

Title: Weight loss in Parkinson's disease

Principal Investigator: ***Ergun Y. Uc, MD**, is an Associate Professor of Neurology at Carver College of Medicine, University of Iowa, VA Medical Center in Iowa City, IA.*

Abstract: “Weight loss is a well recognized feature in the evolution of PD and has been identified as an independent risk factor for mortality in chronic disease. Our goal is to study the features and temporal course of weight loss in PD using well defined, large cohorts from PSG clinical trials. For the purposes of our proposal we intend to mine PSG-maintained databases from 3 completed trials with sufficient duration (≥ 6 months) to generate meaningful conclusions on weight changes. Our analysis will be performed on the DATATOP (n=800), CALM-PD (n=301) and PRESTO (n=472) cohorts. To this end we propose the following specific aims:

Aim 1: To determine the incidence and temporal course of weight loss in PD using cohorts from DATATOP, CALM-PD and PRESTO. An attempt to estimate the prevalence and incidence of low BMI will be made. **Hypothesis:** PD patients will experience weight loss throughout the course of the disease and more frequently in advanced stages.

Aim 2: To determine whether demographics, motor, and non-motor disease characteristics are predictors of weight loss in PD. The effect of gender, age group, race, type of onset (akinetic-rigid vs tremor dominant), dementia, depression and motor fluctuations on the temporal course of weight changes will be explored. **Hypothesis:** Advancing age, akinetic-rigid PD motor subtype, advanced disease, longer duration, dyskinesias, cognitive impairment/dementia, and depression will be predictors of weight loss.

Aim 3: To determine the effect of specific antiparkinsonian medications on weight loss in PD by comparing different study cohorts. The possible effect of the amphetamine-like metabolites of MAOB inhibitors and dopamine agonists on weight will be explored. **Hypothesis:** Different medication may have different effects on weight controlling for demographic features and disease severity. Weight loss may be a key determinant in the progression of PD and may contribute to disease associated morbidity. There are preliminary data from small prospective studies that suggest that weight loss in PD patients appears to be a continuous process that starts before the diagnosis and continues to advanced stages. The possibility that a better understanding of the temporal course and predictors of weight loss may have an impact on the management of PD is a compelling notion. The proposed study has the potential to lead to further investigations on nutritional aspects of PD.”