Products and Supplements Information, and Sourcing

Online product and supplement dispensary

I don't like to push supplements as a necessary practice for everyone, food is absolutely the preferred source of nutrients, but if you are unable to meet your nutritional needs as well as vitamin and mineral needs through food alone then some supplementation may be helpful. However certain conditions are greatly supported through some products and supplements. If your absorption of food is impacted or if you have health challenges that demand a higher than normal nutrient intake then certain supplements can help to fill in the gaps. For most healthy adults eating a well balanced and varied diet, it's unlikely that most supplements and products are necessary, and often are not the best use of money and energy. There can also be potential down sides such as an unhealthy accumulation of nutrients or potential interactions with certain medications.

I have put together an online dispensary (at discounted prices compared with elsewhere online) of a selection of products that I recommend that you can access at – us.fullscript.com/welcome/heartradiance. It is also accessible via my website: HeartRadianceMedicine.com. Here is a quick list of the products I recommend.

- **Product**
    - **Product name, brand – description**

- Magnesium
    - Magnesium Glycinate, Pure Encapsulations – best form, high quality, works very well
- Vitamin D
    - Liquid Vitamin D3 2000IU, Life Extension (liquid) – best in liquid, most affordable version
    - Vitamin D3, Nordic Naturals (softgel) – great maintenance dose in a easy softgel
    - Vitamin D3 5000, Nordic Naturals (softgel) – same as above but much higher dose
- Multivitamin
    - Vitamin Code Mens Multi, Garden of Life – high quality, organic, maintenance and repair
    - Vitamin Code Womens Multi, Garden of Life – high quality, organic, maintenance and repair
- Vitamin B12
    - Liquid Ionic B12, Trace Minerals Research – best in liquid form, includes other trace minerals
- Zinc
    - Zinc 15, Pure Encapsulations – basic zinc supplement in a highly absorbable form
- Iron
    - Floradix Iron + Herbs Liquid Herbal Supplement, Floradix – great balanced liquid iron, easy on the digestion and absorbs well
    - Floravital Iron & Herbs Yeast-Free (Gluten Free), Floradix – gluten free option
- Fish Oil
    - Arctic Omega (Lemon), Nordic Naturals – great affordable all around maintenance
    - Algae Omega, Nordic Naturals – similar to above but is a vegan alternative
    - ProOmega 2000, Nordic Naturals – high intensity inflammation calming, restorative, for serious healing and disease conditions
- Bone Broth
    - Organic Beef Bone Broth, Vital Proteins – quality organic bone broth powder
    - Bone Broth Protein (Pure), Ancient Nutrition – contains a high amount of protein
- Gut Restoration

    - GI Revive Powder, Designs for Health - leaky gut or ulcers, helps heals and coats the gut lining when there is damage and permeability, quality ingredients, no extra stimulants
- Electrolytes
    - Optimal Electrolyte Seltzer, Seeking Health – basic, quality, affordable electrolyte powder
- Joint Health
    - ProOmega Joint Xtra, Nordic Naturals – fish oil paired with connective tissue repair
    - Collagen Peptides, Vital Proteins - collagen for connective tissue nourishment
- Greens Powder
    - Perfect Food Raw Organic Powder, Garden of Life – organic, very high quality, includes some probiotics, has no stimulant additives
- Protein
    - RAW Organic Meal (Vanilla), Garden of Life - organic, quality, for superfood supplementation
    - RAW Organic Protein, Garden of Life – higher percentage of protein, vegan, gluten free

- Prebiotics
    - Nordic Flora Prebiotic Powder, Nordic Naturals – basic, quality, simple prebiotic powder
- Probiotics
    - HMF Intensive, Genestra – great place to start, best to use in short spurts every 2 weeks
    - Primal Defense, Garden of Life – HSO probiotic, excellent to reinoculate microflora
    - Dr. Ohhira's Probiotics Original, Essential Formulas – classic, powerful, works very well
    - MegaSporeBiotic, Microbiome Labs – innovative spore based, reinoculates in a unique way
    - SBO Probiotics Gut Restore, Ancient Nutrition – soil based probiotics, prebiotics, and more
    - BioSpora Probiotic, Klaire Labs – quality, tested
    - ProBiota HistaminX, Seeking Health – probiotic plus calms the inflammation in the gut

Product and Supplement Basic Information

Magnesium
Magnesium is a mineral your body needs to function properly for so many tasks. Many people don't consume enough of this essential nutrient, which is found in foods such as nuts, leafy greens, legumes, and seeds, but is often missing in our modern foods. I most commonly recommend magnesium to people who have muscle tension, it is a natural muscle relaxant, yet it also deeply nourishes and soothes the nervous system, so it's great for stress leading to muscle tension and helping restore the nervous system anytime there is regular high stress. Epsom salt baths are essentially magnesium, they relax, soften, and nourish. It's one mineral that one can fairly safely take quite a lot of without too much concern, however in excess it can create loose stools; the form is absolutely essential (don't buy the cheap stuff), and the best is magnesium glycinate (easy on the digestion and absorbable), magnesium citrate is okay as well.

