just to name a few of the benefits of healthy sleep. If you are not waking up feeling rested, consider changing your bedtime routine to help you establish a calm state before bed. A few ideas include creating a consistent bedtime, turning off all technology at least one hour before bed, and avoiding substances that interfere with sleep (alcohol, sugar, caffeine, etc.). Treat yourself to a relaxing warm bath or cup of herbal tea and notice how your body can begin to relax and become calm before you get into bed.

Give yourself and those around you the gift of mindful presence this holiday season. Slow down and create a season of intention. Notice that you can find a moment of peace and joy, and take the time to absorb and extend that sensation.

*Many Blessings to you all this holiday season,*
*Katie Winnell RN, BSN, NC-BC*
Katie Winnell is a Registered Nurse and Board Certified Nurse Coach with Credentialing in Clinical Meditation and Imagery and Health Education. She helps clients reveal and activate a lifestyle of wellness though Integrative Nurse Coaching and Clinical Meditation, Mindfulness and Imagery techniques. Katie is now seeing clients through the Integrative Medicine Office of Dr. Carin Nielsen.

**Book Review: FOOD: WHAT THE HECK SHOULD I EAT?**
by Carin Nielsen MD in Book Reviews

*Book Review*

**FOOD: WHAT THE HECK SHOULD I EAT?**
Dr. Mark Hyman
FROM THE PUBLISHER: When it comes to diet, there's so much changing and conflicting information flying around that it's impossible to know where to look for sound advice. Decades of misguided "common sense," food-industry lobbying, bad science, and corrupt food policies and guidelines have only deepened our crisis of nutritional confusion, leaving us overwhelmed and anxious when we head to the grocery store.

Bestselling author Dr. Mark Hyman is here to set the record straight. In Food: What the Heck Should I Eat? -- his most comprehensive book yet -- he takes a close look at every food group and explains what we've gotten wrong, revealing which foods nurture our health and which pose a threat. From grains to legumes, meat to dairy, fats to artificial sweeteners, and beyond, Dr. Hyman debunks misconceptions and breaks down the fascinating science in his signature accessible style. He also explains food's role as powerful medicine capable of reversing chronic disease and shows how our food system and policies impact the environment, the economy, social justice, and personal health, painting a holistic picture of growing, cooking, and eating food in ways that nourish our bodies and the earth while creating a healthy society.

With myth-busting insights, easy-to-understand science, and delicious, wholesome recipes, Food: What the Heck Should I Eat? is a no-nonsense guide to achieving optimal weight and lifelong health.

MY THOUGHTS: This book is a MUST READ, and will forever change the way you think about food. When I began reading this book I set aside a notebook, thinking that I would take brief notes of information "pearls" to share with my patients - I stopped after 2 chapters because there was so much relevant and useful information on EVERY PAGE I couldn't possibly write it all down!

In this book, Dr. Mark Hyman acknowledges that there is no one "perfect" diet for everybody, instead of focusing on basic dietary principles that simply make sense. He breaks down macronutrients (carbohydrates, proteins, and fats), providing education on each group's benefits, as well as information on how to make safe, quality food choices. For example, not only will you learn more about why protein is important for our health, but also which sources of protein provide the most benefit and the "dos and don'ts" of choosing quality sources of protein for you and your family.

The book is packed with information, yet easy to read, and each recommendation is backed by sound research, not simply opinion. I found this book to be eye-opening, thought-compelling, and forever life-changing when it comes to thinking about the food that we eat. Consider adding this book to your Summer reading list!

Carin Nielsen, MD
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions, and using a “Food First” approach is a common theme in our office. Treating symptoms simply by prescribing medication as a “band-aid” does not address the underlying factors that contributed to your problems in the first place, and is not likely to provide lasting results. My approach involves getting “under the surface” to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office at info@CarinNielsenMD.com or 231-638-5585.

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**Summer Supplement Swap**

by Carin Nielsen MD in Integrative/Functional Medicine

If you take nutritional supplements, the changing of seasons is a great time to clean and organize your supplement cupboard and re-think your routine. The demands on your mind and body vary with the seasons, and adjusting your supplements to meet seasonal needs can help you to look and feel your best all year long!
Check out these “Summer Supplement Swaps” from my personal routine to help you get started:

SWAP OUT IMMUNE SUPPORT FOR ANTIOXIDANTS

During Winter months I take Vira-Resist herbal immune support daily to fight off coughs, colds, and flu. In the Summer months, I take a break from my immune support and tighten the cap and store the bottle in a cool, dark cupboard.

Summer months bring the potential for increased oxidative stress from sun exposure, summer cocktails and restaurant meals. To fight the effects of oxidative stress I increase my antioxidant routine, adding extra Antioxidant Support Formula, which contains the powerful antioxidants Selenium, Alpha-Lipoic Acid, and N-Acetyl Cysteine, as well as Milk Thistle, which helps to protect my liver from potentially damaging effects of summer cocktails. I also add extra antioxidant-rich Vitamin C in the form of Buffered Vitamin C (which is more gentle on the stomach) to help protect my skin from sun damage and boost collagen synthesis.

ADD EXTRA MINERALS

Summer = Sweat. Combining the increased perspiration of summer with regular infrared sauna use puts me at risk for excess mineral loss, so I add extra Zinc and Magnesium to my routine to replenish losses. In addition, I am liberal with my use of sea salt to replenish minerals and stay hydrated.

KEEP YOUR VITAMIN D DOSE IN CHECK

For myself and many of my patients, a hefty dose of Vitamin D is recommended during Fall and Winter months. During Summer months, with increased sun exposure, this may not be necessary. I check my 25, OH Vitamin D levels and adjust my dose of Vitamin D3 as necessary. Why is this important? You can overdose on Vitamin D! Vitamin D is one of four fat-soluble vitamins (along with Vitamins A, E, and K), so levels can build up in your system and become toxic. It’s important to know your number!

*Here’s to a happy, healthy Summer!*

Carin Nielsen, MD
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Can Journaling Help You Exercise Smarter?

by Katie Winnell RN, BSN, NC in Mindfulness

CAN JOURNALING HELP YOU EXERCISE SMARTER?
Spring has sprung in Northern Michigan, finally! More sun and warmer temps beckon us outdoors and inspire us to get out and move. Spring is a great time to enter into or return to your exercise routine*. But just like any other healthy habit, it can be hard to find the motivation to stay committed to moving our bodies.

