ALL ABOUT FATIGUE



WHAT IS IT?

Fatigue is defined as feeling a lack of physical and/or mental energy, often experienced as exhaustion or tiredness. It is a very common symptom that greatly incapacitates people with MS.

Fatigue may aggravate other MS symptoms, like visual disturbances, difficulty



concentrating and memory loss, as well as affect mobility (movements slow down) and muscle spasms, thereby hindering the person's ability to carry out their daily activities.

There are two types of fatigue: primary and secondary fatigue

- (•) **Primary fatigue:** A direct result of damage to the central nervous system by the disease. There are different types of primary fatigue:
 - Lassitude: is excessive tiredness that is not directly related to participation in any activity or exercise.
 - "Neuromuscular fatigue": occurs in specific groups of muscles (for example, in the hand after writing).
 - Fatigue due to heat sensitivity: an increase in body temperature can cause the appearance of fatigue. This kind of fatigue can result from seasonal weather changes, but can also appear for other reasons (e.g., bathing with hot water or eating hot foods).
- (•) **Secondary fatigue:** may appear as a consequence of factors that are not directly related to MS, like changes in sleep patterns, infections, exercise, medications, etc.

WHAT ARE THE SYMPTOMS?

The fatigue associated with MS is different in each person:

In some people, it presents as tiredness that can become unbearable.

In others, it worsens other symptoms, like visual disturbances, difficulty concentrating, memory loss, slowed movements and muscle spasms.

Fatigue can **affect every type of daily activity**, from the most simple tasks to the most complex.



It can also negatively affect activities that are important to the person with MS, as well as affect those of their friends, family members and social circle.

People with MS say that when they are tired they, "cannot do fun things, only necessary things." They also state that

"my memory fails on me" or "I feel guilty because, as a result of the fatigue, I look like I am lazy." These statements demonstrate that **fatigue has repercussions on the psychological, cognitive, social and physical aspects** of the lives of people with MS.

WHY DOES IT OCCUR?

Fatigue or generalized tiredness in MS can result from different causes:

- **1. Primary fatigue:** appears as a direct result of damage to the central nervous system associated with MS.
 - Lassitude: state of weakness and significant generalized tiredness without having previously participated in any activity or exercise.
 - "Neuromuscular fatigue": physical, mental or organic inability to continue working at the same rhythm as before. Occurs in specific groups of muscles (for example, in the hand after writing).
 - Fatigue due to heat sensitivity: state of weakness and significant generalized tiredness due to an increase in body temperature that, in healthy subjects, would not cause any problems at all. Can be caused by seasonal weather changes, but can also appear for other reasons (e.g., bathing with hot water or eating hot foods).
- **2. Secondary fatigue:** may appear as a consequence of factors that are not directly related to damage to the nervous system (Table 1) like, for example:
 - Sleep disorders. Difficulty falling asleep, staying asleep or sleeping well (insomnia) that prevents one from feeling "like new" when getting up in the morning. Usually due to symptoms associated with MS that interrupt sleep and can be diminished or reduced (pain, urgency to urinate at night, depression or anxiety, spasticity, etc.).
 - Infections. May cause the appearance of certain symptoms (like fever) that can lead to fatigue.
 - Exercise. The increased effort made by the body when compensating for compromised mobility or coordination may cause fatigue.
 - Depression and anxiety. Difficult topics can wear you out emotionally and physically. Depression and anxiety are common with MS. If you or your family members notice changes in mood or a loss of interest in the activities that you used to enjoy before, be sure to mention this to your healthcare professional.

- Environment. The amount of light and ambient temperature at your place of work and home are very important, since low lighting can increase the amount of work your eyes have to do and heat tends to aggravate fatigue.
- Weather conditions (excess heat, increase in temperature). Heat makes you feel like you are more tired and humidity can aggravate the effects of heat.
- Stress. There are many factors in patients with MS that can cause stress: more demands on you than you can meet, personal conflicts, interruptions in your routine, depression, etc.
- Inadequate rationing of your physical energy. Upon carrying out a task that requires physical effort (participating in sports, housework, etc.), you may make the mistake of using all your energy quickly. In patients with MS, it is recommendable to ration your energy and, as a result, effort should be made gradually.
- Medication: the side effects of many medications can make you tired or sleepy. If you think there is a relationship between the intensification of your fatigue and a change in your medications, tell your doctor.



It is important to keep a list of all the medications that you take:

- (•) Prescription medications.
- (•) Other medications that do not require prescriptions, like aspirin, ibuprofen and other products including cold, flu or allergy medications.
- (•) Possible herbal medicines or alternative medications.
- (•) Vitamins, minerals or other dietary supplements.

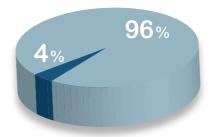
When you go to the doctor, take the list with you. If your medications change, be sure to update the list.

TABLE 1: Possible causes of secondary fatigue associated with MS.

Possible causes	Symptoms
Infections	Cold, flu, urinary infections
Medications	Side effects of certain medications, including non-prescription medications and "alternative" products. Interactions between certain medications.
Sleep disorders	Difficulty falling asleep Disrupted sleep from having to get up frequently to urinate or because of spasms and pain Waking up tired or with a headache
Depression	Feeling down and irritable Lack of interest in the people or topics that used to interest you before Feelings of incompetency or failure
Disabilities	Decreased physical fitness of your muscles, heart and/or lungs
Pain	Backache, arthritis pain, headache
Stress	Difficulties at work, family stress, financial worries, issues related to your MS
Respiratory problems	Asthma, respiratory failure

HOW FREQUENTLY DOES IT OCCUR?

Fatigue is the most common symptom of MS, occurring in approximately 96% of all MS patients.



TREATMENTS

As a patient, you are likely being treated by a **multidisciplinary team** composed of medical and nursing specialists, psychologists, speech therapists, rehabilitation specialists and/or physical therapists. These people consider the different treatment

options to find the solution that works best for your situation

For informational purposes, the different types of common treatments corresponding to the type of fatigue experienced by the patient are described below:



1. Drug-based treatments

• It is fairly common for some people with primary fatigue to receive a drug-based treatment that is also used to treat Parkinson's disease, the flu or narcolepsy (excessive sleepiness during the day). Examples of these include amantadine and modafinil. Both of these drugs have to shown to be effective in treating fatigue.

For cases of secondary fatigue, it is important to keep in mind that the underlying causes of the fatigue must be treated. These are usually depression, anxiety, infections, fever, etc.

2. Non-medication treatments

- Certain changes in your daily routine, like splitting up and spreading out planned tasks throughout the dav alternating periods spent completing certain activities with rest periods can help you control your fatigue. The best way to make these changes is with the support of occupational therapists, physical therapists, your primary doctor, your neurologist and/ or the MS-specialized nursing staff
- The role of an occupational therapist consists of organizing and adapting the patient's daily activities so that they can be carried out efficiently, thereby





avoiding wasting too much energy. He or she will take into account the fatigue that is associated with your MS, as well any fatigue resulting indirectly from the disease.

An occupational therapist can tell you about practical and efficient techniques for making personalized decisions depending on your needs and energy patterns, so that you can create your own energy conservation program. This program should be discussed with other professionals specializing in MS, and its purpose should be to improve your ability to control your fatigue and quality of life.

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