

MEDQUEST™ MONTHLY

the aging process is inevitable...the changes don't have to be!

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INTRODUCTION

Why do you take vitamins? Do you find it's a good alternative to consuming 5 pounds of broccoli each day? Or did your mother insist you take a spoonful of cod liver oil before eating dessert? Whatever your reason, vitamins are an important addition to daily nutritional support.

Your body is bombarded with stress, environmental toxins, processed foods, lack of sleep, and poor lifestyle habits that can bring you down. Even people who focus on a healthy lifestyle include nutrients for essential health maintenance. For a foundation of support, five nutrients can cover your basic nutritional needs and keep your body functioning at its best – CoQ10, Fish Oil, Multi-vitamin, Probiotics, and Vitamin D.

In this edition, we look at these essential nutrients and discuss their role in your health. We also include two nutrient-rich recipes that can be added to your favorite dish – papaya-avocado salsa and miso-ginger dressing.

ESSENTIAL NUTRITIONAL SUPPORT



With so many supplements on the market, it may seem there is a nutrient that provides superpowers for almost anything. There could even be a supplement to dissuade an argument with your boss or convince your kids that cleaning is more fun than watching television. Through the large assortment of nutritional possibilities, here are five imperative nutrients that you should consider taking on a regular basis.

COQ10

As a strong antioxidant, coenzyme Q10 is essential to human metabolism and the creation of cellular energy. It is mainly found in tissues that require large amounts of energy, including the heart, brain, liver, kidneys, and skeletal muscles. CoQ10 stimulates cellular growth, inhibits cellular death, and regenerates antioxidants.^{1,2} As we age, CoQ10 levels produced in the body decline dramatically to cause a deficiency that makes the body more susceptible to aging and disease.³

Brain/Neurological Function: The brain relies on CoQ10 and cellular energy to function appropriately. CoQ10 supplementation can increase cognitive energy expenditure by 29%.⁴ Individuals with neurological deterioration were shown to have a 44% slower rate of decline after taking CoQ10 (1,200 mg) for ten months.⁵

Heart Health: Individuals taking statin drugs to lower their blood pressure often have low levels of CoQ10 in their body. It is often recommended that patients taking statin drugs supplement with CoQ10 to restore their levels. Furthermore, CoQ10 supports healthy blood pressure levels.^{6,7,8}

Blood Sugar Levels: CoQ10 influences glucose utilization. If there is a CoQ10 deficiency, blood sugar can become unbalanced. Supplementation can help restore healthy blood sugar levels in patients with type 2 diabetes.⁹

Athletic Performance: By reducing fatigue and oxidative stress in the muscles, CoQ10 meets the energy demands of athletes.^{10,11} It can also decrease the susceptibility of exercise-induced muscle injuries.¹²

FISH OIL – OMEGA-3S

Are you getting enough essential fatty acids, particularly omega-3s? There is nothing fishy about the benefits of

omega-3 fatty acids, as they continue to be praised for their health supportive properties. Even so, many Americans do not consume enough of this essential fatty acid, as diets are commonly high in omega-6 fatty acids (vegetable, sunflower oil, etc.) and low in omega-3s. This imbalance causes various health ailments, including an increase of inflammation that is associated with joint pain, cardiovascular abnormalities, and cognitive deterioration.^{13,14} Omega-3 fats counterbalance the ratio of omega-6 fatty acids to reduce inflammatory properties, including the formation of C-reactive proteins that cause cardiovascular and cognitive ailments.¹⁵

Cardiovascular Support: Supplementing with fish oil has been shown to reduce coronary heart disease and cardiovascular risks.^{16,17} It has a wide range of cardio benefits, including reducing triglyceride levels, reducing congestive heart failure risks, lowering C-reactive protein levels, and stabilizing atherosclerotic plaque.^{18,19}