Instead of plodding through an exercise routine using highly over-rated willpower to push through motivation obstacles, how about taking a step back to look honestly at those obstacles, as well as your hopes and goals? Observing our strengths and struggles nonjudgmentally allows us to view and explore them without falling into sabotaging self-criticism. Once we are clear on where we are, strengths, struggles, and all, then we can plan the path forward with a clear vision based in reality and inspiration.

So, try taking a step inward to notice the story you may be telling yourself about exercising, a story which may color and shape your motivation and commitment to this healthy habit. Journaling is a great way to begin this practice. Here are 3 journaling prompts to help you get started:

1) Get clear on where you are right now. Why do you want to exercise? It seems like an easy question, but we exercise for different reasons, some for specific health-related outcomes, some to meet athletic goals, and others to get out and feel better emotionally. Knowing why you want to exercise can help you choose a routine and set goals that will be effective and enjoyable. It can also help you remain realistic about your exercise routine, which helps you to set specific, achievable goals that honor your motivation and path, not someone else’s.

2) Take a peek at your future self. Close your eyes, take a deep breath, imagine walking a path. Ahead you see yourself 3 months from now. What do you see from a whole, integrated perspective? Not just your physical self, but what do hope for in terms of your emotional, spiritual, and relational self? Now, what strengths do you hold that can get you further along your path? Perseverance? Positive attitude? Enjoyment of the outdoors? And what obstacles might get in your way? Lack of social support? Time limitations? Self-criticism? How can you problem solve those obstacles now, so when they pop up, you have a plan to overcome them? Keep this picture (make sure it is realistic) close, and revisit and revise when it’s helpful.

3) Maximize the benefits. Take a moment at the end of each exercise session to journal about how you feel, physically, emotionally, and spiritually. Our human brains spend lots of time ruminating on the negative aspects of new habits (no, it’s not just you, we all do it!), and it is more difficult to hard-wire in the positive. So take a minute to revel in your accomplishment and the state you are in after you exercise. What do you feel? Name how your body feels. Name the emotions you experienced while exercising and post-exercise...joy, positivity, pride? Revisit this positive physical and emotional state when you are low in motivation, remind yourself of what is to come (no worries if you aren’t feeling those good vibes, journal about the obstacles you noticed and spend a minute problem solving those struggles).

Journaling can be an effective awareness practice to help you uncover the stories that either limit you or motivate you. Give it a try, you might surprise and inspire yourself! Most of all, use exercise journaling as a method to explore, not critique. Everything you uncover is more information, neither good nor bad, just more self-knowledge to work with to fine tune your motivation.

So, explore, journal, and MOVE!

*As always, if you have a specific health condition or are new to exercise, have a conversation with your health care provider regarding your exercise routine.

Katie Winnell, Board Certified Nurse Coach, Health Educator, and Clinical Mediation and Imagery Specialist, can help you with your wellness plan using coaching, behavioral change, and self-awareness tools. You can make an appointment by calling 231.638.5585.
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Treating Crohn’s Disease - A Functional Medicine Approach

by Carin Nielsen MD in Digestive Health

BACKGROUND
I first met Todd* with his wife in October 2016. He had been diagnosed with Crohn's disease (an autoimmune inflammatory bowel disorder) three years prior. His symptoms included abdominal pain and loose stools with blood and mucous.

During our first visit, I learned that during the time his symptoms began Todd had been under increased stress with an upcoming wedding, a change in employment, and home renovations.

He had originally been treated with sulfasalazine, a common prescription medication for Crohn's, however, the medication made him nauseated and his symptoms were not well controlled. He had been unable to increase the dose as recommended due to side effects.

Todd continued to have frequent loose bowel movements within 15 minutes of eating, often associated with mucus and blood. He was experiencing sharp localized abdominal pain with activity, and the pain was limiting his ability to perform his physically strenuous job as an electrical lineman.

Prior to our first visit, Todd and his wife had already explored holistic options for his treatment. He had tried digestive enzymes, probiotics, and homeopathic remedies without relief. He had also completed a two month trial of a gluten-free diet but was unsure if that made any difference.

INITIAL WORK UP
At our first visit, I ordered a comprehensive laboratory evaluation to screen for:

- Inflammation
- Nutritional deficiencies
- Anemia
- Hormone balance
- Candida/Yeast
- Celiac disease

I also ordered Functional Stool Testing.

While waiting for results, I recommended that Todd begin a four-week Comprehensive Elimination Diet, and provided educational materials and book recommendations for support with this.

Blood testing revealed low levels of zinc, and significant vitamin D deficiency, but was otherwise normal. Functional stool testing indicated significant intestinal inflammation and low levels of "good" gut bacteria.

Recommendations were customized for Todd based on his laboratory results (no more "guessing game" when it comes to supplements):

- Vitamin D (which supports the immune system response)
- Zinc carnosine (a key factor in the health of the intestinal lining)
- Fish Oil (a natural anti-inflammatory)
- Immunoglobulin powder (derived from colostrum)
- VSL#3 - A high-dose prescription-grade probiotic (this brand has solid evidence supporting its use in the treatment of Crohn's)

I also prescribed Low-Dose Naltrexone (LDN), an opioid antagonist that has an outstanding safety profile and has shown promise in the treatment of Crohn's in both adults and children with minimal side effects.
TWO MONTHS LATER–IMPROVEMENT!
Two months after initiating diet changes, LDN and targeted supplementation, Todd reported his pain improved by at least 50% with some pain-free days and improved energy. While still experiencing blood in his stools, he described it as much less than before.

I recommended he add a glutamine/aloe combination to promote further healing of the intestinal lining.

SIX MONTHS LATER–MORE IMPROVEMENT!
At six months Todd reported that he continued to experience significant improvement and was very pleased with his progress. He described his pain as minimal, with only minor flares “nothing like it was before”. He had good energy and stamina and was no longer having any work pain. He had become a “believer” in his regimen of supplements and LDN, having forgotten them on two nights, each time with a symptom flare.