Vitamin D
Vitamin D is a fat-soluble vitamin in a family of compounds that includes vitamins D1, D2, and D3 (D3 is the best most absorbable supplement form). Your body produces vitamin D naturally when it's directly exposed to sunlight, you also get vitamin D from certain foods (and supplements). Vitamin D has several important functions, perhaps the most vital are regulating the absorption of calcium and phosphorus and facilitating normal immune system function. It may reduce the risk of certain diseases, help improve mood and reduce depression symptoms, helps with weight management, and is important for typical growth and development of bones and teeth. Basically you need a healthy amount of sunlight/vitamin D for most body processes. You may be less likely to absorb enough vitamin D from the sun if you live in an area with high pollution, use sunscreen in excess, spend most of your time indoors, live in a big city where buildings block sunlight, live in northern climates where there is less sunlight, or if you have darker skin (the less vitamin D your skin can absorb). A healthy but not excessive average dose of vitamin D3 for a typical adult is 800-1000

IU daily; liquid D3 in dropper or oil gel caps is essential. Depending on your lifestyle, it may be difficult to get enough vitamin D through your diet alone, especially in winter (winter is really the only time that vitamin D supplements really shine in my opinion, especially up here in long cold gray dark pacific northwest winters).

Multivitamin
If you follow a restrictive diet, eliminate entire food groups, have a medical condition that demands a greater nutrient uptake such as many chronic conditions, or take medications that interfere with nutrient absorption, you may want to consider a multivitamin. Additionally, taking multivitamins designed for specific stages of life that require increased vitamin and mineral needs may be beneficial, such as before, during, and after pregnancy, or in the later stages of life. The quality and form is essential, and many are a complete waste of money, go right through your digestive system, and don't do a thing!

Vitamin B12
Vitamin B12 is an essential vitamin that your body needs but cannot produce on its own. It's found naturally in animal products, but also added to certain foods and available as an oral supplement or injection (oral B12 has come a long way recently and for moderate needs it works perfectly well). Vitamin B12 has many roles in your body. It supports the normal function of your nerve cells, generating energy, and most importantly is needed for red blood cell formation and DNA synthesis (it is most commonly taken for anemia). It's vital for supporting bone health, improving mood and maintaining healthy skin and hair. For most adults, the recommended daily intake is 2.4 mcg, though it would be higher for women who are pregnant or breastfeeding, or if there is regular significant blood loss such as heavy menstruation or chronic ulcers. Risk factors for vitamin B12 deficiency include a decreased ability to absorb this vitamin due to low hydrochloric acid secretion (such as people who have GI issues and take antacids or other stomach acid inhibiting drugs), certain medications, or gastrointestinal disease and surgeries. Vegans are also at risk since B12 is only found in animal products.

Zinc
Zinc is an essential mineral that your body does not make on its own. It aids growth, DNA synthesis, immune function and more. Zinc is essential for cell growth and division, immune function, enzyme reactions, DNA synthesis and protein production. Risk factors for zinc deficiency include insufficient dietary intake, poor absorption, alcoholism, genetic mutations and old age. Zinc occurs naturally in foods like shellfish, meat, poultry and dairy, and is added to other foods, such as breakfast cereals and wheat flour. Zinc toxicity may cause diarrhea, headache, abdominal cramps and reduced immunity. Most people can obtain their daily dose of zinc through diet alone. I mostly recommend it when recovering from an illness or when acutely sick as the immune system cells need zinc to be created.

Iron
Some people may have an inadequate iron intake, impaired absorption, or increased iron needs, so they may be at risk for iron deficiency which can lead to fatigue, dizziness, weakness, pale skin, coldness, unexplained aching pains, depression, aimlessness, difficulty sleeping, and so many other symptoms as iron is a mineral present in hemoglobin, a protein that transports oxygen from your lungs to every cell in the body. People at risk for iron deficiency typically include infants and kids, athletes, people with heavy menstrual bleeding, those who are pregnant, those with digestive disorders (absorption issues or ulcers), cancer or chronic illnesses, people on a restrictive diet, and those who frequently donate blood. Iron comes in different forms. Heme iron: a form of iron that is found in animal-derived foods and is more readily absorbed by the human body (eating animal products, especially meat is essential in iron deficiency). Non-heme iron: a form of iron that is found in plant-based and iron-fortified foods and is not as well absorbed as heme iron. Iron supplements may be necessary for those who don't get enough iron in their diet and those who have increased iron needs. However taking too much iron is also a very real risk, in excess it can build up in the blood and spill over into the organs, cause digestive issues, and much more. If iron supplementation is needed then regular blood work is important to ensure a healthy balance.

