

# Policy Statement

## Use of Alternative Diets and Supplementation in the Management of Multiple Sclerosis

---

### Summary

The British Dietetic Association (BDA) considers that the risks and benefits to an individual should be considered before adopting an alternative diet in the management of Multiple Sclerosis (MS). There is currently a limited evidence base for the named alternative diets and the use of supplementary vitamin D, omega 3 and omega 6 fatty acids, and vitamin B12 for the specific treatment of MS. If people do wish to follow any of these diets then they need to ensure their diet is nutritionally adequate and a healthy body weight maintained. Registered dietitians may be able to support this where necessary.

### Recommendation

1. The BDA does not advocate the use of alternative diets for the management of MS.
2. The BDA does not advocate the use of supplementary vitamin D, omega 3 and omega 6 fatty acid compounds, and vitamin B12 for the specific treatment of MS. This recommendation does not include individuals who are clinically deficient or a high risk group (e.g. elderly for bone health).
3. Although the use of alternative diets is not recommended, the BDA recognises individual's choice and where this is the case, registered dietitians can be available to support patients in ensuring their diet is nutritionally adequate and minimize nutritional risk.
4. The BDA recommends a well-balanced diet to maintain a healthy body weight.

### Background

Multiple Sclerosis (MS) is a neurological condition affecting nerves in the brain and spinal cord. It results in varying symptoms from individual to individual including fatigue, loss of vision, balance and co-ordination difficulties, swallowing and speech difficulties and cognitive impairment (NICE 2014 and MS Society, 2014). To date there is no known cure for MS and the BDA recognizes that many people with MS implement dietary strategies to help manage their MS symptoms/relapse rate and/or quality of life. MS is a chronic remitting/relapsing condition which complicates the assessment of the impact of any dietary change on the underlying condition.

Currently there are recommendations for the use of supplementation of vitamin D and omega 3 and 6 fatty acids (as per NICE guidance) but no recommendations for the use of alternative diets. Some of these alternative diets may result in food exclusion and possible risks such as inadequate nutrient intake, altered bowel habit, fatigue, mood changes, pressure ulcers and infection.

This BDA policy statement aims to provide guidance for the use of alternative diets and supplementation for the management of MS. It provides an overview of the current literature behind five common alternative diets and supplements that have been raised from the clinical setting. All other vitamin/mineral supplements have not been included in this policy statement secondary to limited research.

## Alternative Diets

### Best Bet Diet:

This diet was developed by Ashton Embry. Based on the theory that proteins escape from a leaky gut which causes the immune system to malfunction. The diet recommends avoiding dairy, grains, red meat and legumes. It also suggests having allergy tests and an extensive list of additional supplements.

Currently there is no research on the Best Bet Diet and MS. This diet may result in several food restrictions, possible nutritional deficiencies and also have financial implications. There is no current evidence to recommend this diet in the management of MS.

### Swank Diet:

This was developed by Dr Roy Swank in 1948. The main components of this diet recommend restricting the amount of saturated fat to no more than 15g per day and unsaturated fat kept to 20-50g per day. Also red meat is limited for the first year, no added fat permitted, 1% or less for dairy products, no processed foods and additionally taking a cod liver oil and a multivitamin (Swank, 1990)

Currently there is limited research on this diet and the one study completed had no control group to compare with and thus creating the potential for research bias.

There is a limited evidence base to advocate this diet in the management of MS and the diet may result in reduced protein and dairy intake and may be lower in energy overall. Those who are underweight, losing weight or have a poor appetite might find it difficult to maintain a healthy weight on this diet

### Low Gluten:

Gluten is a protein that is found in wheat, rye and barley. A low gluten diet is one which limits the amount of gluten ingested. Multiple Sclerosis is an autoimmune condition and some research suggests that autoimmune conditions may improve with a gluten free diet as neurological symptoms are associated with gluten sensitivity in patients with and without coeliac disease (Rodrigo et al, 2014). It has also been suggested that gluten intolerance incidence is higher in people with Multiple Sclerosis (Rodrigo et al, 2011). Therefore, some people feel restricting gluten can help in the management of their MS.

Currently there is not enough research to recommend a gluten free diet as a suggested therapy for MS. If individuals do wish to follow a gluten free diet then this can be done safely by substituting food sources appropriately with gluten free alternatives. Those with MS are not eligible to receive gluten free products on prescription.

### The Paleo Diet:

The Paleo diet incorporates foods that are said to have been consumed by caveman. Included in this diet are meat, fish, nuts, vegetables and fruit. Excluded are grains, pulses, potatoes, dairy and processed foods (MS Society, 2014).

There is limited research into the paleo diet and MS with only one small study. This study did find an improvement in fatigue, however there was no control group, poor compliance rate with only 60% of participants adhering to the intervention and also small sample size (Bisht et al, 2014).

