Abstract

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Title: Dynamometry as a prognostic and prediction marker

Dynamometry is a method for measuring muscle strength. It is one of the methods of biomechanical motion analysis. There are two types of dynamometry. Isokinetic dynamometry is based on isokinetic muscle contraction. In this contraction, the muscles change their length. Isometric dynamometry is based on isometric muscle contraction. The length of the muscle does not change during the contraction.

In my master thesis, 22 studies were included. Of this, 18 were engaged in a dynamometer, which measured muscle strength. Studies have been focused on prediction of short and long-term mortality, prognosis of hospitalized and severely ill patients, prediction of disease symptoms (cancer, chronic obstructive pulmonary disease, liver disease). I searched for studies according to the PubMed database.

In 16 studies, it was confirmed that dynamometry can be used in the present time as a reliable diagnostic, predictive and prognostic method. Dynamometry is characterized as a simple, objective, non-invasive, easily transposable and reproducible method.

Keywords: dynamometer, muscle strength, prediction marker, handgrip strength