

Mellen Center Approaches: Integrative Medicine in Multiple Sclerosis

What is Integrative Medicine?

Integrative Medicine (IM) combines treatments from Conventional medicine and Complementary Medicine for which there is some high-quality evidence of safety and effectiveness.

<http://nccam.nih.gov/health/whatiscam/>

Do MS patients use IM?

Yes, MS patients tend to use IM in at least the high 60%, the rate has increased over the past decade. The types of IM that have been reported to be used by MS patients include: Reflexology, Massage therapy, Yoga, Meditation, Diet, Omega 3 fatty acid supplements, Acupuncture, Reikki, Tai Chi, vitamins and supplements. The reasons that MS patients use CM include; dissatisfaction with conventional medicine, having more control over their disease management, improved sense of well being and to help their MS symptoms. MS patients with: longer course of MS, higher educational levels, female sex and high level of fatigue tend to use IM more than others.

Bowling, A Complementary and Alternative Medicine in MS Continuum Lifelong learning Neurol 2010: 16(5):78-89.

Berkman C, Pignotti M, Cavallo P, Holland N. Use of alternative treatments by people with MS. Neurorehabil. Neural repair 13,243-254(1999)

Marrie RA, Hadjimichael O, Vollmer T. Predictors of alternative medicine use by MS patients. Mult Scler. 9,4612-466 (2003)

Can MS patients help their MS by a certain diet?

There is no known one diet that is known to treat MS. There are studies noting that there may be a possible protective effect of a plant based diet. There is a possible link with a high calorie diet and high animal fat intake increasing the risk of developing MS. To promote wellness we have recommended the following suggestions for our MS patients:

1. Follow a low fat diet while avoiding saturated fats
2. Eat vegetables for at least 2 meals per day, 5-7 servings a day. Serving size varies, low starch vegetables serving size is ½ cup cooked or 1 cup raw vegetables as a serving. It is important to eat a variety of colorful vegetables.
3. Eat fruits daily 3-5 servings daily of colorful variety of fruits.
4. Eat proteins daily. Proteins include: meat, poultry, fish, eggs, beans and nuts etc.
5. Increase your intake of whole grains in your cereals, breads and pastas.
6. Eat less or try to eliminate simple sugars such as white flour and white sugar.
7. At this time there is no known necessity to avoid gluten to help treat the MS.
8. Fish may be helpful for the immune system, tuna or salmon have high levels of omega 3 oils.

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9. Follow the ChooseMyPlate.gov recommendations on the balance of food products on your plate. Choose more vegetables and proteins than grains or fruit on your plate.
10. Increase the Omega 3 products over Omega 6 products in your diet.

Does the Mellen Center recommend the Paleo diet?

The Paleo diet encourages meat, seafood, eggs, vegetables and fruits; these are all generally healthy for the general population including MS patients. The Paleo diet discourages: grains, legumes, dairy and refined sugars. MS patients can discuss the specifics of their dietary needs with their primary doctor. The Paleo diet may lead to a healthy weight and increased energy. A healthy diet is helpful for general wellness.

<http://www.paleoplan.com/resources/food-basics/>

Does the Swank diet help MS?

The Swank diet is a stringent low fat diet that bans all; dairy, gluten, legumes and all saturated fats. This diet has not been proven to help MS in a controlled study. At this time we recommend a healthy diet listed above. Again, MS patients should discuss their dietary needs with their primary doctors.

Are certain fats good or bad for MS?

We recommend a diet high in Omega 3 greater than Omega 6 fatty acids. These are found in various sources: flaxseed, soy, soybean oil, canola oil, walnuts, fish and fish oils. There are some findings that suggest that the fish oils may be potential immunomodulators and are well tolerated with the disease modifying medications of MS.

Gallai V, Sarchielli P, Trequattrini A et al. Cytokine secretion and eicosanoid production in the peripheral blood mononuclear cells of MS patients undergoing dietary supplementation with n-3 polyunsaturated fatty acids. *J Neuroimmunol.* 56,143-153 (1995).

Bates D A double blind controlled trial of long chain n-3 polyunsaturated fatty acids in the treatment of MS. *J Neurol Neurosurg psychiatry* 52,18-22 (1989).

Shinto L Omega-3 fatty acids supplementation decreases matrix metalloproteinase-9 production in RRMS. *Prostaglandins Leukot EFA* 80,131-136(2009)

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Which Integrative Medicine treatment has been shown to be helpful in MS?

See the tables below for positive, negative or inconclusive studies in relation to MS.

