

# WELL MATRIX

Health Resiliency Program

## In-Practice Guide

---

# Table of Contents

## 01 Introducing a New (and Very Old) Paradigm of Health

- 01 What is Wellness?
- 03 The Roots of Wellness
- 04 Optimizing Wellness with the Lifestyle Matrix Resource Center

## 07 Wellness In Your Practice

- 07 The WellMatrix Four Markers of Wellness
- 08 Defining Nutritional Wellbeing
- 09 Defining Physical Wellbeing
- 10 Defining Emotional Wellbeing
- 12 Defining Environmental Wellbeing

## 15 Basic Assessment

- 15 Basic Assessment: Roots, Development and Grading
- 16 WellMatrix Questionnaire
- 18 Scoring the Questionnaire and Developing the WellMatrix Index

## 21 Advanced Assessment

- 21 Nutritional Wellbeing Assessment
  - Nutrient Testing
  - Omega-3 Testing
  - Body Impedance Analysis
  - Waist-to-Hip Ratio
- 25 Physical Wellbeing Assessment
  - Overhead Squat
  - Timed Up & Go (TUG) Test
  - Inflammatory Markers
- 27 Emotional Wellbeing Assessment
  - Cortisol Awakening Response (CAR)
  - Diurnal Cortisol
  - DHEA-S
  - Melatonin
- 28 Environmental Wellbeing Assessment
  - Saliva or Dried Urine Heavy Metal Testing
  - Oxidative Stress Testing

## 33 Interventions

- 33 Protocol for Nutritional Wellbeing
- 34 Protocol for Physical Wellbeing
- 35 Protocol for Emotional Wellbeing
- 39 Protocol for Environmental Wellbeing

---

## 45 How to Successfully Implement the WellMatrix Program in Your Practice

### 51 Case Studies

- 51 Transforming from a GI Disorder to Wellbeing
- 57 Transforming from a Musculoskeletal Condition to Wellbeing
- 63 Transforming from an Asymptomatic Patient to Wellbeing
- 71 Transforming from Autoimmunity to Wellbeing
- 77 Transforming from Toxic Environmental Factors to Wellbeing

### 85 Appendices

- 85 Appendix A: Health Through the Ages
- 88 Appendix B: A History of the American Diet
- 96 Appendix C: Basic Balance Exercises
- 97 Appendix D: Medication-Driven Depletions
- 103 Appendix E: Organic/Non-Organic Foods
- 105 Appendix F: Genomics
- 107 Appendix G: Geriatrics
- 112 Appendix H: Pediatrics
- 116 Appendix I: Athletes
- 122 Appendix J: Pregnancy and Lactation
- 127 Appendix K: Sweeteners
- 130 Appendix L: Gender and Special Populations

# Introducing a New (and Very Old) Paradigm of Health

## WHAT IS WELLNESS?

The World Health Organization defines wellness as...“a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity” and the National Wellness Institute defines wellness as... “a conscious, self-directed and evolving process of achieving full potential.” Merriam-Webster dictionary defines wellness looking at the goals of the patient: “the quality or state of being in good health especially as an actively sought goal.”

Yet, we see the term wellness peddled daily as the new snake oil. Everything from clothing to CBD to yak butter, supplements to sage wisdom are all marketed as wellness. If you ask your patients what health is, you will get many different answers. Many, if not most, will define wellness in terms of no pain, no stress or feeling better. When asked the criteria for getting well, some will say eating well, exercising, better sleep, family time, less stress, strong finances, not being sick or on chronic medications.

In this In-Practice guide, we seek to further define wellness for you the health care provider as well your patients. We will demonstrate that true wellness is really wellbeing. We see wellbeing in the light of having vitality. **Vitality** is the state of physical, mental and spiritual wellbeing that can support the patient’s ability to live, flourish and grow. Rather than focusing on the negative, or disease quantifying characteristics, we want to focus on the positive factors that promote wellbeing. Promoting wellness can improve the innate vitality of your patient’s body, bolstering their metabolic reserve and resilience against the insults their body faces daily. Wellbeing promotes a sense of improved mental function and self-healing. We feel if this program is utilized well, the patient has the physiological and mental tools to counteract the onset and acceleration of illness, thereby, lower medical overutilization, leading to a happy and healthy patient. Imagine as a physician, the happiness your patients, their family, loved ones and friends will have when your patient has improved physical, chemical and emotional health. They will be bursting at the seams to tell you and everyone they meet how wonderful it is to be truly “well.” It is time for a new, yet very old, paradigm shift in health care to focus on disease resistance, vitality and wellness!

To date, the health care system has not developed adequate tools to measure and quantify wellbeing. Almost all these outcome assessments measure what is called “perceived wellness.” Yet, as previously stated, physicians, patients, insurance companies, employers, hospitals, gyms, and any purveyor of “wellness” products will all measure wellbeing differently. The WellMatrix program is designed to bring conformity and uniformity to this chaotic field. We have analyzed current data in order to further categorize factors to help support patients on their quest for true wellbeing. We have designed an easy to use evaluation, focusing on four health markers to help you, the clinician, give a WellMatrix Score, or Index, to your patient and provide you a guide to help identify health weaknesses and easy-to-use interventions to improve their WellMatrix Index. The four WellMatrix markers are: **Nutritional, Physical, Emotional** and **Environmental Wellbeing**.