While bowel movements had earlier been improved, he had since noticed increased blood and mucus in his stools, so a low dose of Sulfasalazine had been restarted.

He continued to cautiously experiment with his diet, determining his “trigger foods”.

ONE YEAR LATER
This past fall I was able to meet with Todd and his wife for his one-year follow-up. He reported great energy and stamina, no work pain, and no blood in his stools.

While still on the low dose of Sulfasalazine, it was a dose that did not give him side effects and his symptoms as a whole were nearly resolved. Follow up laboratory testing showed normalized levels of iron, zinc and Vitamin D.

I ordered comprehensive nutritional testing at this visit, which allowed us to customize Todd’s diet and supplement needs. His testing showed a need for B-vitamins, as well as magnesium and enhanced antioxidant support to reduce oxidative stress in the intestinal lining. Based on this testing, I also recommended he begin to reduce the amount of animal protein in his diet, transitioning to plant-based proteins.

In just one year, Todd was able to get much better control of his Crohn’s disease through changes in diet, targeted supplementation, and
lower-doses of prescription medications without side effects. He had normalized bowel movements, no blood in his stool, minimal pain and improved energy. I look forward to continuing to work with Todd and his wife to optimize his nutrition, simplify his regimen as he continues to heal, and achieve further success!

*Patient names are changed to protect privacy

I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions, including many autoimmune conditions. Treating symptoms simply by prescribing medication as a “band-aid” does not address the underlying factors that contributed your problems in the first place, and is not likely to provide lasting results. My approach involves getting “under the surface” (using assessments like estrogen metabolite testing) to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.

Tagged in: autoimmune, celiac, chronic fatigue, inflammation, low-dose naltrexone

SEASONAL ALLERGY ALTERNATIVES
by Carin Nielsen MD in Integrative/Functional Medicine
According to the Asthma and Allergy Foundation of America, at least 50 million people in the US suffer from symptoms of nasal allergies, and that number is on the rise. If you suffer from allergies, you likely know the symptoms well - nasal congestion, runny nose, sneezing, itchy and watery eyes, as well as fatigue and “brain fog”. In today’s blog, I present alternatives to the standard prescription and over-the-counter antihistamines commonly used to treat seasonal allergies - calling on the advice and recommendations of Dr. Andrew Weil, world-renowned leader and pioneer in the field of Integrative Medicine, and Director of the Arizona Center for Integrative Medicine at the University of Arizona.

**QUERCETIN**

Quercetin is a bioflavonoid found in a variety of foods, and can also be taken in supplement form. Dr. Weil states that in the lab, Quercetin stabilizes mast cells that release histamine, the principal mediator of reactions to pollen and other allergies, making it a natural antihistamine. It is used to treat symptoms of hay fever (when taken regularly for at least six to eight weeks), such as runny nose, watery eyes, and itching, as well as other forms of allergy and hives.

*Food sources of Quercetin: buckwheat, apples, onions, kale, tomatoes, broccoli, asparagus, berries, red wine, and tea.*

**STINGING NETTLE**

Stinging Nettle is a perennial flowering plant that has been used medicinally for ages, dating back to ancient Greece. Dr. Weil states that Stinging Nettle, while often used to treat conditions such as osteoarthritis, eczema and gout, may also affect the sneezing and itching of hay fever, perhaps because the herb can reduce the amount of histamine the body releases from mast cells in response to an allergen.

*Stinging Nettle grows all over the world and blooms June through September, with pink and yellow flowers.*

**ACUPUNCTURE**

Acupuncture for allergies? While you may be skeptical, Traditional Chinese Medicine specialists frequently use Acupuncture to lessen the signs and symptoms of seasonal allergies. In a study published in the journal *Annals of Internal Medicine*, researchers examined 422 people who tested positive for pollen allergies and had allergic nasal symptoms. The participants who received real acupuncture treatments with their antihistamines showed a greater improvement in their allergy symptoms and less use of antihistamines compared to the other groups. While the conclusion had its limitations (those participants receiving “sham” acupuncture also showed some benefit, suggesting a placebo effect), Dr. Weil states the study’s outcome suggests that acupuncture may help relieve the symptoms of seasonal allergies and is worth further investigation.

*To read more about this research article and Dr. Weil’s views on acupuncture for allergies, click here.*

**THE GUT-ALLERGY CONNECTION**

Did you really think that I could blog without mentioning the gut? Dr. Weil also acknowledges that deleterious changes in the microbiome may underlie the increased incidence of allergy, as they are also felt to be linked to other conditions, including gluten sensitivity, autoimmunity, and...
In a study published in 2011 in the Journal of Allergy and Clinical Immunology, Danish researchers showed that the risk of allergies is higher than normal in children with a less diverse microbiome. If you suffer from allergies, consider working with a Functional Medicine specialist to evaluate and optimize your gut microbiome.

*Do the bugs in your belly cause allergies? Read Dr. Weil's article here.*

Looking for a personalized approach to your healthcare? I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions. Treating symptoms and chronic disease simply by prescribing medication doesn't address the underlying factors that contributed your problems in the first place, and is not likely to provide lasting results. My approach involves getting "under the surface" to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.
THREE REASONS TO CHOOSE SANITAS SKIN CARE

by Carin Nielsen MD in Products and Promotions

THREE REASONS TO CHOOSE SANITAS:

1. MAKE YOUR SKIN WORK FOR YOU
Sanitas products give skin everything it needs to do what it already does best: repair and strengthen itself.

The human skin has miraculous built-in mechanisms for constant repair and renewal of its surface. Unfortunately, the combined assaults of lifestyle, environment and time can compromise the body’s ability to keep up – which is why every technology, ingredient, and dosage in every Sanitas product is selected to foster and improve your skin’s own natural processes to regenerate and protect itself.

2. “EXERCISE & REST” - YOUR NEW SKINCARE ROUTINE
The heart of Sanitas' tested and proven skincare routines lies in the concept of “exercise and rest.”