Currently there is limited evidence to support the implementation of the paleo diet in the management of MS. This diet is not suitable for vegetarians and individuals following this diet would need to be careful with certain food groups such as dairy, as excluding these products may leave you vulnerable to deficiencies.

### Overcoming MS Programme:

The Overcoming MS programme has been developed by Professor George Jelinek and looks at a holistic approach including low saturated fat, omega 3 fats and vitamin D supplementation, meditation and exercise.

A large international observational cohort study commenced in 2011, recruiting online and using surveys to assess the association of diet on quality of life and disability, and also the effect of omega 3 intake. Current results indicate an improved health related quality of life and disability rate, however this methodology is based on self-report which could result in inaccuracies or bias (Hadgkiss et al, 2015). Research is currently ongoing.

Individuals following this diet would need to be careful with their protein and dairy intake and substitute appropriately to reduce the risk of nutritional deficiencies.

### Vitamin D:

Vitamin D supplementation is not recommended in the treatment of relapsing-remitting MS. Evidence shows that relapse rates were not improved by supplementation of vitamin D, and there is evidence to show that high doses of vitamin D had a negative effect on relapses compared to low doses. Although there is some evidence to show benefits to mobility and functional disability, negative effects to gastrointestinal health were also noted.

Overall the benefits of vitamin D supplementation are not felt to be significant enough to outweigh the potential negative effects.

Vitamin D supplementation should be made on an individual basis, dependent on clinical condition, blood test results, at risk groups and dependent on Trust and/or prescriber.

### Omega 3 and Omega 6 supplementation:

Omega 3 and omega 6 supplementation is not recommended for the treatment of relapsing-remitting MS. There is some very low quality evidence suggesting benefits of omega 6 in the frequency and severity of relapses but no benefit in global improvement. Some low quality evidence suggests that omega 3 may contribute to physical benefits however can worsen fatigue and cause adverse symptoms. Overall, there is no strong evidence to suggest that supplementation of omega 3 or omega 6 will significantly reduce relapse or progression of MS.

### Vitamin B12

Vitamin B12 can help to make myelin, the protective layer around nerve fibres that get damaged in MS. A deficiency in vitamin B12 can also cause symptoms similar to MS. Overall data on the effects

of vitamin B12 and MS are inconclusive due to varying reasons including confounding variables in study designs. There is no evidence to suggest routine supplementation of vitamin B12 in the management of MS. Vitamin B12 supplementation should be on an individual clinical need dependent on clinical deficiency.

## Further Information and References

Practice-based Evidence in Nutrition (2010). Nervous System – Multiple Sclerosis: Evidence Summary. Available at URL

<http://www.pennutrition.com/KnowledgePathway.aspx?kpid=7261&trcatid=42&trid=7195>

Practice-based Evidence in Nutrition (2013). Nervous System – Multiple Sclerosis: Toolkit. Available at URL

<http://www.pennutrition.com/KnowledgePathway.aspx?kpid=7261&tkid=20334&secid=20466>

Bisht, B, Darling, W. Grossmann, R. Shivapour, T. Lutgendorf, S. Snetselaar, L.i Hall, M. Zimmerman, B. Wahls, T. (2014) A multi-model Intervention for patients with secondary progressive Multiple Sclerosis: Feasibility and effect of Fatigue. *The Journal of Alternative and Complementary Medicine*. 20 (5). p347- 355.

National Institute of Health and Clinical Excellence, (2014). Multiple Sclerosis: management of multiple sclerosis in primary and secondary care. Clinical Guideline 186. Last Accessed 15th November 2014 at URL: <https://www.nice.org.uk/guidance/cg186/chapter/introduction>

MS Society UK, (2014). What is MS? Last Accessed 15th November 2014 at URL:

<http://www.mssociety.org.uk/what-is-ms>

Farinotti, M. Simi S. Di Pietrantonio, C. McDowell, N. Brait, L. Lupo, D. (2012). Dietary interventions for multiple sclerosis. *Cochrane Database System Review*. 24 January (1). CD004192

Burton JM, Kimball S, Vieth R, Bar-Or A, Dosch HM, Cheung R et al. A phase I/II dose-escalation 10 trial of vitamin D3 and calcium in multiple sclerosis. *Neurology*. 2010; 74(23):1852-1859

Golan D, Halhal B, Glass-Marmor L, Staun-Ram E, Rozenberg O, Lavi I et al. Vitamin D 25 supplementation for patients with multiple sclerosis treated with interferon-beta: A 26 randomized controlled trial assessing the effect on flu-like symptoms and immunomodulatory 27 properties. *BMC Neurology*. 2013; 13(60)