**NUTRITIONAL CONSIDERATIONS**

- Plant-based
- Processed foods
- Organic
- Depletions
- Assimilation

**PHYSICAL CONSIDERATIONS**

- Movement
- Strength
- Endurance
- Balance
- Cross crawl

**EMOTIONAL CONSIDERATIONS**

- Anguish
- Sleep
- Community
- Spiritual
- Stress

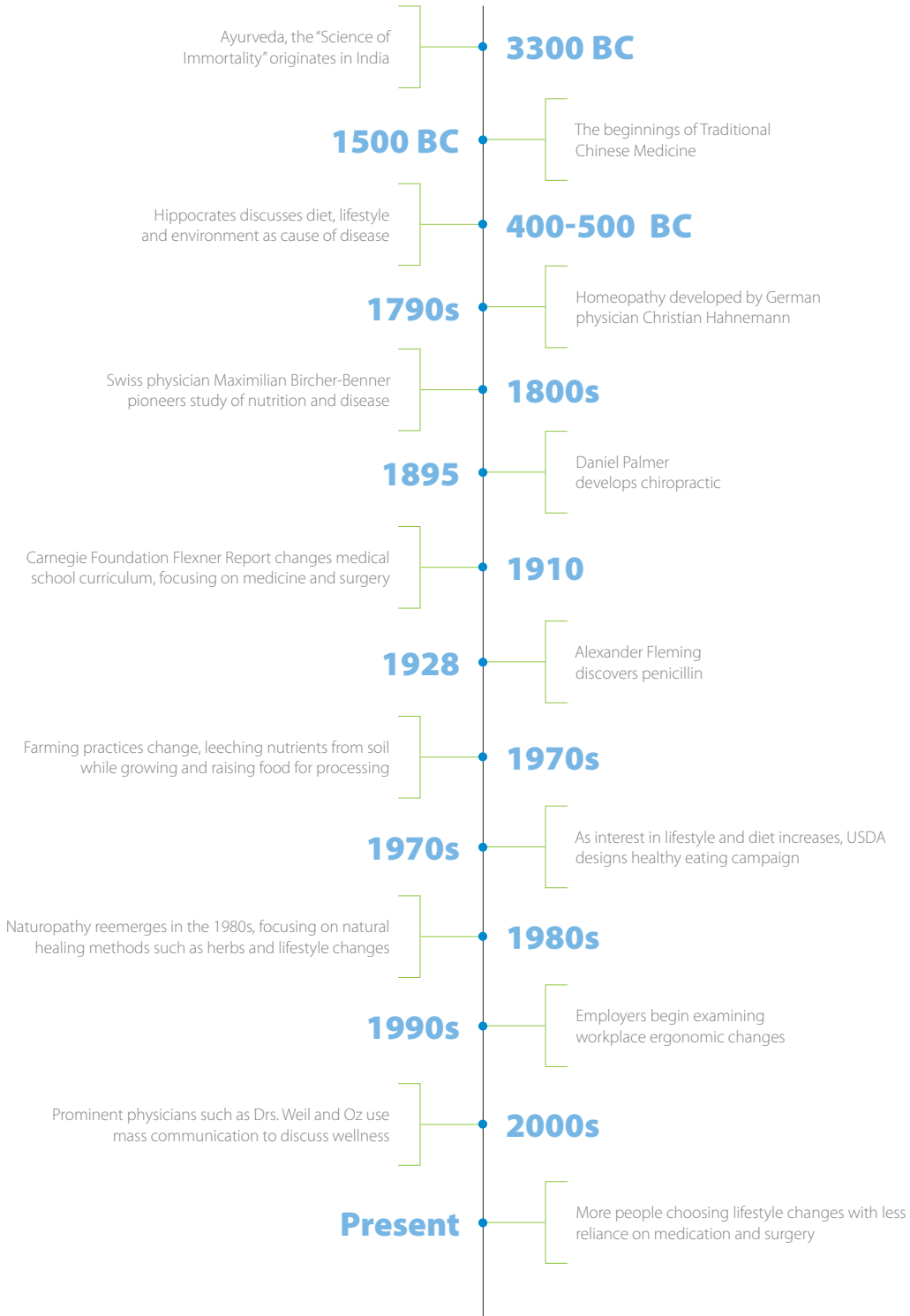
**ENVIRONMENTAL CONSIDERATIONS**

- Home
- Work
- Toxins
- Family/Friends
- Safety

These four markers have been used in various forms for centuries by health care providers and patients to evaluate and provide information to refill and maintain their metabolic reserves to improve physiological resilience. Let's look at the various approaches to wellbeing used through the ages.

### THE ROOTS OF WELLNESS

The concept of wellness has been promoted for centuries by various health care disciplines. Each one utilized a personalized approach combining lifestyle, mental health, exercise, herbs and supplements. However, this has not been the case in the modern era of health care.



Today, there are places in the world where the people live long and healthy lives. These areas are called Blue Zones. The five most commonly discussed are Okinawa, Japan; Sardinia, Italy; Ikaria, Greece; Loma Linda, California; and Nicoya, Costa Rica. The population in these areas often live well into their 90s, with many into their 100s! They have lifestyles that are low on stress and have strategies to help them cope. They are family-focused and eat a predominantly plant-based, healthy diet while following the 80% rule, eating until almost full. Most of them live in areas that are low in pollution, with clean water to drink and bathe in, as well as fresh air to breathe. They move naturally, growing gardens or walking to their neighbor’s house or work. Spirituality is important to them and they have a feeling of purpose, belonging to social circles that support healthy lifestyle choices.

In today’s world, it is often difficult to choose where you live, the environment you work in or the food you eat. Even when you eat good food, our soils are often depleted of the micronutrients our bodies need. These factors may play some type of role in your patients’ vitality. Even with the best diet, we may still need to supplement with magnesium and other micronutrients, or vitamin D due to limited sunshine exposure we get daily, or omega-3 fatty acids due to a shift away from eating cold water fish or concerns of toxins found in fish (For a full story of health through the ages, see Appendix A, page 85).

However, when confronted by a patient who wants to improve their wellness, today’s general practitioner has little education or guidance to provide the patient. The general practitioner can look toward lab results such as a basic chem panel or a lipid panel to give advice to the patient on what they perceive is overall wellness. This approach is still treating a disease such as dyslipidemia or anemia. Most medical schools provide little education on diet and nutrition, exercise, energy, stress reduction, or sleep improvement to their students. Any knowledge a health care provider has in these areas is most likely self-sought and self-taught. The WellMatrix Program is designed to accelerate the implementation of wellbeing into your practice.

**OPTIMIZING WELLNESS WITH THE LIFESTYLE MATRIX RESOURCE CENTER**

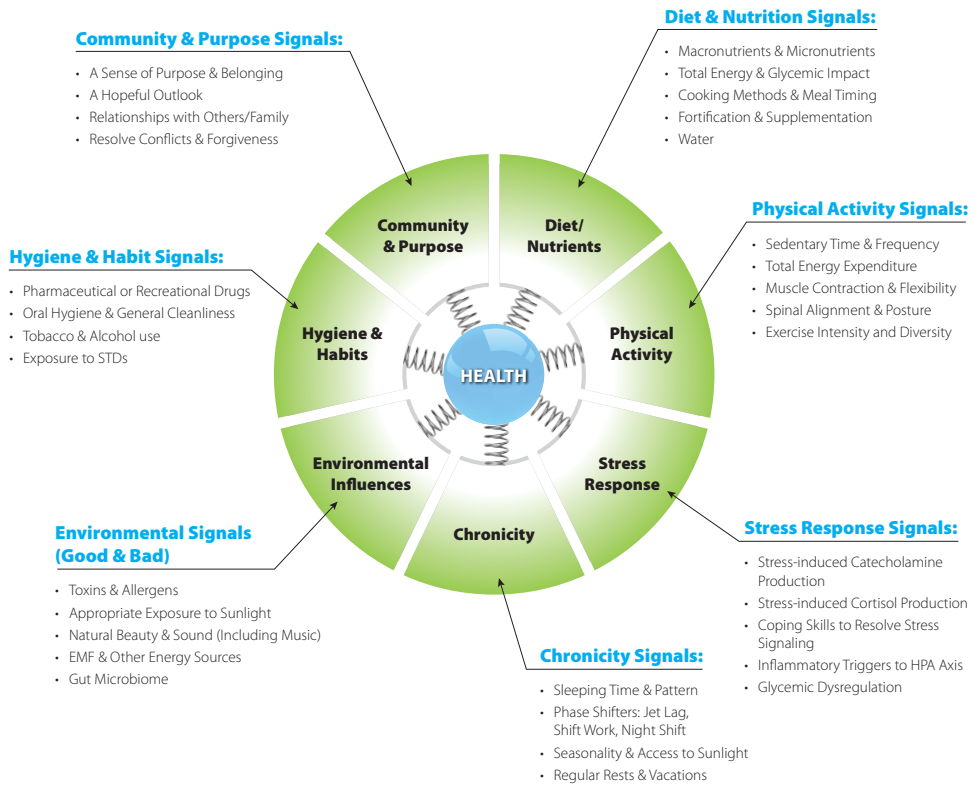
The LMRC has a core philosophy that revolves around lifestyle-based therapy. The human body has an innate ability to maintain its own health when provided with the appropriate amounts and types of healing signals. When harmful signals are removed and healing signals are enhanced, cells, tissues, and organ systems can create healthy outcomes. Lifestyle-based therapy is truly patient-centered in that it requires assessing all signals that influence an individual’s health, recognizing that individuals have differing capacities to translate signals and change behaviors. There must be an open relationship between the engaged clinician and an empowered patient.



# The WellMatrix Four Markers of Wellness

Why should the busy clinician dedicate limited time into developing a wellness portion of their practice? Indeed, most health care practices focus on disease care. The answer is in that statement. Very few practices dedicate any time to the real prevention of disease. Rarely does the physician or health care provider discuss vitality with their patients. Time is spent in history taking, testing, diagnosing and implementing a plan to help treat disease. Once the patient is free of their specific illness, they are no longer connected to the practice until a new disease process afflicts them and then they return when the next crisis occurs. This describes the typical health care practice. Most clinicians know that if the patient slept well, diminished stress and ate a well balanced plant-based diet, their physiological resiliency would be high, and their metabolic reserves filled to the maximum. However, most clinicians do not have a process for implementing strategies around these principles. This would allow the clinician to stay aware of the patients' health status, diminish the need for the disease roller coaster effect, provide disease resistance to the patient as well as provide another income stream to the practice. This is what the WellMatrix Program is all about!

The WellMatrix Program has identified four markers of wellness to help provide a WellMatrix Index for your patient, a starting point for their journey into true health. These were developed after researching a plethora of ideas and opinions from experts in the health care field combined with the principles from the Blue Zones. The foundational principles of the WellMatrix come from the seven spheres of health introduced in the *Supplementing Dietary Nutrients Road Map*.





The goal of the WellMatrix Program is to fine-tune wellness markers. We want you to be able to take a snapshot of their overall wellness in an efficient and reproducible manner providing a WellMatrix Index or wellness grade. With this benchmark, patients can then improve their WellMatrix Index.

The four markers of wellness are: **Nutritional Wellbeing, Physical Wellbeing, Emotional Wellbeing** and **Environmental Wellbeing**. Let's look at these individually.