A resting phase and strengthening phase are both necessary to build continuous skin strength. “Exercising” products utilize alpha hydroxy acids to encourage skin renewal and strengthen the skin’s barrier. On resting days, exercising products are eliminated and only pH neutral products are used to keep the skin’s barrier intact. Limiting the use of exercising products to three to four days per week allows the skin to recover and regenerate.

3. CLEAN, SAFE INGREDIENTS
All Sanitas products are cruelty-free and contain no parabens, phthalates, dyes, harsh preservatives or gluten.

Sanitas Skincare pharmaceutical-grade ingredients are obtained from fair trade, earth conscious, sustainable suppliers. All Sanitas facial care products that remain on the skin are completely fragrance-free and only essential oils that are medicinal in purpose are used.

Want to learn more? Stop by our Downtown Petoskey office to sample or browse products online.
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.

SANITAS SKIN CARE - PROGRESSIVE SKIN HEALTH

by Carin Nielsen MD in Products and Promotions

Your skin has the amazing ability to repair and regenerate itself, especially when you treat it with the right balance of stimulation and nourishment. This simple truth is the foundation of the Sanitas Skin Care line.

I have been using products from this Boulder, Colorado based company for years and am...
excited to share them with my clients. All Sanitas products are cruelty free and contain no parabens, phthalates, dyes, harsh preservatives or gluten.

PROGENERATE • ACTIVATE • OPTIMIZE

AN OVERVIEW OF THE SANITAS SKIN CARE SYSTEM

PROGENERATE
The foundation for healthy skin starts here.
Start with daily essentials: Cleanser - Serum - Moisturizer

Looking to change up your skin care routine? This is the place to start. This collection features customized, daily essentials that are specially formulated for various skin types. A simple daily regimen of cleanser, serum, and moisturizer will help strengthen and prepare your skin to progress to the Activate and Optimize categories for rapid results. Formulas available for all skin types.

Dr. Nielsen's favorites: The Lemon Cream Cleanser is addictive - one smell and you will be hooked! I alternate between the Vita Rich Serum (very hydrating and packed with antioxidants) and the Weightless Serum (more of a matte finish) depending on the time of year.
ACTIVATE

Looking to take your skin care routine up a notch?

Integrate one or more of the Active skin care products into your routine.

Designed to activate skin rejuvenation levels and elevate results, this collection of products integrates powerful technologies for progressing the health of the skin. Activate products include alpha-hydroxy acids, retinols, high-potency topical Vitamin C and more. Product concentrations may increase over time to prevent your progress from plateauing.

Dr. Nielsen's favorites: I'm obsessed with the Vitamin C Lactic cleanser (used 2-3 days per week). I use the Vita C Serum at night - this high-potency Vitamin C serum is rich in antioxidants and essential fatty acids.
Have a specific need? Try these targeted, therapeutic products.

Whether you are looking to reduce blemishes, brighten, hydrate, or reverse the effects of aging, this collection of targeted, therapeutic products is designed to help rehabilitate challenged skin. When combined with the proper Progenerate and Activate programs, the correct selection of Optimize products will advance skin to its most healthy, optimal state.

Dr. Nielsen's favorites: I LOVE the Brightening Peel Pads - these pads can be used 2-3 times per week for an instant glow. The Hyaluronic Concentrate is combined with your usual moisturizer to boost hydration and reduce the appearance of fine lines - instant results!

Want to learn more? Stop by our Downtown Petoskey office to sample or browse products online.
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.

Meditation…One Size Fits All?

by Katie Winnell RN, BSN, NC in Mindfulness
In our fast-paced, on-the-go culture, a meditation practice can offer moments of calm amidst the chaos, moments which can grow into a lifestyle of greater attention, awareness, and peacefulness. As stressful lives have led to an increase in stress-related illness, the healthcare industry has gravitated toward integrating contemplative practices such as meditation into care plans for those with new or chronic illness. This occurrence is supported by years of research into the effectiveness of using meditation as a tool for stress reduction, chronic illness risk reduction, and for balanced emotional and spiritual health. As western medicine becomes better at understanding the gifts of meditation, it is clear that meditation is an effective adjunct therapy for many physical, emotional, and spiritual illness states.

In using meditation as an aspect of integrated medical care, however, we must be careful to match the meditation style to both the personality and the symptom set of the client. Though meditation skills, in general, are appropriate for almost all populations, using meditation clinically involves more than a one-size-fits-all approach. Using an evidence-based scientific approach to meditation has taught us that meditation changes the neurophysiology of the brain, changes the parts of the brain that are “on-line” and functioning, and changes brain wave activity in the brain. These changes, of course, are reflected in the body. So, how these practices are taught and applied, among other factors, can determine the outcome. This is important in setting where a particular outcome is desired, where others may not be. Different goals require different techniques.

Fortunately, we know a lot about how different meditation techniques affect the body and the brain. And we know a lot about how different symptoms and illnesses present in the body and the brain. With the combination of clinician experience, medical history, and the client’s own wisdom, specific meditation techniques can be matched to best meet the needs and goals of the client. Mindfulness Meditation may be the right fit for one client, Focused Awareness Meditation more effective for another, while Open Heart Meditation best matches the needs of yet a different client.

Research does indeed suggest that even relatively brief and general meditation training can have an impact, but this same research indicates that the popular impression that “meditation” or “mindfulness” is good for everything or everyone is a bit of a fallacy, especially when used in clinical settings. Clinically, meditation should not be guesswork. Rather, it should be used with specificity regarding the client’s own goals, their physiology, and how different meditative techniques impact the brain and body. When meditation training is matched to the individual client, it has the potential to reduce stress, reduce chronic illness symptoms, and open the door to experiences of joy, wonder, curiosity, and peace.
If you are interested in learning about how meditation can be effective for your life and health goals, you can make an appointment to begin your journey with Katie Winnell RN, BSN. Katie is a licensed RN, Nurse-Coach and Health Educator with credentials in Clinical Meditation and Imagery. The upcoming Spring 2018 Foundations of Meditation Session, an introductory 4-week class which sets the foundations for your meditation practice, begins April 17th at 6:30 pm at Dr. Nielsen’s office, 413 Waukazoo Ave., in Petoskey. Call 231.638.5585 to pre-register or schedule an appointment.
Book Review: "Healing Arthritis" by Susan Blum, MD, MPH
by Carin Nielsen MD in Book Reviews

In Healing Arthritis, Dr. Susan Blum, author of the bestselling The Immune System Recovery Plan shares her science-based, drug-free treatment plan for the almost fifty million people who suffer from arthritis.