Cognitive Function: Fish oil contains high amounts of DHA, a vital component of phospholipids that are abundant in the brain. Optimum amounts of DHA are important, as a deficiency can lead to mental decline.²⁰ DHA deficiencies in infants can have a negative impact on neurological development, behavior, and visual acuity.²¹

Diabetes: Diets high in saturated fats and omega-6s are significantly related to insulin resistance. Omega-3 levels are significantly decreased in patients with type 2 diabetes and non-alcoholic fatty liver disease (NAFLD). Researchers have found that omega-3 serum levels are negatively related to insulin resistance.²² Supplementation can improve glucose uptake and metabolism.^{23,24}

Eye Health: A concentrated amount of DHA is found in the retina to lessen the development of hydroxyl radicals and reduce inflammation.²⁵ Research has shown a high consumption of DHA and EPA, the two main components of fish oil, can reduce risks of age-related macular degeneration.²⁶

Inflammation: Omega-3s reduce inflammation, including chronic joint pain and autoimmune ailments.^{27,28} Fish oil can alleviate pain, joint tenderness, and morning stiffness in patients with rheumatoid arthritis.^{29,30}

Mood Balance: A deficiency in DHA can lead to changes in behavior and mood. EPA and DHA levels are significantly lower in subjects with depression.³¹ Fish oil, particularly DHA, has been shown to reduce mental stress.³² Supplementation also shows a reduction in depressive symptoms and improvement in mood.^{33,34,35}

Muscle Health: Fish oil can reduce muscle fatigue by increasing muscle oxygen efficiency.³⁶ It also helps to maintain muscle mass and adipose tissue.³⁷

MULTI-VITAMINS

A daily multiple can provide a balanced ratio of nutrients that are essential to overall health, as many health ailments can be caused by vitamin deficiencies.³⁸ Aging adults can often have nutrient deficiencies, in which those that supplement with vitamins and minerals have a lower risk of chronic ailments.^{39,40}

Energy/Muscle Performance: Muscle often deteriorates with age; yet, a healthy diet, vitamins, and regular exercise can inhibit the loss of muscle mass and strength that is found in the aging population.⁴¹ Furthermore, athletes that take a multivitamin have greater nutrient values in their blood, which reduces the development of oxidative stress that comes with athletic training.⁴²

Heart Health: Individuals that take multi-vitamins have fewer cardiovascular risks. Folate and vitamin B6, found in multi-vitamins, particularly contribute to these health findings.^{43,44}

Healthy Weight: Individuals that are overweight often have low micronutrient levels, when compared to normal weight individuals.⁴⁵ Taking a multi-vitamin balances micronutrient levels for under or overweight individuals, as well as helps maintain a healthy weight.⁴⁶

Immune Function: Multivitamins can improve immune response and overall physical health by increasing micronutrient availability.⁴⁷

Emotional Health: Several nutrients in a daily multiple can support emotional health, including B vitamins. It can sustain immunity, energy, and the stress response.⁴⁸

PROBIOTICS

What are those trillions of microorganisms living in your gut and why are they so important to your body? Probiotics are the microorganisms, or good bacteria, found in the GI tract. Their essential function is to offset the accumulation of harmful bacteria. Approximately 80% of the immune system can be found in the GI tract, in which a healthy gut helps the body be less vulnerable to illness. When microflora is lacking, your body is more prone to colds and flu, allergies, chronic inflammation, mood imbalances, and gastrointestinal ailments.^{49,50,51,52,53,54}

Stress, antibiotic-use, decrease in stomach acid, pesticides, diets high in fat, sugar, and refined foods can all contribute to microflora depletion. Without good nutritional support intestinal microflora cannot survive. The good bacteria needs fiber, vegetables, legumes, and whole grains to thrive, while a diet high in refined sugar and animal fat produces more harmful bacteria to offset the balance of intestinal flora.