## **NUTRITIONAL WELLBEING**

For many people, nutritional wellbeing is the quality of what they eat, and they make a good point. However, healthy communities around the world practice nutritional wellbeing as part of their heritage. Families in these communities look at eating as not just consuming food, but as a part of their family time. Meal preparation begins with the selection of good food choices. These ingredients are fresh, often either from a local market or from their own gardens. These foods are high-quality, nutritionally dense, and usually locally grown or raised. Most of their food choices are organic with minimal application of herbicides or pesticides. Preparation continues at home and often involves more than one person or generation. Food preparation is taught to younger generations with recipes and techniques often generations old. Once prepared, the meal is enjoyed by the entire family at the table as they tell stories about how their day went or working out their daily struggles together. They eat until they are almost full, chewing their food thoroughly and giving their digestive systems a chance to work correctly. After their meal, these populations take time to rest and digest. Cleaning up after the meal is often a family affair. This is repeated over and over. Eating out is a rare treat and eating establishments for these populations often take extreme measures to guarantee high-quality food and experiences.

This is in stark contrast to less-than-healthy populations around the world. The Standard American Diet is high on calories but low on quality which contributes to macro and micronutrient depletion and a variety of chronic disorders. These populations struggle to get their family together for meals and shop at big-box stores for their food choices. Their food often comes from long distances and is grown to look good or travel long distances with minimal deterioration. Processed or frozen foods are commonplace to allow for long-distance travel from where it is produced to your plate. Plants have been treated with a variety of herbicides and pesticides and meat sources are fed antibiotics and poor-quality foods to fatten them up to get to the grocery shelves. Food preparation uses methods that also deplete nutrients from the food. Age-old healthy recipes have been replaced with easy-to-prepare, overly processed meals. Very little time is spent preparing. Food consumption is often done in different rooms at different times due to hectic schedules. Food is consumed rapidly, chewed quickly, and digestive tracts struggle to produce the appropriate chemicals to digest, leading to malabsorption and nutrient depletion and, over time, chronic disease.

The WellMatrix Program is designed to emulate new (old) techniques for nutritional wellbeing. To evaluate your patients' nutritional wellbeing, we use the questions found throughout the WellMatrix Questionnaire. This helps to not only evaluate their food intake, but the quality of their food and if they are following the principles of good nutritional wellbeing seen in populations such as the ones living in the Blue Zones. A food diary should be used to help evaluate food choices, how the food is prepared and consumed. If the patient has a poor score in nutritional wellbeing, Advanced Assessment strategies such as Body Impedance Analysis (BIA) or waist-to-hip ratio can be used (See page 21 for more information).

## BASIC ASSESSMENT

The WellMatrix **Basic Assessment** is designed to easily and efficiently assess your patients for overall physiological resilience and provide a WellMatrix Index. The WellMatrix Program includes an easy-to-use Questionnaire that is divided into four categories, each representing the four WellMatrix markers discussed. The Questionnaire was designed after thorough research. We reviewed expert discussions on wellness, employer wellness surveys, nutrition surveys from the health care field and information provided by clinical experts. The questions in **BLUE** are questions based in the qualities found in people living in the Blue Zones. The **BLUE** color of the Blue Zone questions can be used as a conversation starter to discuss the first steps on the journey to wellbeing. The questions in **RED** are questions that reflect poor behaviors or habits that can negatively impact their wellbeing.

The WellMatrix **Nutritional Wellbeing** portion of the WellMatrix Questionnaire has 11 Yes/No questions for a possible low total of 11 and a high total of 22. There is a general question worth one to three points on how patients perceive their diet. The total possible high score is 25.

The WellMatrix **Physical Wellbeing** portion of the WellMatrix Questionnaire has 11 Yes/No questions for a possible low total of 11 and a high total of 22. There is a general question worth one to three points on how patients perceive their physical fitness. The total possible high score is 25.

The WellMatrix **Emotional Wellbeing** portion of the WellMatrix Questionnaire has 11 Yes/No questions for a possible low score of 11 and a high total of 22. There is a general perceived question worth three points on how patients perceive stress management. The total possible high score is 25.

The WellMatrix **Environmental Wellbeing** portion of the WellMatrix Questionnaire has 11 Yes/No questions for a possible low score of 11 and a high total of 22. There is a general question worth three points regarding their possible environmental toxicity. The total possible high score is 25.

### Scoring the Basic Assessment

Each section will be graded. For the questions in the **RED** section, the “Y” answers are worth one point and the “N” answers are worth two points. For the questions in the **BLUE** section, it is reversed where the “Y” answers are worth two points and the “N” answers are worth one point.

Add the **RED** and **BLUE** scores and the **GREEN** perceived 1-3 score to get a total score for each section.

The WellMatrix Index is the total of all 4 markers added together out of 100.

# WELL MATRIX Questionnaire

Patient Name: \_\_\_\_\_ Date: \_\_\_\_\_

To help evaluate your state of wellness, please fill out the following questionnaire. Circle yes or no for each question, and note in the Comments sections any additional concerns related to each category. After reviewing your answers, your health care provider will discuss options to improve your wellbeing.

## Nutritional Wellbeing

- Do you eat organically grown and in season foods? Y N
- Do you eat cold water fish such as wild caught salmon or cod at least twice a week? Y N
- Do you eat five different colors of vegetables per day? Y N
- Do you eat enough vegetables to meet your fiber needs? Y N
- Do you fast at least 12 hours three or more times per week? Y N
- Do you chew your food thoroughly, until it is a paste, before swallowing? Y N

Blue Score \_\_\_\_\_

- Do you suffer from regular bouts of diarrhea, bloating or constipation? Y N
- Do you regularly drink soda (diet or regular)? Y N
- Do you take antacids or proton pump inhibitors such as Prilosec, Prevacid, Protonix or omeprazole? Y N
- Do you eat out more than twice a week? Y N
- Do you regularly get muscle cramps? Y N

Red Score \_\_\_\_\_

On a scale of 1-3, with 1 being poor and 3 being great, how is your diet? (Circle one) **1 2 3**

Total Nutritional Wellbeing Score \_\_\_\_\_

Comments: \_\_\_\_\_

## Physical Wellbeing

- Do you watch TV or work on your computer/tablet less than two hours per day? Y N
- Do you get outside most days of the week for at least 10 minutes? Y N
- Do you participate in physically active hobbies such as gardening or dancing? Y N
- Do you participate in a formal exercise program? Y N
- Do you perform easy stretching/balancing exercises? Y N
- Do you perform exercises that elevate your heart rate? Y N

Blue Score \_\_\_\_\_

- Do you regularly have muscle or joint pain? Y N
- Do you take prescribed or over-the-counter medications on a regular basis for joint pain or muscle pain? Y N
- Have you had surgery for any musculoskeletal conditions such as knee, shoulder or back pain? Y N
- Have you been diagnosed with arthritis, chronic fatigue syndrome or fibromyalgia? Y N
- Do you exercise less than three times or more than five times per week? Y N

Red Score \_\_\_\_\_

On a scale of 1-3, with 1 being poor and 3 being great, how is your physical health? (Circle one) **1 2 3**

Total Physical Wellbeing Score \_\_\_\_\_

Comments: \_\_\_\_\_

# WELL MATRIX

## Emotional Wellbeing

- Do you participate in group activities at least three times per week? Y N
- Do you sleep seven to eight hours a night without the help of medication? Y N
- Are you spiritually active at least four times per month (e.g. meditate, participate in church activities, prayer)? Y N
- Do you eat some of your meals with family or friends every day? Y N
- Do you have one or more pets? Y N
- Do you practice stress management technique such as deep breathing? Y N

Blue Score \_\_\_\_\_

- Do you frequently experience anxiety, mental fogginess, trouble concentrating, or depression? Y N
- Do you wake up more than twice a night, need an alarm clock to wake up, or feel tired/sluggish once you wake up? Y N
- Do you consider your job, personal relationships or finances stressors in your daily life? Y N
- Do you care for a parent or a disabled family member? Y N
- Do you feel lonely? Y N

Red Score \_\_\_\_\_

**On a scale of 1-3, with 1 being very stressed and 3 being not stressed at all, how stressed are you? (Circle one) 1 2 3**

Total Emotional Wellbeing Score \_\_\_\_\_

**Comments:** \_\_\_\_\_

## Environmental Wellbeing

- Do you avoid drinking from plastic bottles/cups and eating food from plastic plates or containers? Y N
- Do you eat organic? Y N
- Do you grow your own fruits or vegetables? Y N
- Are you free of physical threats (e.g. personal relationship, workplace)? Y N
- Are you free of emotional toxins (e.g. personal relationship, workplace, family)? Y N
- Do you use organic cleaners such as soap, detergent, and shampoo? Y N

Blue Score \_\_\_\_\_

- Do you smoke or vape, or are you regularly exposed to secondhand smoke? Y N
- Have you lived or worked in a place with known mold? Y N
- Do you get sick often or have you taken antibiotics in the last two years? Y N
- Do you have mercury fillings or had all your mercury fillings removed at the same time? Y N
- Have you been exposed to lead or other heavy metals (e.g. tin, aluminum, magnesium)? Y N

Red Score \_\_\_\_\_

**On a scale of 1-3, with 1 being poor and 3 being very good, how would you rate the quality of your environment? (Circle one) 1 2 3**

Total Environmental Wellbeing Score \_\_\_\_\_

**Comments:** \_\_\_\_\_



**WellMatrix Index** \_\_\_\_\_

## Advanced Assessment for Marker Scores of 15-19

When the WellMatrix Basic Assessment has identified a need to further assess the disease resistance of the patient in a specific marker (A score between 15-19) the Advanced Assessment will be used. This allows you to identify specific interventions that will improve metabolic reserve and physiological resilience. You may elect to add CBC and Advanced Chemistry panel at any time.