Kampman MT, Steffensen LH, Mellgren SI, Jorgensen L. Effect of vitamin D3 supplementation 31 on relapses, disease progression, and measures of function in persons with multiple sclerosis: 32 exploratory outcomes from a double-blind randomised controlled trial. *Multiple Sclerosis*. 33 2012; 18(8):1144-1151

Mosayebi G, Ghazavi A, Ghasami K, Jand Y, Kokhaei P. Therapeutic effect of vitamin D3 in 36 multiple sclerosis patients. *Immunological Investigations*. 2011; 40(6):627-639

Shaygannejad V, Janghorbani M, Ashtari F, Dehghan H. Effects of adjunct low-dose vitamin d 27 on relapsing-remitting multiple sclerosis progression: preliminary findings of a randomized 28 placebo-controlled trial. *Multiple Sclerosis International*. 2012; 2012:452541

Soilu-Hanninen M, Aivo J, Lindstrom BM, Elovaara I, Sumelahti ML, Farkkila M et al. A 4 randomised, double blind, placebo controlled trial with vitamin D3 as an add-on treatment to 5 interferon beta-1b in patients with multiple sclerosis. *Journal of Neurology, Neurosurgery, and 6 Psychiatry*. 2012; 83(5):565-571

Stein MS, Liu Y, Gray OM, Baker JE, Kolbe SC, Ditchfield MR et al. A randomized trial of high-20 dose vitamin D2 in relapsing-remitting multiple sclerosis. *Neurology*. 2011; 77(17):1611-1618

Swank RL. Multiple sclerosis: a correlation of its incidence with dietary fat. *Am J Med Sci* 1950; 220:421-430.

Swank RL, Dugan B. Effects of a low saturated fat diet in early and late cases of multiple sclerosis. *Lancet* 1990; 336(8709):37-39.

Hadgkiss, E, Jelinek, G, Weiland, T, Pereira, N, Marck, C, Van Der Meer, D. (2015). The association of diet with quality of life, disability, and relapse rate in an international sample of people with multiple sclerosis. *Nutritional Neuroscience*. 18, (3). 125 – 136

Hadgkiss, E, Jelinek, G, Taylor, K, Marck, C, Van Der Meer, D, Periera, N, Weiland, T. (2015). Engagement in a program promoting lifestyle modification is associated with better patient-reported outcomes for people with MS. *Neurological Sciences*.

Jelinek, G, Hadgkiss, E, Weiland, T, Pereira, N, Marck, C, Van Der Meer, D. (2013). Association of fish consumption and omega 3 supplementation with quality of life, disability, and disease activity in an international cohort of people with multiple sclerosis. *International Journal of Neuroscience*. 123, (11). 792 – 801

Hadgkiss EJ, Jelinek GA, Weiland TJ, et al. Methodology of an international study of people with multiple sclerosis recruited through web 2.0 platforms: demographics, lifestyle and disease characteristics. *Neuroscience Research*.

Rodrigo, L, Hernandez-Lahoz, C, Fuentes, D, Alvanez, N, Lopez-Vazquez, A, Gonzalez, S. (2014). Prevalence of celiac disease in MS. *International Journal of Neurology and Neuropathy*, 1:2

Rodrigo, L, Hernandez-Lahoz, C, Fuentes, D, Mauri, A, Alvanez, N, Vega, J, Gonzalez, S. (2014). Randomised Clinical Trial Comparing the Efficacy of A Gluten-Free Diet Versus A Regular Diet in A Series of Relapsing-Remitting Multiple Sclerosis. *International Journal of Neurology and Neuropathy*, 1:2

Miller 2005 Miller A, Korem M, Almog R, Galboiz Y. Vitamin B12, demyelination, remyelination and repair in multiple sclerosis. *Journal of the Neurological Sciences* 2005; 233(1-2):93–7.

Evidence-based guideline: Complementary and alternative medicine in multiple sclerosis

Wade DT, Young CA, Chaudhuri KR, et al. A randomised placebo controlled exploratory study of vitamin B-12, lofepramine, and Lphenylalanine (the 'cari loder regime') in the treatment of multiple sclerosis. *Journal Neurol Neurosurg Psychiatry* 2002; 73: 246–249.

---

This document has been developed by the Neurosciences Specialist Group of the BDA with support from the BDA Education and Professional Development Team.

©2015 The British Dietetic Association

5th Floor, Charles House, 148/9 Great Charles Street Queensway, Birmingham B3 3HT

Tel: 0121 200 8080 Fax: 0121 200 8081 email: [info@bda.uk.com](mailto:info@bda.uk.com)

Commercial copying, hiring or lending without the written permission of the BDA is prohibited.

[bda.uk.com](http://bda.uk.com)