FROM THE PUBLISHER:
Arthritis is the most common cause of disability in the world—greater than both back pain and heart disease. One example, Rheumatoid Arthritis (RA), is the most common autoimmune disease, affecting 1% of the US population, and almost 68 million people worldwide.

Conventional medicine tends to treat arthritis with strong, gut-damaging, immune-suppressing pain medications, temporarily relieving the...
symptoms of the disease without addressing its root causes. Now, in her groundbreaking new book, Dr. Susan Blum, a leading expert in functional medicine, offers a better approach to healing arthritis permanently.

MY THOUGHTS:
This book is a must-read for anyone suffering from joint pain or arthritis. While I've been recommending Dr. Blum's first book The Immune System Recovery Plan to my patients for years, I find Healing Arthritis easier to read and more user-friendly for my patients to navigate. The book provides an overview of the root causes of inflammation/arthritis, focusing on:

- inflammatory foods
- gut health
- the role of stress/trauma

Dr. Blum includes a straightforward two-week plan to quickly reduce pain through anti-inflammatory foods and supplements; followed by an intensive gut repair program. Once through this initial phase, her plan addresses the emotional issues that contribute to inflammation and outlines a simple, Mediterranean inspired diet to maintain a healthy gut.

I was pleased to see that the diet and supplement recommendations are given are the same available to patients in my office! This book will serve as a useful companion for patients navigating the world of Functional Medicine in treating arthritis and controlling inflammation.
Carin Nielsen MD

Dr. Susan Blum

functional medicine

Healing Arthritis

Inflammation


by Carin Nielsen MD in Digestive Health

In one year, this 10-year-old has made significant behavioral improvements, has stopped two of three medications, is no longer experiencing insomnia or constipation, and is thriving at school. Read today’s blog to hear his story!

BACKGROUND

I first met nine-year-old Luke* and his mother in late 2016. Luke had been diagnosed with a variety of psychological and neurological disorders, including ADHD, PDD-NOS (pervasive developmental disorder-not otherwise specified), Anxiety, OCD (obsessive-compulsive disorder), ODD (oppositional defiant disorder), and a sensory processing disorder.

Since the age of five, Luke had been evaluated and treated by a variety of psychologists, psychiatrists, neuropsychologists, and pediatricians, as well as a number of occupational and physical therapists. By age nine he was on three different prescription medications for mood and attention.

At that first visit, Luke’s mom described him as “consistently inconsistent”. She illustrated a child who on one day would appear happy, calm and content, while the next day appeared "tormented" by irritability, anger, hyperactivity, impulsiveness, and anxiety.

I also learned that Luke had suffered from both chronic interrupted sleep and lifelong constipation. At times he would go 5–7 days without a bowel movement, and his mother would notice worsening behavior during these times. Complicating matters, his multiple psychiatric medications only seemed to worsen both his sleep and constipation.

INITIAL WORKUP AND RECOMMENDATIONS

After hearing Luke’s story and performing an examination, a comprehensive laboratory evaluation was ordered which included testing for:

- nutritional deficiencies
- inflammation
- blood levels of heavy metals
- thyroid function
- food allergies and sensitivities
- micronutrient testing
- functional stool testing

Prior to our first visit, Luke’s parents had already implemented changes to his diet by eliminating additives and preservatives, most processed foods, sugar, soy, and conventional dairy products. I asked them to expand upon this and completely remove gluten from his diet.
FOLLOW UP AND PLAN
I met again with Luke and his mother in early March 2017 to review the results of his testing. With the exception of low Vitamin D, Luke’s blood lab results were overwhelmingly normal. His stool testing, however, was not.

Luke’s functional stool testing revealed several abnormalities, including:

- poor digestion, with evidence of high levels of protein and fat in his stool
- bacterial dysbiosis, an overgrowth of “bad” bacteria in the gut
- low microbial diversity

I recommended they add both fish oil and vitamin D with specific dosing recommendations given. We also initiated a protocol to rebalance his gut which included:

- continued food restriction, avoiding gluten and other inflammatory foods
- chewable digestive enzymes with meals
- pharmaceutical-grade probiotics
- an herbal blend to reduce the overgrowth of “bad” gut bacteria while still promoting the growth of “good” gut bacteria

TWO MONTHS LATER - PROGRESS!
Off one medication and behavior improved!

Luke’s mother and I followed up via email in May after completing the herbal gut protocol. I was thrilled to learn of the progress that Luke had made! He had been off of Concerta (a medicine for hyperactivity and attention) for 2 months and was experiencing less behavioral problems. I advised them to continue the probiotics, enzymes, fish oil and vitamin D, and we added magnesium.

A FEW MORE MONTHS - MORE PROGRESS!
Off two medications, sleeping well and regular bowel movements!

By August 2017 Luke was down from three to only one medication. His mother reported that he was sleeping well and was having daily well-formed bowel movements! While Luke was still often impulsive and defiant, overall significant behavior improvement had continued since his initial visit.

In November Luke’s mother and I touched base after he had been back in school. She reported that he was “loving school” and was excited to
report that he had not had any behavioral or academic problems. His anxiety and impulsiveness had improved, and his mother commented that “he looks really healthy”.

**ONE YEAR LATER**

To follow up our gut protocol, we repeated Luke’s Functional Stool Testing, as well as a Urine Organic Acid Panel (which can give us a wealth of information without another blood draw). His stool testing had significantly improved, with better microbial diversity however he continued to show signs of poor digestion and bacterial levels, while much better, were still trending toward imbalance.

Using this follow up information we were able to “tweak” his current program, adding back digestive enzymes (which had been phased out), and repeating a one-month herbal program to further balance gut bacteria. We also added back L-glutamine to further heal and strengthen his small intestinal lining.

His diet restrictions have loosened slightly, but key concepts remain in place, including a whole food diet, and keeping sugar and processed foods to a minimum. They have identified significant gluten intolerance with increased anxiety and agitation, as well as a slightly less pronounced sugar intolerance.