### NUTRITIONAL WELLBEING

If the patient scores from a 15-19 in the Nutritional Wellbeing portion of the WellMatrix Questionnaire, the Advanced Assessment for this marker will utilize one or more of the following test strategies to identify deficiencies: nutrient testing, omega-3 testing, and either the Body Impedance Analysis (BIA) or waist-to-hip ratio evaluation. The BIA device is inexpensive and non-invasive to the patient. You should utilize the Body Cell Mass percentage (BCM%) as a gauge for scoring and to evaluate for improvement at each re-evaluation.



### WAIST-TO-HIP RATIO

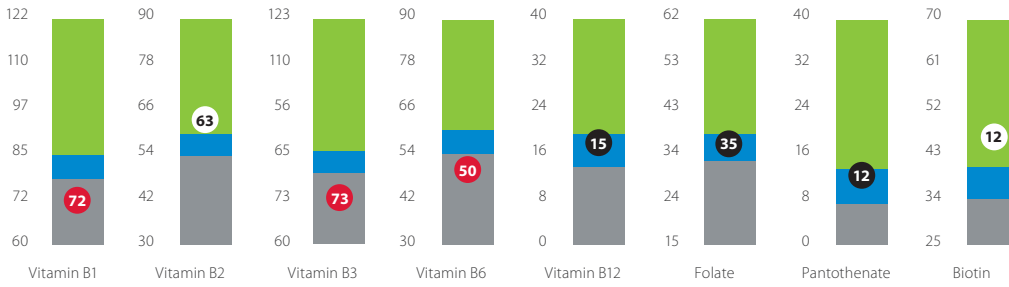
Health Risk	Women	Men
Low	0.80 or lower	0.95 or lower
Moderate	0.81 - 0.85	0.96 - 1.0
High	0.86 or higher	1.0 or higher

Omega-3 Testing	Serum Lab Results	Reference Range
Omega-3 fatty acids	5%	<ul style="list-style-type: none"> <li>• &lt;4% high cardiovascular risk</li> <li>• 5-8% intermediate cardiovascular risk</li> <li>• &gt;8% low cardiovascular risk</li> </ul>

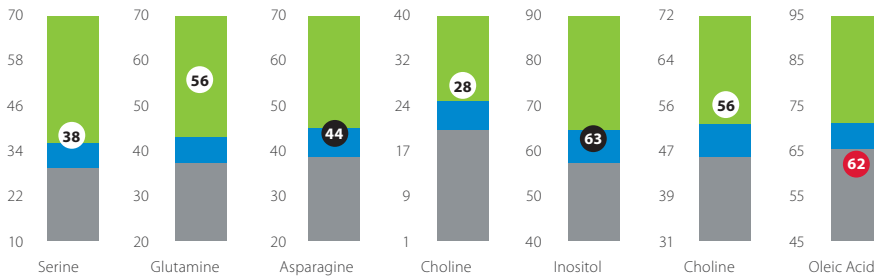
## EXAMPLE OF FINDINGS FOR NUTRIENT TESTING



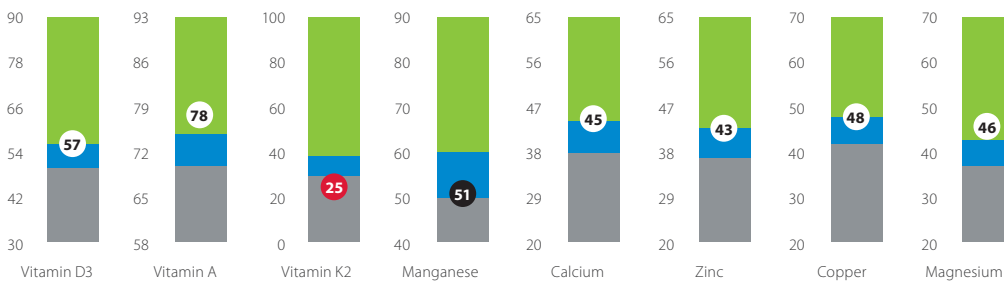
### B-COMPLEX VITAMINS



### AMINO ACIDS AND METABOLITES



### OTHER VITAMINS AND MINERALS



# Interventions









## NUTRITIONAL WELLBEING

If testing demonstrates nutritional deficiencies, the goal is first to replenish what is depleted. When low micronutrients levels are identified, reacted micronutrients are recommended due to their decreased size and subsequent increased bioavailability. (See Appendix B, page 93 for dosage of micronutrients for adults). Macronutrient deficiencies may benefit from use of functional foods with amino acids. These can be mixed in water, shakes or smoothies.

Genomic sequencing has advanced over the last decade. A very important but still somewhat misunderstood concern in single nucleotide polymorphism (SNP) of the gene that creates an important methylation enzyme, methylenetetrahydrofolate reductase (MTHFR). MTHFR methylates folic acid into a more active form, 5-MTHF. Methylated B6 and B12 have been used when this SNP has been identified. The research shows both better absorption of B6 but no difference in plasma levels. It is our opinion that for prenatal patients or those with identifiable SNPs and subsequent symptoms, the patient should utilize methylated B6 and B12. Otherwise, the use of normal folic acid can be beneficial to patients without known SNPs.

If the patient’s food diary demonstrates a lack of vegetables, fruit and/or protein intake, adding a targeted functional food, a multivitamin and multimineral to supplement until the patient can completely change over to a high-quality diet, such as the Mediterranean Diet (MedDiet), is warranted. A new food diary should be provided to the patient when the physician wants to evaluate how the patient is progressing with their dietary recommendations. The **WellMatrix Patient Handbook** is provided for a review of the MedDiet. A **Nutritional Wellbeing Presentation Pad** should be utilized in appointments with the patient. Patients homework should include reading the chapter on **Nutritional Wellbeing** in the **WellMatrix Patient Handbook**.

## MEDITERRANEAN DIET

	Food Type	Examples	Sources and Considerations
	Vegetables	Any in season vegetable	Organic, fermented, shake or smoothie, not juiced
	Fruit	Any in season fruit	Organic, in season, frozen, shakes or smoothies
	Nuts and Seeds	Almonds, walnuts, pistachios, pine nuts Pumpkin, sesame, sunflower seeds	Organic, raw, no salt added Legumes should be soaked overnight and cooked
	Unrefined Grains	Ancient grains such as quinoa, amaranth, teff, bulgur, buckwheat	Ancient and unprocessed
	Eggs	Eggs	Unlimited egg whites and whole eggs three times a week, eggs from free range chickens and organically raised
	Dairy	Unsweetened Greek yogurt, goats milk and cheese, Almond or nut milk	Organic, antibiotic free, sour milk cheese
	Meat	Fish, seafood, minimal red meat	Wild caught fish, free range antibiotic free poultry, goat, minimal beef
	Preparation	Fresh or frozen	Prepare with family and friends

## PHYSICAL WELLBEING

Interventions for physical issues found should include targeted range of motion and/or sensible strengthening exercises. If the patient has failed the overhead squat, specific stretches and exercises are prescribed to help with normal flexibility, balance, range of motion, muscle firing patterns and strengthening.