Fish Oil

Fish oil is one of the most commonly consumed dietary supplements. The main types of omega-3s in fish oil are EPA and DHA, while the type found in plant sources is mainly ALA. Although ALA is an essential fatty acid, EPA and DHA have many more health benefits. Eating whole foods is almost always better than taking supplements, and eating two portions of oily fish per week is as effective as fish oil at preventing many diseases, if not more so. That said, fish oil supplements are a good alternative if you don't eat fish regularly. Inflammation is your immune system's way of fighting infection and treating injuries, and chronic inflammation is associated with basically all the major and most common modern health conditions such as obesity, diabetes, depression, chronic stress, and heart disease. Because fish oil has potent anti-inflammatory properties, it may help treat conditions involving chronic inflammation. Furthermore, fish oil supplements can significantly reduce joint pain, stiffness, and medication needs in people with chronic joint pain (such as rheumatoid arthritis). But don't we learn that fats are bad?! Fish oil supplements may reduce some of the risk factors associated with heart disease and may improve the symptoms of certain mental health conditions. EPA and DHA dosage recommendations vary according to your age, health, and condition and severity. A daily adult intake of 1,100–1,600 mg of omega-3 fatty acids is standard, however you may need to increase the dosage if you are pregnant, nursing, or at risk of heart disease (potent and high doses are indicated in more serious heart disease). Many supplements contain up to 1,000 mg of fish oil per serving but only 300 mg of EPA and DHA. Read the label and choose a supplement that contains at least 500 mg of EPA and DHA per 1,000 mg of fish oil. It is essential to choose a supplement that is third-party tested or has some form of purity verification as omega-3 fatty acids are prone to oxidation (rancid oil), which actually causes further inflammation in the body. Many fish oil products are not actually very good for you! Choose a supplement that contains an antioxidant, such as vitamin E. Also, keep your supplements away from light, ideally in the refrigerator. The production of fish oil from anchovies and similar small fish is more sustainable than that from large fish. It's also important to get enough omega-3s because the Western diet has replaced a lot of omega-3s with other fats, such as omega-6s (avoid fried oils, chemically altered, and old oils), this distorted ratio of fatty acids may contribute to numerous modern chronic diseases.

Bone Broth

Bone broth is made by cooking down animal bones and connective tissue. This nutrient dense stock is used for soups, sauces, and health drinks. You can buy powder, cartons, or make bone broth (far better!) using bones from just about any animal, marrow and connective tissues. Bone broth is rich in minerals that helps build and strengthen your bones and connective tissues, and it restores your digestive tissues too. It may be beneficial for individuals with leaky gut, as well as irritable and inflammatory bowel diseases. It supports joint health as it contains glucosamine and chondroitin, which are natural compounds found in cartilage, which your body uses to build its own connective tissue. Multiple studies have found that glucosamine and chondroitin can help decrease joint pain and lessen the symptoms of osteoarthritis.

Joint Health

Many people deal with chronic joint pain in their knees, hands, elbows, shoulders, and other joints. In most cases, this is caused by the most common type of arthritis, osteoarthritis. Fish oil has anti-inflammatory effects but it doesn't seem to reduce osteoarthritis symptoms. Many supplements aimed at treating joint pain contain glucosamine, which is one of the most well-studied supplements for osteoarthritis. Glucosamine is a natural component of cartilage, a substance that prevents bones from rubbing against each other and causing pain and inflammation. Like glucosamine, chondroitin is a building block of cartilage. It may also help prevent cartilage breakdown from osteoarthritis. Supplementation may be helpful if there are increased risks of joint degradation, such as intensive use of the body causing wear on the joints, elderly females (post menopause) also have a higher osteoporosis risk, chronic digestive and absorption issues, anemia, vegan or vegetarian, people who have a low body mass index, or people who consistently live a fast paced and stressful life (which draws upon our underlying essence, which manifests in the health of our foundation, our bones!). Many people hoping to support the health of their skin, joints,

and hair take collagen supplements, it's a protein found in connective tissue, skin, tendon, bone, and cartilage, it provides structural support to tissues. Collagen is essentially pure yin in supplement form.

Electrolytes
Electrolytes are minerals that carry an electrical charge when dissolved in water. They're vital for your nervous system, muscles and maintaining an optimal body environment. Most people meet their electrolyte needs through a balanced diet, though imbalance may occur if you become dehydrated due to illness or excessive heat which can cause fluid (and electrolyte) loss out through sweat, diarrhea, or vomiting. We occasionally supplement with electrolytes like sodium and calcium to ensure we get enough, however a balanced diet that includes sources of electrolytes should suffice for most situations. If you sweat a lot in the summer and have muscle cramps consider supplementing with a quality (and not too sugary) electrolyte powder.

