Fatigue in Multiple Sclerosis

Introduction
Fatigue is the most common symptom of multiple sclerosis (MS). It occurs in 75 percent to 95 percent of patients with MS. Fatigue can occur at all stages of the disease. The symptom is not related to the severity or to the duration of MS. At times, fatigue interferes with function and is an important symptom to manage. There are a variety of ways to combat fatigue in MS.

What causes fatigue in patients with multiple sclerosis?
The exact cause of MS-related fatigue is still unknown. There are several theories on the subject, including:

- One theory is that fatigue is related to the general activation of the immune system. Chemical messengers are called cytokines; these levels are higher in patients with MS and may be higher still in patients with fatigue. One way of describing this is that you may feel like you have a virus all of the time.

- Another theory is that people with MS may have to use more parts of their brain to do the same task as someone without MS; in essence, they are working harder.

- Another theory is that fatigue is related to reduced electrical transmission of signals in the brain.

Whatever the theory, we know that fatigue from MS is a very real part of the disease.

What are symptoms of fatigue?
There are two major types of fatigue in MS. These two types of fatigue are probably separate problems related to the MS.

The first type is a general feeling of tiredness. It may feel as if one has not slept the night before. This feeling may be worse in the afternoons or after activity. People may feel that they are unable to do as many tasks without getting tired as they did before.

A second type of fatigue is muscular. In this type, there is increased weakness after repeated activity. Often, this occurs with walking. People may find that they are dragging one leg or are more unsteady.

Are there other causes of fatigue besides the MS?
Obviously, people with MS can be tired for other reasons. For example, they may have sleep disorders that interfere with restful sleep. People with MS may have a condition called restless leg system, where they feel that they have to move their legs to get relief. They may also have periodic leg movements, which is when legs kick involuntarily during sleep. Another condition affecting sleep is sleep apnea, which is also common among the general population.
Certain medications may affect sleep or cause fatigue. Alcohol or drug use may alter sleep or cause drowsiness. Sometimes, people have other medical conditions, such as infections, anemia, or a reduced thyroid function, which can increase fatigue.

Are there non-medical treatments for MS-related fatigue?
There are non-medical treatments for fatigue related to MS. These may include:

- A number of studies have shown that regular exercise, usually with some aerobic (cardiovascular) component, helps with MS-related fatigue. Regular exercise is also good for balance, endurance, weight loss, and well-being.

- It is important to use the principle of energy conservation. For example, you can use “the best time of the day” by shopping in the morning and resting in the afternoon. A brief nap may be very helpful to recharge your batteries.

- Avoid over-filling your day.

- If you are taking medications that are causing fatigue, discuss these with your doctor; together, you and your doctor may consider reducing or eliminating these drugs.

- If you are drinking too much or abusing drugs, consider working on stopping these behaviors.

- Some patients are heat sensitive and have more fatigue when they are in a hot environment or are over-heated. Having air conditioning in the summer may be very helpful. Some people may also find cooling vests to be useful.

What are some medical treatments for MS-related fatigue?
In general, if possible, it is good to avoid using medications. People with MS often take several medications. Limiting the number of medicines is good medical practice. It is also important in reducing costs. However, if fatigue continues to interfere with activities, medications may be useful. These medications may include:

- **Aspirin**: A recent well-designed study showed that two regular (325 mg each) aspirins taken twice a day significantly reduced MS-related fatigue and was preferred by patients over placebo. Aspirin is inexpensive and readily available over the counter. However, some people are sensitive to aspirin, and others may find it causes stomach ulcers. A trial of aspirin therapy for fatigue may be a reasonable first step in medication management. Usually, the effect can be seen after a month or two. The cost runs about $4 per month.

- **Amantadine**: Amantadine (Symmetrel®) is an antiviral medication that has been used in a number of studies in MS-related. The drug’s effect is moderate, and side effects for some people may include nausea or a skin rash. Amantadine is given as an oral dose of 100 mg twice a day, usually in the morning and again at mid-day. One to two months is long enough to get a sense of how well this medicine is working. The cost runs about $30 to $60 per month.

- **Modafinil**: Modafinil (Provigil®) is a medication which has been approved by the US Food and Drug Administration to treat a sleep disorder called narcolepsy. Two studies have been done to test modafinil in treating patients with MS. One study showed a significant effect on fatigue, but the other did not. This medication costs about $150 to $200 per month. It may not be covered by prescription plans.

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