## INTERVENTIONS FOR POOR OVERHEAD SQUAT

View	Checkpoint	Underactive Muscles	Stretching	Strengthening	Other
Anterior	Foot turns out	Internal rotators	TFL, hamstring	Ball squeeze	Knee mobilization
	Knee moves inward	Glute med, VMO	Adductors and hamstrings	Clams	
	Knee moves outward	Adductors	Piriformis	Ball squeeze	
	Forward lean	Glute max and erector	Ball ab stretch, hip flexor	Core	
	Lower back arching	Glute max. hamstrings	Hip flexor	Core	
Lateral	Lower back rounds	Glute max, erectors	Hip flexors, erectors	Core on floor or ball	Chiropractic
	Arms fall forward	Mid/lower traps, rhomboids	Pec minor/major, lats	Posterior upper back	
	Forward head	Deep cervical flexors	Scalenes and levator	Deep neck flexors, mid traps	
	Elevated shoulder	Mid/lower traps, rhomboids	Upper traps, SCM, levator	Mid/lower traps	
Posterior	Foot flattens	Glute med, both tibialis	Calf, peroneal	Medial calf raise, pos tibialis	Foot manipulation
	Heel rises	Anterior tibialis	Calf, peroneal	Anterior tibialis	

A fitness program should be designed for the patient. The program will be based on patients age, level of fitness, physical abilities, local they live in, and desire to participate. The goal for the fitness plan should be to safely improve their overall movement and strength and be designed to allow the patient to continue the exercises throughout their life. A simple walking program can be initiated. Patient should walk at a comfortable pace and slowly but steadily pick up their speed.

A weight resistance plan can also be initiated for strength building with the emphasis in proper form, front to back and side to side. A **Physical Wellbeing Presentation Pad** should be utilized in appointments with the patient.

The patient's homework includes reading the **Physical Wellbeing** chapter in the **WellMatrix Patient Handbook**.



## How to Successfully Implement the WellMatrix Program in Your Practice

### FIRST WELLMATRIX APPOINTMENT

**Step 1A in exam room:** If one of your current patients inquires about improving their wellbeing, use the WellMatrix Questionnaire to give them a vitality score.

**Step 1B in exam or consultation room:** If patient is presenting for the WellMatrix Program, provide the WellMatrix Questionnaire.

**Step 1C:** Have Patient watch WellMatrix Patient Video while scoring the questionnaire.

**Step 2:** Score Basic Assessment:

- A. Provide Patient with a copy of the graded WellMatrix Questionnaire and review with the patient the appropriate WellMatrix Presentation Pad for lowest score on Basic Assessment.
- B. If an individual marker score is 23-25, no intervention is required.
- C. If an individual marker score is 20-22, provide appropriate interventions including exercises and basic nutritional advice.
- D. If an individual marker score is 15-19, perform appropriate Advanced Assessment testing. Order needed lab work and/or prescribe appropriate exercises and supplements.
- E. If an individual score is 14 or below, start patient into appropriate program such as Pillars of GI Health or CM Vitals.
- F. Provide patient a food diary and schedule patient for follow up in one to two weeks to review any lab work and success with previous recommendations.

**Step 3:** Checkout

Provide patient with WellMatrix Patient Handbook with instructions to read the appropriate chapter.

### FOLLOW-UP VISIT(S)

**Step 4:**

- A. Review patient's success with WellMatrix Program recommendations from last visit.
- B. Review any lab or other exam findings to identify needed strategies to help improve their WellMatrix Index.
- C. Discuss the next lowest score on Basic Assessment with the patient and review the appropriate WellMatrix Presentation Pad.
- D. Advise patient to read that chapter in WellMatrix Patient Handbook.
- E. At check out, the patient should reschedule in four weeks and The Secret to WellBEing Group Visit.

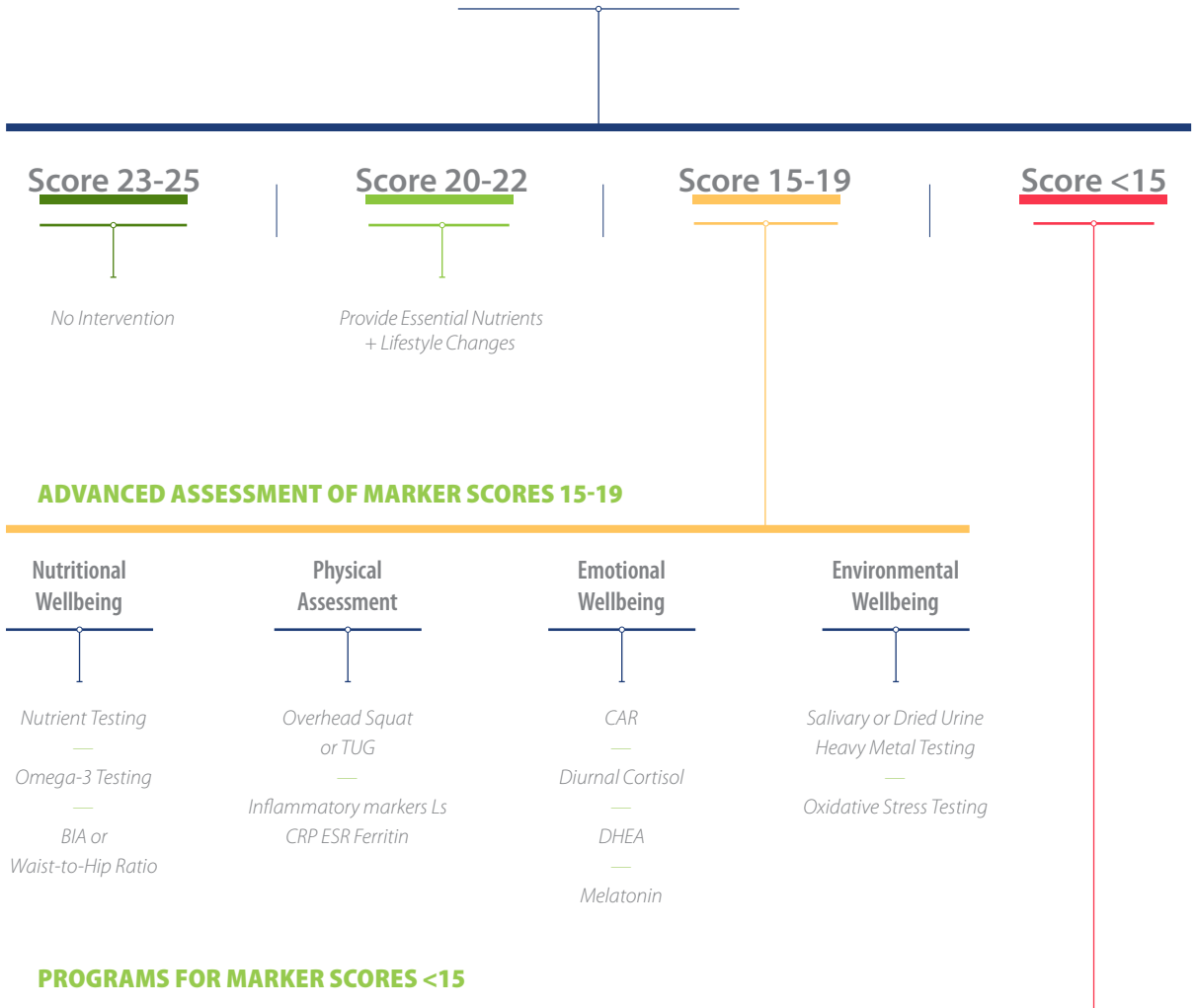
**Step 5:**

- A. Perform Basic Assessment, provide the patient with each sections score and the new WellMatrix Index and compare with initial Basic Assessment.
- B. If any section has a score of 15-19, then perform appropriate Advanced Assessment.
- C. If needed, modify/add exercises, change/add appropriate supplementation and change/modify diet.

Patient should be scheduled every three to six months for a WellMatrix checkup using the Basic Assessment and follow-up discussion about any treatment or recommendations.

## BASIC ASSESSMENT

### INDIVIDUAL MARKER SCORES FROM QUESTIONNAIRE



Nutritional Wellbeing	Physical Assessment	Emotional Wellbeing	Environmental Wellbeing
<ul style="list-style-type: none"> <li>Nutrient Testing</li> <li>Omega-3 Testing</li> <li>BIA or</li> <li>Waist-to-Hip Ratio</li> </ul>	<ul style="list-style-type: none"> <li>Overhead Squat or TUG</li> <li>Inflammatory markers Ls</li> <li>CRP ESR Ferritin</li> </ul>	<ul style="list-style-type: none"> <li>CAR</li> <li>Diurnal Cortisol</li> <li>DHEA</li> <li>Melatonin</li> </ul>	<ul style="list-style-type: none"> <li>Salivary or Dried Urine</li> <li>Heavy Metal Testing</li> <li>Oxidative Stress Testing</li> </ul>

Nutritional Wellbeing	Physical Wellbeing	Emotional Wellbeing	Environmental Wellbeing
	<ul style="list-style-type: none"> <li>Overhead Squat</li> </ul> <ul style="list-style-type: none"> <li>Inflammatory Markers</li> </ul>		<ul style="list-style-type: none"> <li>Heavy Metal Toxicity</li> </ul> <ul style="list-style-type: none"> <li>Oxidative Stress</li> </ul>

Reference pages 15-18 of this In-Practice Guide for more information regarding scores

Initial In-Office Visit

**STEP 1**

Patient completes the WellMatrix Questionnaire to grade each of the four markers of wellness and provide a WellMatrix Index.