Balanced microflora is imperative to the immune response, because it provides energy for epithelial cells to be regenerated when they become depleted. Probiotics also increase the production of T & B lymphocytes that are contained in the GI tract to aid immunity. They directly attack infected cells to help modulate the immune response.^{55,56}

Main functions of probiotics include:

- Aid digestion of proteins, carbohydrates, and fats
- Balance immunity
- Increase nutrient absorption
- Protect the body from pathogens
- Prevent inflammatory responses and allergic reactions
- Create natural antibiotics
- Support LDL cholesterol levels
- Remove chemical substances from the body
- Encourage regular bowel movements
- Lessen symptoms of stress, anxiety, and depression

Good bacteria strains, include *Lactobacillus acidophilus*, *L. casei*, *L. bulgaricus*, *L. plantarum*, *L. salivarius*, *L. rhamnosus*, *L. reuteri*, *Bifidobacterium bifidum*, *B. longum*, *B. infantis* and *S. thermophilus*. Certain foods naturally contain probiotics including, miso, yogurt, kefir, tempeh, and fermented foods (sauerkraut, etc.). Probiotic supplements are a great way to restore and maintain intestinal flora.

VITAMIN D

You may realize vitamin D is crucial to calcium absorption and bone health, but researchers continue to discover the benefits of this vitamin are even more extensive. With concerns about the connection between sun exposure and skin cancer, most people are not getting the required amount of vitamin D the body needs. A vitamin D deficiency has become a public concern in more recent years, as it is vital to several important functions in the body.⁵⁷

Vitamin D health benefits include:

Bone Health – Vitamin D supports calcium metabolism, reduces inflammation, and decreases stress fractures and osteoporosis risks.^{58,59,60}

Cardiovascular Health – Individuals with blood pressure imbalances can have low levels of vitamin D in their blood. Vitamin D normalizes blood pressure, especially systolic blood pressure.⁶¹

Mood Booster – Minimal exposure to the sun, particularly in the winter, can lead to seasonal affective disorder (SAD). Vitamin D can help lessen a depressed mood and symptoms of SAD.⁶²

Balance Blood Sugar – Vitamin D serum levels are often low among diabetics. Restoring these levels can increase insulin sensitivity.⁶³

Skin Health – As an essential vitamin, vitamin D can help prevent psoriasis (red, inflamed skin), actinic keratosis (earliest stage of skin cancer), and seborrheic dermatitis (red, scaly, itchy skin).⁶⁴

Lung Health – Vitamin D has been shown to increase air capacity in the lungs for individuals with compromised respiratory function.⁶⁵

NUTRIENT-RICH RECIPES

This tasty dressing contains antioxidants, probiotics, manganese, vitamin K, and beta carotene to add healthy flavor to your favorite salad or dish

MISO-CARROT GINGER DRESSING

- 1/2 c white miso
- 6 tbsps vegetable oil
- 1/4 c (packed) finely grated peeled carrot
- 2 tbsps finely grated peeled ginger
- 2 tbsps unseasoned rice vinegar
- 4 tsps toasted sesame seeds
- 2 tsps toasted sesame oil
- 2 tsps honey



Directions

Place all ingredients plus 1/4 cup water in a resealable container. Cover and shake vigorously until well combined. DO AHEAD: Can be made 2 days ahead. Cover and chill.

Obtained from Bon Appetit

PAPAYA AVOCADO SALSA

This delicious twist on salsa packs a load of nutrients, including antioxidants, alpha linoleic acid, vitamin C, beta carotene, vitamin K, and folate.

- 2 tbsp Fresh lemon juice
- 1/2 tsp Salt
- 1/4 tsp Cumin
- 1/2 c Sweet onion, small cubed
- 1/2 c Yellow pepper, small cubed
- 1/2 c Papaya, small cubed
- 1/2 c Avocado, small cubed
- 2 tbsp Chopped cilantro



Directions

Mix first three ingredients in a large bowl. Cube the vegetables and fruits in small cubes. Twist and chop the cilantro. Add remaining ingredients to lemon, salt and cumin mixture. Mix entire recipe. Serve over fish, chicken, or with tortilla chips.

Obtained from Nutrientrichfoods.org

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