Positive studies in MS patients:

product	Finding
Fish Oil	Potential immune modulator and tolerated well with disease modifying therapies
Omega 3 Fatty acids	Decreased MMP- 9 in RRMS
Cannabis	Spasticity- pt reported data
Low Dose naltrexone	QOL, pain, fatigue, depression
Meditation	Pain, QOL
Aerobic exercise	Lessened IFN 1B1b side effects
Coenzyme Q10	Invivo immune changes

Negative or Inconclusive studies in MS

Anti – oxidant vitamins
Ginkgo
Vitamin C
Vitamin E
Vitamin B12
Ginseng
Vitamin A
Prolonged fasting
Inosine

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Yoga
Bee venom

Bourdette, Dennis , Shinto L, Yadav V CAM for the treatment of MS, Expert review of Clinical Immunology.6.3(May 2010);p381.

Do physical and mental Comorbidities as well as adverse lifestyle factors effect MS?

Yes, having comorbidities and adverse lifestyle factors(ie. smoking) effect MS in various ways: the clinical phenotype, delaye in diagnosis, worsen disability progression and negatively impact health related quality of life. MS patients will need a cane faster if they have one physical comorbidity. If a patient has multiple vascular comorbidities(ie. Hypertension, obesity) with the MS the level of ambulatory disability was even greater. Due to these findings it is imperative that MS patients have primary care doctors to perform preventative care as well as treat known conditions. It is our role, as their MS Neurologist, to encourage them to see their Primary care doctors and to educate to the importance of managing Hypertension, obesity, Diabetes, Hypercholesterolemia, Hypertriglyceridemia and mental disorders. It is also our role to encourage smoking cessation, healthy eating and adequate physical activity to help promote general wellness and lessen the risk of comorbidities.

Marrie RA, Rudick R, Horwitz R, Cutter, G, et al. Vascular comorbidity is associated with more rapid disability progression in multiple sclerosis *Neurology* March 30, 2010 74:1041-1047

RA Marrie, RI Horwitz, G Cutter, T. Tyry, T Vollmer Association between comorbidity and clinical characteristics of MS *Acta Neurologica Scandinavica* Volume 124, Issue 2, pages 135–141, August 2011

Does Vitamin D help MS?

There are more and more studies supporting a positive role for Vitamin D in MS. There is evidence that low Vitamin D may; increase the risk of having MS, worsen the course of MS and increase the risk of relapses to name a few. Many MS patients need oral supplementation with Vitamin D, the goal level of Vitamin D is close to 50 at this time. Generally most MS patients need to start with 2000IU daily to help achieve a normal level. There are ongoing studies to determine the most efficacious level of vitamin D and if Vitamin D is a potential therapy for MS.

Munger KL, Levin LI, Hollis BW, Howard NS, Ascherio A. Serum 25-hydroxyvitamin D levels and risk of multiple sclerosis. *JAMA* 2006;296:2832–2838.

Correale J, Ysraelit MC, Gaitan MI. Immunomodulatory effect of vitamin D in MS. *Brain* 2009;132:1146–1160

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Does St John's Wort help MS patient's moods?

St John's wort may be effective in mild to moderate depression in MS. It is generally well tolerated; it can cause photosensitivity and fatigue. It can also induce elevation of liver enzymes. This medication should not be combined with other antidepressant medications as well as antihypertensives.

Is Low Dose Naltrexone (LDN) indicated for MS patients?

Naltrexone is FDA approved for the treatment of addictions to opioids and alcohol. At lower doses it has been prescribed as a treatment for various diseases: cancers, Alzheimer's, Parkinson's, MS and other autoimmune conditions. There are limited clinical trials in MS. There was a trial in PPMS in 40 patients with 5mg LDN, improvements shown in fatigue and depression, increases in LFTs, UTI, agitation and sleep disturbances were seen. There was another pilot study with 60 MS patients, RR and progressive, crossover design, this showed it improved several measures of quality of life and pain but no effect on physical symptoms and that a larger study may be warranted. In this trial some patients were also on disease modifying therapies. In an animal model it appeared that LDN was somewhat protective against EAE.

Can supplements help MS patients' bladder symptoms?

Cranberry tablets may help lessen the risk of frequent UTIs in MS patients by inhibition of bacterial adhesion to the uroepithelium. It is well tolerated yet may affect warfarin and may increase the long term risk of kidney stones. It does not treat a UTI. Vitamin C can acidify the urine and help lessen the frequency of UTIs.

Are supplements helpful or harmful in MS?