**STEP 2**



**WellMatrix Patient Education Video**

The patient watches the WellMatrix Patient Education Video while the questionnaire is graded by staff or health care provider. This video discusses the patients journey from disease care into increasing their vitality and wellbeing.

**STEP 3**

A. The clinician starts with the lowest scoring marker and provides the patient with the appropriate WellMatrix Presentation Pad.



**Nutritional Wellbeing**



**Physical Wellbeing**



**Emotional Wellbeing**



**Environmental Wellbeing**

B. Clinician and patient review the questionnaire to identify key markers of focus to initiate treatment:

- Testing:** Nutrient testing, omega index and Body Impedance Analysis (BIA) or waist-to-hip ratio
  - Diet & Supplementation:** Vitamin D, multimineral, multivitamin, fish oil, MedDiet
- Testing:** Overhead squat or Timed Up and Go (TUG) test, inflammatory markers
  - Exercises & Supplementation:** Focused exercises, turmeric, fish oil, bioflavonoids, proteolytic enzymes
- Testing:** Cortisol Awakening Response (CAR), diurnal cortisol, DHEA-S, melatonin, vitamin D
  - Interventions & Supplementation:** Adaptogens, licorice, phosphatidylserine, B vitamins and vitamin D, magnesium, sleep hygiene, stress management
- Testing:** Saliva or dried urine heavy metal testing, oxidative stress testing
  - Diet & Supplementation:** NAC, glutathione, methylated B vitamins, vitamins C and E, silymarin, MedDiet

The image shows three screenshots of the WellMatrix program. The top screenshot is the 'WellMatrix Questionnaire' with a 'Nutritional Wellbeing' section highlighted. The middle screenshot is the 'Nutritional Wellbeing' presentation pad, with a 'Testing' section highlighted. The bottom screenshot is the 'Physical Wellbeing' presentation pad, with a 'Testing' section highlighted. Green lines connect the highlighted sections of the presentation pads to the corresponding text boxes on the left.

**STEP 4**

A. Patient receives the WellMatrix Patient Handbook and asked to read the appropriate chapter and provided with Health Inventory Sheet.



B. Patient is supplied with any necessary testing kits, initial support supplements, and is encouraged to initiate positive lifestyle changes.



**STEP 5**

A. Review pertinent test results and plan to improving wellbeing with the patient. Initiate targeted therapies and dietary recommendations based on data collected.

B. Identify the next lowest marker on the WellMatrix Questionnaire. Utilize the corresponding WellMatrix Presentation Pad Handout and have patient read appropriate chapter in the WellMatrix Patient Handbook. Initiate targeted lifestyle changes and dietary recommendations for this marker.



Follow-Up Visit (1-3 Weeks)

**STEP 6**



At this time, enroll patients in the **The Secret to Wellbeing** Group Visit. **SEE THE FOLLOWING PAGE FOR MORE DETAILS**

Follow-Up Visit (8+ Weeks)

**STEP**  
**7**

In two months, the clinician can assess the patient to track progress and adjust their plan as necessary. On subsequent visits, the clinician should review the next lower marker(s). Additional lifestyle or dietary recommendations should be provided if needed. Once the lifestyle and dietary changes have been implemented, the clinician should provide another WellMatrix Questionnaire, grade it, and compare it to the previous score. Lifestyle and dietary changes should be monitored/modified as patient improves vitality and wellbeing.



Nutritional Wellbeing



Physical Wellbeing



Emotional Wellbeing



Environmental Wellbeing



TRANSFORMING MEDICINE WITH GROUP VISITS

During the initial phase of care, implementing lasting lifestyle changes is essential for improvement of patient health outcomes. Group Visits are a great way to reinforce healthy lifestyle habits and keep patients motivated and accountable prior to one-on-one reassessments. In addition, Group Visits are an effective tool to create better practice efficiencies both financially and clinically. We recommend using the The Secret to Wellbeing Group Visit Toolkit. You can find this and other Group Visit Toolkit resources at [LifestyleMatrix.com](http://LifestyleMatrix.com)



LifestyleMatrix.com

# Transforming From a GI Disorder to Wellbeing

## PATIENT PRESENTATION

A 30-year-old female teacher had presented with long standing Crohn’s disease. She had a partial colectomy three years ago and is on monthly Remicade infusion therapy. She states that her job feels stressful, but she thinks she handles the stress well. She is divorced and has moved in with her mother on their 100-year-old family farm. Her mother has smoked cigarettes for most of her life and the patient has not been around a smoker in quite a few years. Her treatment included nutrient support for gut health and inflammation as well as eliminating dairy and gluten from her diet. Her diarrhea and abdominal pain have diminished, and she has gained some of her weight back. You have discussed the possibility of a relapse and recurrence of her condition, but overall, she has done well with her care (For more information on the care for inflammatory bowel diseases, see pages 95-106 in the Pillars of GI Health In-Practice Guide). Now that she has done well in the Pillars of GI Health Program, it is imperative that she works on replenishing and maintaining her metabolic reserve. Crohn’s disease is an autoimmune disorder and she will be susceptible to relapses for the rest of her life as well as acquiring other autoimmune disorders. That possibility, combined with the missing portions of her colon, diminish her physiological resiliency. We placed her in the WellMatrix program to build on the success of the Pillars of GI Health Program and improve her physiological resilience.

She was given the Basic Assessment and her WellMatrix Index was 76. Her lowest score was a 16 in Nutritional Wellbeing, followed by an 18 for Environmental Wellbeing, a 20 for Emotional and a 22 on Physical Wellbeing. We discussed the results of the Basic Assessment and utilized the Advanced Assessment for Nutritional Wellbeing and Environmental Wellbeing to help with guidance to improve her WellMatrix Index. The following labs were ordered: nutrient testing and dried urine heavy metal test. The patient was given the WellMatrix Patient Handbook and a food diary and is to return in two weeks.

## WELLMATRIX QUESTIONNAIRE RESULTS

Nutritional Wellbeing	16
Environmental Wellbeing	18
Emotional Wellbeing	20
Physical Wellbeing	22
<b>WellMatrix Index</b>	<b>76</b> 😊

## ASSESSMENT AND HOMEWORK FOR FIRST VISIT

Lab Testing and Review	<ul style="list-style-type: none"> <li>• Nutrient Testing</li> <li>• Dried Urine Heavy metal</li> <li>• Reviewed previous from Crohn’s treatment</li> </ul>
Appointment Tool	<ul style="list-style-type: none"> <li>• WellMatrix Nutritional Wellbeing Patient Presentation Pad</li> </ul>
Homework	<ul style="list-style-type: none"> <li>• Read Chapter 1 Nutritional Wellbeing in WellMatrix Patient Handbook</li> <li>• Begin Food Diary</li> </ul>

## SECOND OFFICE VISIT (TWO WEEKS LATER)

At two weeks follow up, she stills feels better and continues her nutritional and dietary recommendations provided by the Pillars of GI Health program. Lab findings demonstrated low magnesium, vitamin D, B2, B6 and B12. Environmental toxicity testing demonstrated mild elevation of cadmium and lead. Recommendations include daily liquid vitamin D, silymarin, glutathione and N-acetyl cysteine (NAC) for detoxification, a high-quality liquid or powder form of reacted multivitamin to be added to her protein smoothie she drinks every morning from the Pillars of GI Health Program to help with low vitamin B levels. It was discussed implementing the Immune Foundations program, but she prefers to try the liver detoxification and nutrient repletion first. She was advised to read the chapters on Environmental Wellbeing and Nutritional Wellbeing. It was recommended that she have her water tested for lead and cadmium, test for lead based paint in the house and have a plumber look at her pipes for possible lead contamination. Avoiding the use of plastic food and drinking containers was discussed. Her food diary demonstrates that she is still successfully eliminating gluten and dairy from her diet. She is provided the WellMatrix Inventory Sheet and is asked to fill out a new food and sleep diary for the two weeks prior to her next appointment. Due to the possibility of recurrence of Crohn's combined the findings on the WellMatrix Assessments, she should return to the clinic once every two months over the next year for follow-up.