Greens Powder
I like a good greens product as a supplement for individuals who have an aversion to eating a regular and diversified plate of vegetables and fruit, those who cannot consume enough veggies, during travel, or to simply really pack in lots of awesome nutrition and vitality to the diet. The best greens products have natural sources of vitamins and minerals, including key micronutrients that are often deficient in our diet. Greens powders can support your body's immunity, energy levels, detoxification process, and more. Greens powders are supplements made from greens, vegetables, fruits, seaweed, probiotics, digestive enzymes and more. And though they are nutritious, they should not replace whole foods! You should still eat plenty of fresh greens, other vegetables, and a variety of healthy foods. Not all products are the same!, ensure the source is high quality, organic, and processed well. Also some sure taste terrible, find a delicious one!

Protein
Protein powders are very popular among health conscious people, and there are numerous types of protein powder made from a wide variety of sources. Protein powders can provide high quality protein in a concentrated, convenient form to increase muscle mass, improve overall body composition and help meet their protein needs. Although not everyone needs protein powder supplements, they can assist you if you do strength training, if you cannot meet your protein needs with diet alone, if there are absorption and digestive challenges, or chronic illnesses or injuries. Remember that proteins are the basic building block of all the tissues in the body, and we must continually be repairing and generating new tissues. Grains, greens, carbs, fruits, and sugars generate energy but it is meat and animal products, legumes/beans, and nuts and seeds that are the main sources of protein in the diet. As there are so many options, it can be difficult to determine which will provide optimal results. Many protein powders are dairy based (if your body digests dairy) or come from collagen (animal skin), while many others are plant (legume) based. Most important is that they are of a high quality source, and don't have tons of unwanted additives like nervous system stimulants. I like a broad spectrum meal replacement protein powder.

Fermented Foods
The term "fermented foods" refers to any foods that have undergone the process of fermentation, which is the chemical breakdown of sugar by yeast and bacteria. Not only does it enhance food preservation, but eating fermented foods can also boost the number of beneficial bacteria, or probiotics, in your gut. This includes a wide range of foods, such as sauerkraut, sourdough bread, kimchi, alive yogurt, miso, tempeh, kefir, kombucha, and certain fermented veggies like fermented pickles, as well as so many more! Probiotics are associated with a variety of health benefits, including improved digestion, better immunity, and even increased weight loss. For the best results, start by eating one or two servings per day, then slowly work your way up. Getting probiotics through whole foods is a simple way to take advantage of fermented foods' health benefits while reducing your risk of side effects associated with probiotic use, such as digestive issues. I feel fermented foods work best by incorporating a small amount on a very regular basis, just don't eat too much at once. Also if there is serious digestive dysbiosis (frequently associated with antibiotic use)

fermented foods alone are likely not enough, here we turn to probiotics, while fermented foods are more of a maintenance thing.

Prebiotics and Probiotics

The gut bacteria, collectively referred to as the gut flora, or gut microbiome, perform many important functions in the body. The health of the microbiome in the gut is really at the core of our health in the entire body, it is what allows us to digest and absorb nutrients, it is deeply interwoven with our immune system, it plays a huge role in our mental states, as well as so many other aspects of health. Probiotics are live bacteria found in certain foods or supplements. Prebiotics are substances that come from types of carbs (mostly fiber) that humans can't digest, the beneficial bacteria in your gut eat this fiber, it is like food for the probiotic organisms. So if you eat a wide range of whole foods such as vegetables, fruit, and beans they likely contain all the prebiotics you need. The food you eat plays an important role in the balance of good and bad gut bacteria. For example, a high sugar and high refined fat diet negatively influences the gut bacteria and may contribute to insulin resistance and other conditions. Most impactful are antibiotics, they can cause permanent changes in certain types of bacteria, especially when taken during childhood and adolescence. We would like to think that the body can recover naturally from antibiotic use, but even with a single course of antibiotic treatment the body needs serious and sometimes quite intensive support to repair the damage to the gut microbiome. Because antibiotic use is so widespread, health problems commonly occur to people later in life. Probiotic supplements are designed to deliver very specific species of bacteria to the human gut. However, not all probiotic supplements are of the same quality or contain the same quantity of bacteria. In minor digestive microbiome upset a regular small dose may be enough, but commonly people don't take enough for long enough (3 to 6 months is a good starting place). I think this is one place where supplements can really change things, but we have to use the quality (and expensive) ones. They should typically be shelf stable, several capsules with food several times a day, and we need to rotate and use multiple different products to try to match the wide variety of organisms in your digestive tract. This includes various forms of probiotics including standard probiotics, spore based, and soil based.