Through the use of a thorough history, appropriate laboratory testing, and evidence-based Functional Medicine protocols, Luke has made significant behavioral improvements, has stopped two of three medications, is sleeping well, having regular bowel movements and thriving at school. I look forward to seeing his progress continue over the years to come!

*patient name has been changed to protect privacy*
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions, including both adult and childhood mood and behavior disorders. Rather than focusing solely on the use of prescription medication, consider addressing potential "root causes" of you or your loved one's symptoms, such as nutrition, gut health, toxicities/impaired detoxification, hormone imbalance, deficiencies and more. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.

The Easiest New Year’s Resolution

by Katie Winslow, LAc, RAc, Dipl.OMon Acupuncture

What is the best way to keep your New Year’s resolution for better health?

Make it something easy and enjoyable that you actually want to do.

A key part of weight management, healthy blood pressure, hormone balance, and overall better health is stress reduction.
Exercise and acupuncture are both excellent ways to reduce stress. In a research article on acupuncture’s physiologic effects on the body, researchers in Stockholm Sweden stated “Both exercise and acupuncture . . . cause the release of endogenous opioids and oxytocin essential to the induction of functional changes in different organ systems. Beta-endorphin levels, important in pain control, . . . have been observed to rise in the brain tissue of animals after both acupuncture and strong exercise.”

The release of these ‘feel good’ substances helps us to feel less stress (and less pain). Evidence also shows that the elevated levels of endorphins and oxytocin after acupuncture can remain long after the acupuncture treatment has ended.

The exercise part of the equation is up to you, but monthly, bi-monthly, or even seasonal acupuncture treatments can do wonders for your health. And, if you have pain issues or a lack of energy, acupuncture can help with those too.

Resolving to improve your health could be the best choice you will ever make, but only if you actually follow through on it. Why not make it easy on yourself? A relaxing hour, or half hour, break in your day for an acupuncture treatment could make the difference.

Regardless of your health history and physical background, almost anyone is a candidate for acupuncture. If you have an ailment, acupuncture can help relieve it. If you feel well, acupuncture can help you maintain wellness, boost immunity, and manage stress. At Integrative Medicine, practitioners provide acupuncture in collaboration with Dr. Nielsen’s recommendations. Patients very often see greater improvement in their condition when treated by both an MD and an acupuncturist. If you are interested in a consultation or appointment, contact our office at info@CarinNielsenMD.com or 231-638-5585.
Get to know this Super Fiber - Glucomannan

by Carin Nielsen MD in Products and Promotions

Glucomannan is a “Super Fiber” that has been shown to reduce appetite, aid in weight loss, lower cholesterol and blood sugars, and relieve constipation.*

Glucomannan is an ancient fiber that comes from the Asian elephant yam, also known as Amorphophallus konjac. This soluble fiber is one of the most viscous dietary fibers known - it can absorb up to 50 times its weight in water.

APPETITE AND WEIGHT LOSS
When combined with water, glucomannan forms a viscous gel-like substance that slows digestion, delays the emptying of food from the stomach into the small intestine, slows down the influx of carbohydrates and fats into the bloodstream, binds to bile acids, and impedes dietary fat absorption.* [1,2] Studies suggest that glucomannan supplementation significantly reduces weight at doses of 3 g/d to 4 g/d when compared to placebo. [1-7]

Bottom line: When combined with water, Glucomannan expands in your stomach, helping to reduce hunger and promote weight loss.*

GLUCOSE AND LIPID METABOLISM
Soluble fiber slows the absorption of carbohydrates, which influences the release of insulin and the rate of fat storage. Glucomannan studies have not only demonstrated a positive impact on postprandial glucose handling and glucose metabolism but also on cholesterol metabolism.* [1-4,7-9]
Bottom line: When combined with food, studies show that Glucomannan can lower blood sugars and cholesterol.*

**HEALTHY BOWEL FUNCTION, PREBIOTIC**
Glucomannan not only allows more water to remain in the stool, thereby making waste softer, larger, and easier to pass through the intestines, but it is also an excellent prebiotic. In a placebo-controlled, randomized, parallel, double-blind, crossover trial, doses of 3 g/d and 4 g/d of glucomannan had a positive impact on bowel regularity when compared to placebo. [10] Glucomannan has also been shown to increased the fecal concentration of lactobacilli as well as the daily output of bifidobacteria, lactobacilli, and total bacteria. In addition, fermentation of glucomannan resulted in greater fecal concentrations of short-chain fatty acids and lower fecal pH.*[11]

Bottom line: Glucomannan promotes regular bowel movements and the growth of more "good bacteria" in your gut.*

**FIBER LEAN**
features Shimizu Propol® A propolmannan - a konjac-derived glucomannan using proprietary processing techniques that allow the fiber to maintain high viscosity yet remain stable through the digestive tract.

- Supports Appetite and Weight Control*
- Supports Glucose and Cholesterol Metabolism*
- Supports Healthy Bowel Movements*
- Serves as a Prebiotic for Intestinal Bacteria*

When taken with adequate amounts of water, Fiber Lean expands in the stomach, creating a viscous "gel-like" substance which promotes a sense of fullness, slows the rate at which food enters your bloodstream and increases the speed at which food exits the body through the digestive tract (pushing more calories out through the colon, rather than letting them be absorbed). Fiber Lean binds and quickly eliminates toxins from the gut.*

- Take 30-60 minutes before a meal to feel full with reduced portion sizes*
- Take prior to heading out to a party/event to reduce cravings and temptation*

Fiber Lean comes in both powder and capsule form.
Visit our Downtown Petoskey office for a free Fiber Lean sample, or visit our online store to buy online.


Consult your healthcare practitioner prior to use. Individuals taking medication, especially hypoglycemic agents, should discuss potential interactions with their healthcare practitioner. Do not take Fiber Lean at the same time as medication as it may reduce medication absorption.