## PERTINENT LAB FINDINGS

### Nutrient Testing

Nutrient	Abnormal Serum Lab Results	Reference Range
Vitamin D	13 ng/mL	30-75 ng/mL
Magnesium	0.8 mEq/L	1.5-2.5 mEq/L
Vitamin B2	2 µg/dL	4-24 µg/dL
Vitamin B6	1.3 µg/dL	2.0-47 µg/dL
Vitamin B12	120 ng/mL	200-900 ng/mL

**HEAVY METAL TESTING**

<b>Element</b>	<b>Reference Range</b>
Lead	<=11.7
Mercury	<=1.01
Aluminum	<=2.3
Antimony	<dl
Arsenic	<=15
Barium	<dl
Bismuth	<dl
Cadmium	<=0.035
Gallium	<dl
Nickel	<=2.11
Niobium	<dl
Platinum	<dl
Rubidium	<=1,458
Thallium	<dl
Tin	<dl
Tungsten	<dl
Uranium	<dl



## NUTRIENT SUPPORT FOR DETOXIFICATION/BIOTRANSFORMATION

Nutrient	Dose
Vitamin D	5,000-10,000 IU/day
Chelated Magnesium Glycinate	200-800 mg/day
Chelated Selenium	100 mcg/day
Glutathione	500 mg/day
N-Acetyl Cysteine	500 mg/day
Silymarin	200 mg/day
Vitamin B2	50 mg/day
Vitamin B6	50 mg/day
Methylated Vitamin B12	500 mcg/day

## HOMEWORK FOR SECOND VISIT

Appointment tools	WellMatrix Inventory Sheet and Environmental Wellbeing Presentation Pad
Homework	<ul style="list-style-type: none"> <li>• Environmental Wellbeing Chapter in WellMatrix Patient Handbook</li> <li>• Have home water, paint and pipes tested for heavy metals</li> <li>• Food and sleep diary to be completed for two weeks prior to returning to clinic</li> <li>• Avoid plastic food and beverage containers</li> <li>• Begin nutrient support protocol</li> <li>• Ask mother to smoke outside</li> </ul>

**THIRD OFFICE VISIT**

On the following visit, she reports that she is struggling to keep on the SCD. We recommended a modified MedDiet, avoiding nuts and starchy carbs. Her current food diary demonstrated she is consuming more vegetables, chicken, fish, occasional fruit and minimal red meat and processed foods. She was very happy to have minimal to no abdominal symptoms, more energy, sleeping closer to 7 hours a night with better quality sleep as well as having one good bowel movement every or every other day with minimal to no diarrhea. Sleep hygiene discussion included the use of blue light blocking glasses and to keep her sleeping temperature around 65-68°F. Eating recommendations were discussed, including trying to eat meals with her family when possible and avoid non-stick and aluminum cookware. She has switched to glass or Pyrex eating and drinking utensils. It is recommended to continue on her supplementation regime. She is to return to clinic in two months.

**HOMEWORK FOR THIRD VISIT**

Appointment tool	WellMatrix Emotional and Physical Wellbeing Presentation Pads
Homework	<ul style="list-style-type: none"> <li>• Blue light-blocking glasses used if working on a device or watching TV one hour before bed</li> <li>• Bedroom sleep temperature 65-68</li> <li>• Avoid non-stick and aluminum cookware</li> <li>• Eat meals with family and friends</li> <li>• Schedule for group visit</li> <li>• No changes in nutrient support</li> </ul>

**FOURTH OFFICE VISIT**

The Basic Assessment is performed. She increases her Emotional and Environmental Wellbeing scores and increases her WellMatrix Index to an 84. It is noted that her Physical Wellbeing score is slightly improved. She should discontinue her glutathione and NAC and change her silymarin to three consecutive days once a month. Calprotectin will be ordered on next visit to monitor her Crohn’s disease. She is to return to clinic in two months.

**HOMEWORK FOR FOURTH VISIT**

Supplementation	Discontinue glutathione and NAC, silymarin 3 consecutive days per month
Appointment Tool	WellMatrix Physical and Emotional Presentation Pads

**CASE SUMMARY**

1. Educate patient on importance of reducing risk of other autoimmune disorder
2. Low Score on Basic Assessment in Nutritional Wellbeing
3. Focused nutritional recommendations for depletions and support of detoxification
4. Emotional wellbeing support with focused stress reduction recommendations
5. Improved WellMatrix Index score from 76 to 84



## Geriatrics

There are over 45 million older adults age 65 and older living in the U.S.; by 2050, that number is expected to almost double. Between 2020 and 2030, the number of older adults is projected to increase by over 17 million individuals. Their health care, activity levels, nutrition, social networks, and living arrangements are different compared to their younger years. The physician must be cognizant of the specific considerations for the geriatric population in building their overall wellness.

### DIET

A new diet may prove to be challenging for the geriatric population. A decrease in food intake has been seen in the elderly regardless of any pathology. Decrease in basal metabolic rate and/or lean body mass as well as sarcopenia (muscle mass loss) may lead to less food/caloric intake. Nutrient absorption decreases with age. Incontinence and constipation are common with the elderly and must be considered with any dietary change. Diets high in iron may cause more constipation in menopausal women. Loss of bone density related to menopausal changes combined with poor nutrition and absorption leads to an increase loss of balance and subsequent increased risk of fall and fracture.

The elderly population has many challenges regarding their diet. Proton pump inhibitors (PPIs) are used for chronic reflux and can alter the way this population digests their food. Adding a new diet may cause this problem to be amplified. Digestion of proteins will be affected with the long-term use of PPIs. Addition of Betaine HCL might be indicated for hypochlorhydria.

False teeth and other dental procedures may make it difficult to chew, especially with fibrous vegetables. Decrease or changes in taste and smell can lead to less food enjoyment and selecting to not eat foods from the new diet. Lack of social interaction at mealtime has been shown to disrupt or eliminate normal mealtimes. All these factors often lead to a changeover to salty and sugary easy to eat foods for satisfaction. Low quality diets lead to vitamin and mineral deficiency. Deficiency of vitamin D and K2 amplifies bone loss leading to an increase risk of osteoporosis, falls and fracture. To help combat age and medically driven constipation, adding soluble and in-soluble fibers are important. However, add slowly as this may cause diarrhea if the patient has not been using any fiber in their diet.

Overall absorption will most likely be decreased in the geriatric population. This must be considered in how the patient can digest a new diet. Supplements consumed by the patient may be less effective. A limited budget may cause the patient to choose to purchase cheap, poor-quality supplements or none at all. A study from the Netherlands utilizing a health cost analysis demonstrated that there was a decrease in disease related malnutrition with the use of oral nutritional supplements leading to a possible reduction of health care costs in the elderly in the hundreds of billions of dollars. A 2015 review in *Nutrients* recommends 1.0-1.3 g/kg/day of protein intake combined with resistance exercise to help slow or stop age related muscle mass loss. Functional foods in powder form are a good source of digestible amino acids to help fight off age related muscle mass loss. These powders can be mixed in water or juice or made into a smoothie to improve protein intake for the elderly. Begin slowly, however, to avoid GI distress.

Meal preparation may be a problem with this population. Transportation, muscle weakness, movement around the kitchen, vision troubles, loss of heat and cold sensitivity, lack of finances for an expensive diet plan are examples of the difficulties that this population may encounter when preparing for a new diet. This population will gravitate to easy, pre-prepared meals or possibly use a meal delivery program.

## EXERCISE

Evidence suggests that moderate activity can slow the progression of arthritis and help with overall circulation. Chronic arthritis, permanent architectural changes in structure, history of surgery, wear and tear on less elastic soft tissues and years of a more sedentary lifestyle will make it difficult for this population to exercise. An evaluation of overall MSK function, cardiorespiratory ability, balance, vision and instruction comprehension needs to be completed before any exercise program is initiated. A specifically designed plan needs to be implemented by the physician after all the data is collected.

