

## Sleep Disorders in Multiple Sclerosis

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### Introduction

Disrupted sleep and poor sleep quality can be associated with fatigue, daytime sleepiness and potentially with dangerous cardio-respiratory events. The prevalence of sleep disorders in multiple sclerosis (MS) has not been well established. Symptomatic narcolepsy has been reported in 8.6% of MS patients. In our preliminary report with 65 MS patients we found a prevalence of sleep disorders of 37%.

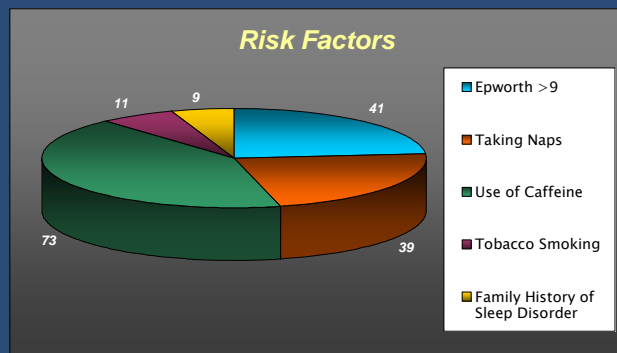
### Objective

To determine the prevalence and to identify the type of sleep disorders in MS patients.

### Methods

Prospective study for all types of MS. A sleep disorder questionnaire which includes the Epworth sleepiness scale was given to MS patients 18 to 64 years old, during their follow up visit to the Maxine Mesinger MS Comprehensive Care Center at Baylor College of Medicine. Collected data includes demographic information, type of MS, date of diagnosis, use of tobacco and alcohol, sleeping habits, caffeine consumption and medical history. We also interrogated about current and previous treatments and other medical conditions.

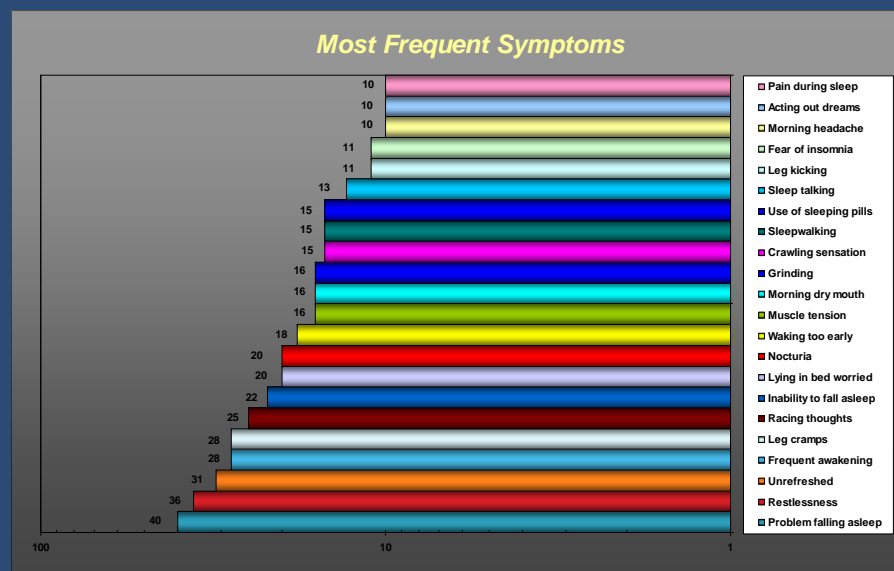
Patients who suffer from congestive heart failure, primary respiratory disorders and obstructive respiratory disorders or any other neurodegenerative condition were excluded. Informed consent was obtained from all participants.



DEMOGRAPHICS	
Total patients	100
Women	81
Men	19
Mean age	40
Type of MS	
RRMS	98
SPMS	2
MS treatment	
Interferon treatment	51
Natalizumab	23
Glatiramer acetate	17
Other treatment	9
Ethnicity	
Caucasian	63
African American	20
Hispanic	16
Middle Eastern	1

### Results

A total of 100 patients were included. Eighty-one were women, the mean age was 40. Most patients were on interferon treatment (51), 17 on glatiramer acetate, 23 on natalizumab and 9 on other type of treatment. Family history of sleep disorders was present in 9%. Forty-one percent of the patients have sleep disturbances based on Epworth scale of >9. Of these, 87.5% have significant fatigue. The most common sleep disturbance reported was difficulty falling asleep followed by restlessness.



### Conclusions

Insomnia is diagnosed in 6% to 15% of the general population. The prevalence of sleep disorders in our MS population was 41%, and fatigue was present in 87.5% of these patients. Several factors influence the quality of sleep in MS. These can potentially cause daytime somnolence and increased fatigue. Awareness and treatment of these conditions is vital for improving health and quality of life in MS patients.

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