

# Association between TUG and Anthropometric Values, Vibration Perception Threshold, FHSQ and 15-D in Type 2 Diabetes Mellitus Patients

Domínguez-Muñoz F.J.

Adsuar J.C.

Carlos-Vivas J.

Villafaina S.

Garcia-Gordillo M.A.

Hernández-Mocholi M.Á.

Collado-Mateo D.

Gusi N.

**Background:** Diabetes Mellitus (DM) is a chronic disease and it is characterized by reduced insulin sensitivity and/or impaired insulin production. It affects approximately 415 million people worldwide and involves a variety of complications. DM has a number of complications, including diabetic neuropathy. All of these complications can have effects on body composition, vibration perception threshold (VPT), foot health and health-related quality of life (HRQoL). **Objective:** The aim of this study is to determine the correlation between the Timed Up and Go (TUG), VPT, Foot Health Status Questionnaire and 15-D Questionnaire in type 2 diabetes mellitus (T2DM) patients. **Methodology:** A total of 90 T2DM patients (56 men and 34 women) were evaluated on their body composition, VPT, the foot health status through the FHSQ, the HRQoL was evaluated through the 15-D Questionnaire and the TUG test was performed. **Results:** Statistically significant associations were found between TUG and lean and fat mass, VPT, the sections "General Foot Health" and "Physical Activity" in the FHSQ questionnaire, and the 15D total score and its sections "Mobility" and "Depression".

**Conclusions:** There is a moderate direct correlation between the Timed Up and Go and the fat mass percentage and the vibration perception threshold. Moreover, there is a moderate inverse correlation between Timed Up and Go and fat-free mass, foot health and health-related quality of life in T2DM patients. Therefore, Timed Up and Go can be a tool to assist clinicians in monitoring and managing

T2DM patients.

15D

diabetes mellitus

FHSQ

HRQoL

TUG

vibration perception threshold