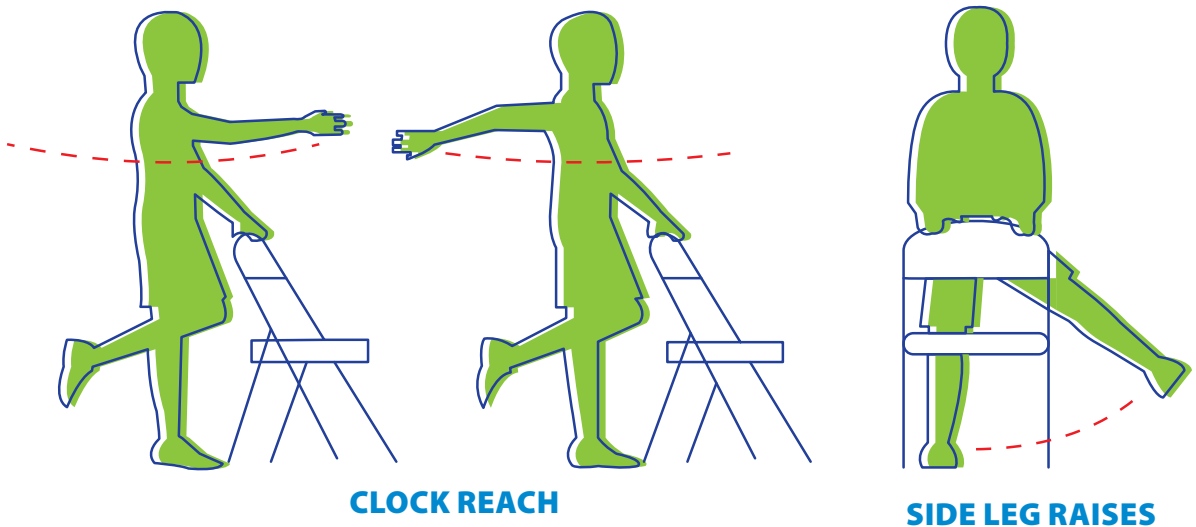
Peripheral neuropathy and vascular disease will cause problems with proprioception. Loss of proprioception leads to an increase in the risk of falls and fractures.

Aging leads to an increased risk of dementia. Any exercise program must be simple with a complete set of written instruction to the patient. The program should first be attempted in office to determine if the patient can understand the instructions as well as perform the exercise. Any mistakes, misunderstandings and inabilities can then be addressed in the clinic.

## Clinical Pearl

- Between 25-33% of Americans over 65 years old falls every year
- Every 11 seconds, an older adult is treated in the emergency room for a fall
- Every 19 minutes, an older adult dies from a fall
- Falls are the leading cause of fatal injury in the elderly
- In 2015, the total cost of fall injuries was \$50 billion
- Older adults avoid social activities and social events due to the fear of falling, leading to depression and isolation

*Information from the National Council of Aging*



Exercising in this population starts and ends with range of motion and stretching. These can progress into resistance exercising such as with resistant bands or water aerobics. Light weights could then be added. Mild weight bearing exercises will help deter osteoporosis.

Hydration is needed with increase in activity. Physical disability such as arthritis or incontinence causes this population to drink less due to the concern of hygienic accidents. Adding Kegel exercises may help with bladder control. Dehydration can lead to vertigo thus increasing the possibility of a fall. Age related constipation is amplified due to limited hydration.

A commonly used antibiotic family, fluoroquinolones, are well known to cause tendonitis and spontaneous tendon rupture. These antibiotics are becoming more commonly prescribed to the elderly. These include Cipro and Levaquin commonly used in respiratory infections as well as infections found in bones and soft tissues. Accumulation in these tissues is high which leads to an increase in tendinopathies.

## **STRESS**

It is well known that the geriatric population has a higher incidence of loneliness and depression. This population has many worries. Money, food, lack of independence, absence of friends and relatives, transportation to their doctor or the grocery store are just a few examples that can tax their already agitated stress response. Stress in the elderly can lead to:

- Poor diet and lack of movement
- Weakened immune system and an increase in obesity
- Increase risk of heart disease, high blood pressure and cognitive decline
- High rate of depression and anxiety
- However, those engaged in activities have improved health markers, decreased cognitive decline and live longer

Sleep problems are common in the geriatric population. Melatonin production decreases as we age, and sleep dysrhythmia causes this population to have disruption in day/night sleep patterns. There is evidence that lack of or poor sleep can increase the possibility of dementia and Alzheimer's disease. Low dose use of melatonin for geriatric insomnia has been found to improve sleep in the elderly. Dosage should start with .3 mg/day and can be raised incrementally if needed but not to exceed 5 mg/day.

The physician for the elderly must watch for signs of depression. Alcoholism is higher in the elderly than any other specific population. Multiple physicians should communicate together about their treatment options for the elderly patient. Polypharmacy can lead to mental conditions such as confusion, anxiety and depression. The pharmacist must be a health care partner in the care of the elderly. There are community groups for the elderly that attempt to create programs and activities to keep the elderly active. Churches often have weekly activities planned for the elderly church members. These programs are very important during the holidays.

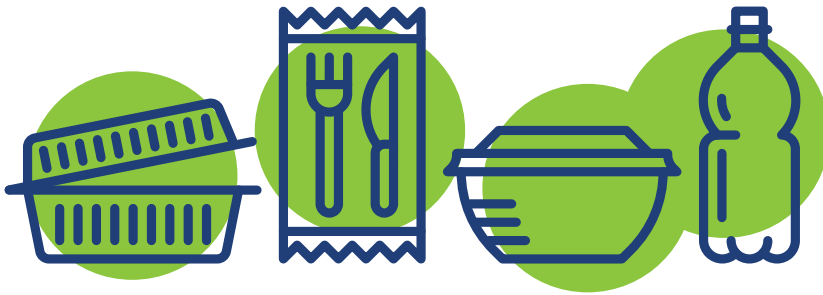
## **TOXIC CHEMICALS AND ENVIRONMENT**

Toxic exposure is an important consideration in the elderly. Vision problems or dementia may lead to the substitution of cleaning or other dangerous chemicals for liquid foods such as cooking oil or drinks. Using cleaning chemicals in small unvented rooms may lead to a fall or worse.

The geriatric population stays inside at much higher rates than the non-geriatric population. Phthalates are known to be endocrine disruptors. They are found in plastics, cosmetics, vinyl clothing, household pipes, and medical equipment. Heating, agitating and long-term nonuse are common causes for release of these chemicals into the air. Polyfluoroalkyl substances (PFAS) are used in food packaging as well as common household products such as cleaners, paints, and polishes. PFAS are also found in our water supply. These can build up in our bodies and have been shown to have negative effects on our health. The elderly population usually do not have to cook for an entire family and will rely on reheating previously cooked and pre-prepared foods. Preparation for these meals are usually done on a plastic plate or container in a microwave and are a source of phthalates.

Environmental hazards are risk factors for the elderly. The ability to smell diminishes as we age. Objects burning in the house, gas odors, rotting food and animal feces may be undetected by the elderly. Rugs found within

## CHEMICALS USED IN FOOD PACKAGING



- BPA (bisphenol-A)
- Phthalate
- PFC (perfluoroalkyl chemicals)
- PFAS (Per- and polyfluoroalkyl substances)
- Titanium dioxide

the house, low light, small animals, old eyeglasses and poor footwear are well-known problems for the geriatric population leading to a major increase risk in falling.

Medical establishments often have geriatric wellness checks that include fall risk assessments and these services are often free to the patient. Other large health establishments such as John Hopkins Medicine have developed a tool kit to help smaller clinics develop a plan for fall risk assessment.

Cognitive decline appears to have worsened with each decade and may become epidemic as we live longer. The causation for this disorder is elusive and most likely multifactorial. A 2013 study from *Ageing* looked at a new approach to the treatment of cognitive decline. Lifestyle changes were adopted by patient ranging from mild decline to advanced Alzheimer's disease. These changes included diet, supplementation, stress reduction, sleep, fasting, and brain stimulating activities. In all but the advanced Alzheimer's patient, there was measurable improvement of their cognitive symptoms. The author states that this program was difficult and most of the patients did not participate in all of the interventions. But with that said, the results of this small but promising study demonstrate the changes that have occurred with time combined with stress, poor diet, sleep disturbances may be able to be stopped or reversed with important lifestyle changes.



### **STAIRS/STEPS**

- Loose carpet
- Bad lighting
- No handrail

### **BATHROOM**

- Rugs
- No grab bars
- Low toilet
- Hot room

### **FLOORS**

- Animals
- Throw rugs
- Tight furniture
- Tall furniture
- Clutter
- Low light

### **KITCHEN**

- Rugs
- Tall cabinets
- Hot surfaces
- Deep refrigerator/freezer



**LifestyleMatrix.com**

LT-WM-003-A 01242020



6 1 5 0 3 3 1 8 0 0 4 1 8