*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.
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions, including many that are linked to unhealthy eating habits and lifestyle patterns. Treating symptoms simply by prescribing medication as a “band-aid” does not address the underlying factors that contributed to your problems in the first place, and is not likely to provide lasting results. My approach involves getting “under the surface” to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.
Regardless of who you are, where you live, or what you do, chances are you've experienced the stress and anxiety life can bring. The fact of the matter is, we live in uncertain times. As a human species, we always have. Intellectually we know there are no guarantees that come with being alive. Our evolutionary development demands that we stay alert to threats and potential danger so that we can stay alive. While we no longer find ourselves on the lookout for the proverbial lion outside the cave door, potential threats and turmoil abound, for some of us more than others. This can leave us feeling stressed, anxious, uncertain, and vulnerable.

Every day we absorb, integrate, and react to countless stressful stimuli from our external environment as well as the emotions and thoughts that these stimuli bring up within ourselves. Our brains have literally been designed to scan for these stimuli and attach emotion and memory to them (termed the negativity bias) (1). In this sometimes constant state of vigilance, we may find ourselves further and further away from a state of calm, a state of peace. This distancing from inner peace can lead to increased chronic stress and multiple stress-related illnesses (2). Now we have added another layer of dis-ease to our uncertain lives.

And yet, amidst all of this turmoil, we live, we trust, we love, we look forward to tomorrow. How is it that we hold these two dichotomies within the same brain, the same heart, the same spirit? This is the essence of being human. It is in human vulnerability that we often locate both our desire for and our capacity to experience the state of peace which allows us to trust, to love, to find the meaning and purpose that see us through to tomorrow. And these potentials exist within each and every one of us. They are not mysterious or magical, they are the result of the intermingling and reorganization of the myriad functions of the human brain (3). This physiological fact, however, does not diminish the beauty and freedom experienced with unlocking these potentials. We all have access to these resources, sometimes we just need the guidance and support of others to nudge open the door within ourselves behind which they are waiting.

So how do we nudge this door within ourselves open? One inch at a time. The field of neuroplasticity has shown us we can “turn down” the negativity bias wired into our brains through evolution and “turn up” our capacity to scan and experience beauty, contentment, and peace (1). Doing this, however, takes a dedicated practice which guides us to a state of inner awareness, then gently turns this inner awareness to a more active state of focused attention to the experience of peace. This quite literally changes the activity of the brain biochemically and energetically, priming us to absorb and experience calm peacefulness. From this state we can access our own wisdom, our purpose in life, softening the vulnerability of uncertainty (4).

We can exist in peace, even in the tumultuous world in which we live. But this is a practice. And as in any practice, we need guidance and support. Join me at Dr. Nielsen’s office for one or both of these offerings as we explore the human potentials of peace, wisdom, purpose, and oneness through the practice of Clinical Meditation and Imagery.

FOUNDATIONS OF MEDITATION
$140. Pre-registration required.

EXPLORATIONS IN MEDITATION AND IMAGERY
Drop-In sessions: When: first and third Tuesdays of each month** starting September 5th 2017, 6:30pm.
$15 drop-in fee. No registration required.
**please note: October 2017 offerings will be the first and fourth Tuesday, Oct. 3rd and 24th, 2017**

Sources:
The Three Books I Most Often Recommend to Patients

by Carin Nielsen MD in Book Reviews
Summer is a great time to relax in the hammock or on the beach with a good book. Below are three books I frequently recommend to patients. Each is the type of book that you can come back to over time, re-reading chapters and absorbing more information. Happy reading!

**THE IMMUNE SYSTEM RECOVERY PLAN: A DOCTOR'S 4-STEP PROGRAM TO TREAT AUTOIMMUNE DISEASE**

By Susan Blum, MD, MPH

*A must-read for anyone seeking a Functional Medicine approach to Autoimmune Disease and a great companion to my office protocols.*

This book provides:

- A basic science “primer” of the immune system and its dysfunction in Autoimmune Disease (you can skip ahead if it’s too much).
- An overview of a Functional Medicine approach to Autoimmune Disease.
- Step-by-step protocols for managing stress, cleaning up the gut and optimizing detoxification.
THE HORMONE CURE:
RECLAIM BALANCE, SLEEP, AND SEX DRIVE; LOSE WEIGHT; FEEL FOCUSED, VITAL, AND ENERGIZED NATURALLY WITH THE GOTTFRIED PROTOCOL

by Sara Gottfried, MD

If you are a female between the ages of 35-65, you should read this book!

Harvard-trained physician Dr. Sara Gottfried provides an easy-to-read, well-organized summary of a Functional Medicine approach to hormone balance, including:

- Adrenal dysfunction
- Thyroid disorders
- Peri-menopause and Menopause

Dr. Gottfried explains how stress impacts hormones at many levels and provides evidence-based protocols to get you started on the path to hormone balance.
GRAIN BRAIN:
THE SURPRISING TRUTH ABOUT WHEAT, CARBS, AND SUGAR--YOUR BRAIN'S SILENT KILLERS

by David Perlmutter, MD

Looking to learn more about gluten and its potentially damaging effects on the body? Considering a more “Paleo” diet? This best-selling book by board-certified Neurologist David Perlmutter is thought-provocative and research-oriented, and will certainly cause you to pause before you put that bagel in your mouth! Included is a practical four-week plan to get you started on a grain-free lifestyle, including gluten-free recipes.

Want to learn more? Consider a few of Dr. Perlmutter’s other books:

- “The Grain Brain Cookbook” and “The Grain Brain Whole Life Plan” offer even more practical, day-to-day applications.
- “Brain Maker” a compelling read that describes the relationship between gut health and brain function.

Tagged in:  
- grain brain  
- Immune System Recovery  
- The Hormone Cure

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National Weight Control Registry

by Carin Nielsen MD in Weight Loss
The National Weight Control Registry (NWCR) is an ongoing research study established in 1994 that includes over 10,000 adults who have lost at least 30 pounds of weight and kept it off for at least one year.

Members complete annual questionnaires about their current weight, diet, exercise habits and behavioral strategies for weight loss maintenance.

The NWCR was developed to identify and investigate the characteristics of individuals who have succeeded at long-term weight loss.

HOW DID NWCR MEMBERS LOSE THE WEIGHT?

- 98% of NWCR participants report that they modified their food intake in some way to lose weight.
- 94% increased their physical activity, with the most frequently reported form of activity being walking.
- Over half of participants lost weight with the help of some type of program.