MS patients may want to avoid immune stimulating supplements: Echinacea, Oral garlic tabs, Zinc, Astragalus, Cat's claw, maitake mushroom, mistletoe, stinging nettle and antioxidant vitamins. There is a theoretical risk of stimulating the immune system in an MS patient thereby worsening the MS. The goal of supplementation is to promote a healthy immune system.

Recommended supplements:

1. Multivitamin
2. Vitamin D
3. Calcium supplement to help the bones
4. B Complex for fatigue
5. CoEnzyme Q 10 for fatigue
6. Fish or Flax seed Oil
7. Vitamin C to prevent bladder infections
8. Cranberry capsules to prevent bladder infections

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Does Yoga help with MS symptoms?

There was a 6 month parallel group randomized controlled trial in MS patients. Yoga was compared with exercise class and observation, it was found to help the fatigue level as assessed by the SF -36, it did not correlate with the MSFC or the EDSS. Therefore Yoga can be helpful for MS patients with various levels of disability and it may help with fatigue.

Does Music Therapy help MS?

There have been a few studies of Music therapy in MS, one showed improvement in depression, self esteem and anxiety and another helped MS patient's gait. Therefore Music therapy can be suggested as playing a role in helping MS symptoms of depression and gait disorder.

Does Meditation help in MS

Yes, meditation may help MS, in one study it showed that it helped with fatigue, quality of life and pain therefore one can consider recommending meditation in MS patients with pain or fatigue. This study included Tai Chi as well, so this may have benefits for the MS patient.

Does Acupuncture help MS?

Acupuncture is a component of traditional Chinese medicine. Clinical trials are too limited to provide definitive information regarding MS symptoms. There are studies of Acupuncture helping pain, in other conditions. It may be recommended in our MS patients with pain.

We offer our patients access to various mind -body therapies, including Acupuncure, Reiki, Music therapy, Meditation, Tai Chi as they are low in side effects and cost and may have potential benefits in overall health, fatigue or pain.

There is a general interest in knowing if MS symptoms or the disease itself can be helped by CAM treatments, there are many trials currently recruiting, please see NIH web site for recruiting trials.

Cleveland Clinic Resources for IM

Wellness consultations at Mellen Center 216 444 8600

Integrative Medicine consultation at Cleveland Clinic, various locations
216 986 HEAL

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Cleveland Clinic Mellen Center for Multiple Sclerosis

CAM practitioners at the Integrated Medicine Centers including Acupuncture, Reiki, Reflexology

216 986 HEAL

Acupuncture consultation within Cleveland Clinic, many sites including Family health centers. 800 223 2273

Smoking Cessation Cleveland Clinic 800 223 2273

Alcohol and Drug recovery Center Cleveland Clinic 216 444 5812

Lifestyle 180: 216 444 5812 or 800 223 2273 x 45812

Nutrition therapy at Cleveland Clinic 216 444 3046

Other Resources

Website- NCCAM The National Center for Complementary and Alternative Medicine

<http://nccam.nih.gov/health/decisions/practitioner.htm>

Tech Resources for General Wellness:

Doctor, My iPhone Says...."

The majority of apps help consumers do one of two things: obtain health information or track their own health measures. Examples of the former include:

- **Epicurious**, a recipe app which can be tailored for dietary restrictions.
- **MyAllergies Food Diary**, which provides food allergy information.
- **Is That Gluten Free**, and **Food Additives** which help food-sensitive people assess which foods to avoid.
- **Daily Yoga**, one of a host of yoga-related apps that can guide people through daily yoga routines.
- **My Plate** and **My Diet Steps**, which give people serving size guidelines.
- **Daily Workouts**, and other exercise-related apps that, like the yoga apps, lead people through 10-30 minute fitness routines.
- **iTherapy** and **Healing Foods**, which offer information on complementary, alternative and integrative health care.
- **Meal Snap**, a food scanning app that can calculate caloric and nutrient composition of a food the user photographs with his/her mobile phone.

Apps that track the user's health information include:

- **Daily Burn**, which tracks calories.
- **Insight Timer**—daily meditations.
- **Weight Watchers App**—weight changes over time.
- **BGluMon**—blood sugar.
- **iBP Blood Pressure**—blood pressure changes.

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- **My Quit Coach**—cigarette consumption & quit adherence produced by the LIVESTRONG organization.
- **Sing Fit** - an app created by music therapists that allows users to more easily get the health benefits and pleasures of singing by enabling them to change pitch and tempo of the backing music for their favorite songs.
- **ZeoMobile**--this app, along with its lightweight headband, allows people to track REM sleep throughout the night.
- **Simply Being**--a highly rated guided meditation application.

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