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**Same drug, different usage**

A second study of ocrelizumab showed important benefits for people with relapsing-remitting MS. In this study, treatment with ocrelizumab significantly reduced relapse rate, delayed disability progression and reduced the number of brain lesions compared to the first-line disease modifying therapy interferon beta-1a.

**MD1003**

Another drug with promising results was MD1003, which is a high dose formulation of bisim. A Phase III clinical trial demonstrated that when administered to people with primary or secondary progressive MS, MD1003 showed less disability in some of the participants compared to a mock treatment, and was well tolerated.

**New findings on Tyasbri**

Despite being an effective treatment for relapsing-remitting MS, natalizumab (Tysabri) is known to increase the risk of progressive multifocal leukoencephalopathy (PML), a dangerous infection of the brain, in some individuals. Dr. Lana Zhovtis Ryerson (NYU Langone Medical Center, New York, NY) presented preliminary data showing that an extended dose schedule with less frequent dosing of natalizumab maintained the efficacy of the drug while reducing the risk of PML by that point in the study.

**Exercise, the virtual way**

For some people living with MS, accessing a gym or trainer on a regular basis may be a difficult proposition, and tools to improve physical activity at home are a welcome alternative. Dr. Francesca Tona (Sapienza University, Rome, Italy) and her team demonstrated that high intensity training over 12 weeks using a Nintendo Wii balance board can significantly improve balance impairment in people living with MS.

**Diet**

There is no question: people with MS should eat a healthy diet. In general, that means a low-calorie diet based on vegetables, whole cereals, legumes, fruit and fish. And, since MS is an inflammatory disease, foods associated with other inflammatory diseases should be limited: red meat, animal fats, sugar-sweetened drinks and salt. Many people have adopted certain diets, which they feel have positively impacted their day-to-day living. The MS Society is encouraged by these stories and looks forward to further research on these and other regimens.

**Lifestyle and MS:**

**Smart choices make a difference.**

Ongoing research holds incredible promise for people living with MS. Stem cell therapy, remyelination and other breakthroughs offer hope for a seismic shift in treatment. But what can people living with MS do right now?

There is great interest in the MS community in complementary and alternative medicine or CAM. Up to 70% of people with MS have tried one or more CAM treatments.¹

Do they work? Do people living with MS benefit from CAM?

Let’s start with what we know:

What is good for Canadians is good for people living with MS.

Like all Canadians, a person living with MS will almost certainly have a better outcome if their lifestyle includes a proper diet, appropriate exercise and not smoking. And, an unhealthy lifestyle is probably much worse for people with MS than for the population overall.

**Exercise**

It seems incredible that people diagnosed with MS were once advised to avoid physical activity, as it was thought to worsen symptoms. We now have over 20 years of studies showing that exercise can improve balance, mental health, cognitive function, and reduce fatigue in the long term. One important MS Society-funded study found that a 12-week trial of treadmill training had a positive impact on quality of life for people with primary progressive MS, for which there is no treatment. Another study indicated that, for children and adolescents living with MS, the less physically active they are, the greater their fatigue.²

The evidence is compelling enough that researchers in Canada have issued guidelines for adults with mild or moderate disability. The guidelines, which were developed with input from the MS Society of Canada, recommend 30 minutes of moderate intensity aerobic activity twice a week, alternated with strength training for major muscle groups twice a week (for complete guidelines, visit our web site at www.mssociety.ca).

**See you online!**

[Links for more information on MS Society of Canada and upcoming events]
Vitamin D deficiency is a major health issue for people with MS. While we don’t yet know exactly why Vitamin D levels are lower in people with MS, it is clear that people may be more sensitive to the effects of the vitamin. In addition, people with MS who take supplements for this deficiency have found that symptoms improve. This is supported by the fact that observational studies show a correlation between lower Vitamin D levels and MS risk, and that increased intake of Vitamin D is a sound strategy — vitamin D may contribute to stronger immune system and reduced inflammation.

So, where does that leave us? In general, eat a healthy diet, avoid excessive salt and maintain a healthy weight — similar to the health-promoting advice that everyone should follow. But what about Vitamin D? It’s an essential nutrient that can be obtained from many different sources. Some people choose to take supplements, while others prefer to increase their intake through foods or sunlight exposure. Either way, it’s important to ensure you’re getting enough of this important vitamin. The benefits of Vitamin D are not limited to its effects on the immune system; it also has been linked to a lower risk of depression, improved mood and a reduced risk of some cancers like breast and prostate.

Research funded by donors like you offers HOPE

What do the experts say?

Audrey Hicks, PhD, Professor of Kinesiology at McMaster University, sees the impact of exercise on people living with MS every day in her lab. She helped develop the Physical Activity Guidelines mentioned in this newsletter, and recommends exercise across the board. “I have yet to read any report of exercise doing damage to anyone with MS.”

Michelle Ploughman, PhD, Canada Research Chair at Memorial University, first became interested in the relationship between MS and exercise as a clinician. “I noticed anecdotally that people with MS who lived to be 70 or 80 had healthier lifestyles — they smoke less, drink less, exercise more.”

Now we know why, she asserts. When you exercise, you increase neurotrophins that are needed to keep nerves alive and healthy. “Exercise also promotes growth of new brain connections, new blood vessels, even new neurons in the brain,” she says.

Dr. Ploughman has some advice for people who are beginning an exercise program. “First, the benefit of exercise goes away if you stop doing it. So, it’s important to find something you can stick with. Second, people often wonder about intensity. Everyone is different but, one rule of thumb is to exercise hard enough so that you will be a little out of breath when you’re finished.”

“Properly used, exercise seems to help everyone.”


The annual European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) Congress is one of the most eagerly anticipated events for MS researchers and clinicians each year. Important announcements at ECTRIMS this year included:

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**UPCOMING EVENTS**

World MS Day is May 25

**Gear Up to Fight MS**

It’s not too early to start thinking about MS Bike! This year, we will hold more than 20 events in nine provinces. The events start in June, so plan ahead to join the 10,000+ riders who support MS research. Register today at msbike.ca.

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One way to come up with more definitive dietary recommendations is to better understand the basic science around MS and nutrition. Toward that end, the MS Society of Canada and the MS Scientific Research Foundation are funding a collaborative study to explore how microbes in the gut influence MS in children and adolescents.4