# Effect of transcranial magnetic stimulation TMS on motor symptoms and sleep disorders of Parkinson disease

A thesis submitted for partial fulfillment
Of MD degree in Neurology
By

**Mohammed Mustafa Mohammed Marouf**

**(M.B.B.CH, M.SC)**
***Assistant lecturer of neurology, faculty of Medicine, Fayoum University***

Supervised by

**Prof. Hala Abd El Mageed Shaheen**

Professor and head of Neurology department , Fayoum University

**Dr. Lamiaa Ebrahim Daker**

Ass Professor of Neurology, Fayoum University

**Dr. Mohammed Gomaa Dief**

Lecturer of Neurology, Fayoum University

Faculty of Medicine

Fayoum University

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# Abstract

**Background**

Parkinson disease is a degenerative disabling disease . Transcranial magnetic stimulation TMS is non-invasive device that is used in treatment of many neurological diseases as Parkinson disease .

**Aim of the work**

To detect the effect of TMS in motor and non-motor symptoms as sleep disorders and psychiatric symptoms in patients with Parkinson disease .

**Methods**

This study is a clinical trial study which will include 40 patients of both sexes with the diagnosis of PD divided to two groups , first one received real TMS and the other group received sham TMS. And assessed in motor symptoms , sleep disorders and depressive symptoms at baseline and after stimulation

**Results**

There was a statistically significant improvement in motor symptoms , sleep quality and depressive symptoms in patients received real TMS versus Sham group

**Conclusion** :

High frequency repetitive nerve stimulation has significant effect in improvement of motor symptoms , depressive symptoms and sleep problems in patients with Parkinson disease



**Keywords:** Parkinson disease , TMS , UPDRS , depression , sleep diorders