

Test-retest reliability of vibration perception threshold test in people with type 2 diabetes mellitus

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Background: Diabetes mellitus is a chronic disease characterized by fasting hyperglycemia. It affects approximately 415 million people worldwide and involves a variety of complications. One of them is the loss of sensitivity to peripheral vibration. **Objective:** Our study aims to discover the test-retest reliability of a procedure for assessing vibration sensitivity in people with type 2 diabetes mellitus. **Methodology:** 90 people with type 2 diabetes mellitus (56 men and 34 women) performed the vibration perception threshold (VPT) test using the Vibratron II device. A re-test was completed seven days after the first reading. **Results:** The relative reliability of the VPT test result is excellent (intraclass correlation coefficient = 0.96). The same applies to gender and obesity subgroups. Regarding absolute reliability, the standard error of measurement is 8.99%, and the small real difference is 24.94%. **Conclusions:** The relative and absolute reliability results of the vibration perception threshold in people with type 2 diabetes mellitus offer excellent results. © 2020 by the authors. Licensee MDPI, Basel, Switzerland.

Reliability

Type 2 diabetes mellitus

Vibration perception threshold

Vibratron II

diabetes

obesity

perception

public health

reliability analysis

sensitivity analysis

adult

aged

anthropometry

Article

basal metabolic rate

body composition

body equilibrium

controlled study

correlation coefficient

female

glycosylation

human

major clinical study

male

non insulin dependent diabetes mellitus

perception test

proprioception

sensitivity analysis

test retest reliability

vibration perception threshold test