HOW HAVE NWCR MEMBERS KEPT THEIR WEIGHT OFF? HERE ARE SOME LIFESTYLE HABITS THEY HAVE IN COMMON:

- 78% eat breakfast every day.
- 75% weigh themselves at least once a week.
- 62% watch less than 10 hours of TV per week.
- 90% exercise, on average, about 1 hour per day.

Like I frequently discuss with clients, this is not rocket science! These people (over 10,000) lost weight simply by changing their eating patterns in some way and moving more!

WANT TO LEARN MORE?

Visit the NWCR website www.nwcr.ws
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions, including weight gain and obesity. Treating symptoms simply by prescribing medication as a “band-aid” does not address the underlying factors that contributed your problems in the first place, and is not likely to provide lasting results. My approach involves getting “under the surface” (using assessments like estrogen metabolite testing) to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.

Diet
exercise
lifestyle
National Weight Control Registry
weight loss

Alpha-lipoic Acid
WHAT IS ALPHA-LIPOIC ACID?

Alpha-lipoic acid (sometimes referred to as ALA) is a co-enzyme found in every cell of the body, and is used to turn glucose into energy. Alpha-lipoic acid also functions as a powerful antioxidant, attacking "free radicals". Free radicals are produced in the body as a byproduct of energy production, and cause harmful chemical reactions that can damage cells, organs and tissues, and make it harder for the body to fight off infections.
Alpha-lipoic acid is the only antioxidant that is both water and fat-soluble, which means it has access to all parts of our body to attack free radicals and prevent oxidative damage. Alpha-lipoic acid also helps to regenerate other powerful antioxidants and make them active again.

WHAT IS ALPHA-LIPOIC ACID USED FOR?
- Diabetes, Pre-Diabetes and Insulin Resistance
- Peripheral Neuropathy
- Heavy Metal clearance
- General Antioxidant Support

Researchers believe Alpha-lipoic acid helps improve insulin sensitivity. More simply put, Alpha-lipoic acid may make it easier for your body to use blood sugar for fuel. Alpha-lipoic acid is also used to treat the symptoms and delay progression of diabetic and alcoholic peripheral neuropathy. Studies show Alpha-lipoic acid binds with toxic metals, such as mercury, arsenic, iron, and other metals that act as free radicals. Because alpha-lipoic acid can pass easily into the brain, it may help protect the brain and nerve tissue, researchers are investigating it as a potential treatment for stroke and other brain problems involving free radical damage, such as dementia.

HOW TO SUPPLEMENT: ADULTS
- General antioxidant support: 50-400 mg per day
- Diabetes and diabetic neuropathy: 600-800 mg per day

PRECAUTIONS/POSSIBLE INTERACTIONS

Because of the potential for side effects and interactions with medications, you should take dietary supplements only under the supervision of a health care provider. Side effects are generally rare and may include insomnia, fatigue, diarrhea, and skin rash.

Alpha-lipoic acid has not been studied in children, pregnant or breastfeeding women and is therefore not recommended for use in these populations.

Caution:
- If you are diabetic or have low blood sugar, as Alpha-lipoic acid may lower blood sugars further.
- If you are an alcoholic, or have Vitamin B1 (Thiamine) deficiency, as animal studies have shown that Alpha-lipoic acid may lower Vitamin B1 levels.
- If you are on thyroid medication, monitor thyroid levels as Alpha-lipoic acid may reduce thyroid hormone levels.
- If you are on chemotherapy, you should check with your oncologist prior to using Alpha-lipoic acid.

SOURCES:
- University of Wisconsin Integrative Medicine - Supplement Samplers
- University of Maryland Medical Center - Complementary and Alternative Medicine Guide
- Oregon State University, Linus Pauling Institute - Micronutrient Information Center
I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions. Treating symptoms simply by prescribing medication as a “band-aid” does not address the underlying factors that contributed your problems in the first place, and is not likely to provide lasting results. My approach involves getting “under the surface” (using assessments like estrogen metabolite testing) to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.

12-week Transformation
by Carin Nielsen MD in Weight Loss

Interested in learning more about our 12-week Weight Loss/Lifestyle Change programs?

Wondering how a program might work for you?
“The program was personalized to fit my needs, concerns. Once I learned how and what to eat I have been able to continue almost automatically. It works because it changes how you see food and gives you a healthy change, instead of yo-yo diets or a fad diet that you won’t be able to do long-term.

It is a lifestyle change, one that my body needed. I am able to pinpoint which foods make me feel sick and which ones add weight, and eliminate them.”  

EL, Age 36.

In just 12 weeks, she lost:

**28 POUNDS**
7 INCHES OFF HER WAIST
4.5 INCHES OFF HER HIPS
3.75 INCHES OFF HER CHEST
3.25 INCHES OFF HER ARM

And she even took a three-week vacation during her program!

Are you ready to get started?

Call 231-638-5585 to book your appointment today, or feel free to email me with questions at info@CarinNielsenMD.com
Looking for a personalized approach to your healthcare? I use an Integrative/Functional Medicine approach with my patients to treat a variety of chronic medical conditions. Treating symptoms and chronic disease simply by prescribing medication doesn't address the underlying factors that contributed your problems in the first place, and is not likely to provide lasting results. My approach involves getting "under the surface" to find and correct underlying imbalances. If you are interested in learning more or if you would like to schedule a consultation, please contact our office info@CarinNielsenMD.com or 231-638-5585.
Advanced Lab Testing available through Dr. Lauren Grace at Sarasota Integrative Health. Advanced Lab Testing. Genova NutrEval Panel*. $154 Insurance Rate. Provides detailed insight and a better understanding of patients' nutritional deficiencies. By combining testing in 5 key areas of core nutrients, physicians are offered a depth of insight into a patient's overall nutritional status unrivaled in the laboratory industry. Sample Report. Genova GI Comprehensive*. $134 Insurance Rate. By evaluating targeted biomarkers, the GI Comprehensive Stool Profile can reveal hidden conditions that other stool tests may overlook. Balancing gut microbiota is key for improving core gastrointestinal health.