

The feasibility of Whole Body Vibration in institutionalised elderly persons and its influence on muscle performance, balance and mobility: a randomised controlled trial

Submission date 30/06/2005	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 06/07/2005	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 15/04/2008	Condition category Other	☐ Individual participant data

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific

Contact name

Prof Tony Mets

Contact details

Geriatric & Gerontology Department
Academic Hospital of the Free University of Brussels (AZ-VUB)
Laarbeeklaan 101
Brussels
Belgium
B-1090

Additional identifiers

Study information

Scientific Title

Study objectives

Whole Body Vibration is feasible in institutionalised elderly persons and improves the mobility and muscle performance compared to control.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Not provided at time of registration

Primary study design

Interventional

Study design

Randomised controlled trial

Study type(s)

Not Specified

Health condition(s) or problem(s) studied

Institutionalised elderly persons

Interventions

Intervention: A 6-week exercise program on a vertical vibration platform (Power-Plate, Badhoevedorp, The Netherlands), three times per week (with a minimum of 1-day rest in between) and consisting in 6 static exercises targeting lower limb muscles. The exercise volume and intensity being progressively increased according to the overload-principle.

Control: Exactly the same exercise program on the vibration platform as the intervention group, but without vertical vibration (the sound of the motor of the vibration platform being reproduced by a tape recorder during each bout of exercise).

Intervention Type

Other

Phase

Not Specified

Primary outcome(s)

Feasibility: taking into account continuation of the exercise program and/or occurrence of complications related to the Whole Body Vibration exercises.

Improvement due to the intervention: taking into account balance and gait (using the timed up-and-go test and Tinetti-test), upper limb and lower body flexibility (using the back scratch and chair sit-and-reach test), maximal grip strength (using a Martin vigorimeter device, Elmed, Addison, USA), closed chain bilateral leg extension (using a linear isokinetic multi-joint dynamometer, Aristokin®, Lode, Groningen, The Netherlands).

Key secondary outcome(s)

No secondary outcome measures

Completion date

15/12/2003

Eligibility

Key inclusion criteria

All residents of a nursing home (Van Zanden, Brussels, Belgium; capacity of 102 beds) within dependence categories O, A and B according to the scale of Katz et al. (1963) for basic activities of daily living.

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Senior

Sex

All

Key exclusion criteria

Mainly based on contra-indications for Whole Body Vibration: presence of infectious disease, insulin-dependent diabetes mellitus, endogenous osteosynthetical material, knee or hip prosthesis, pacemaker, epilepsy, musculo-skeletal disorders and cognitive or physical dysfunction interfering with test and training procedures.

Date of first enrolment

01/12/2003

Date of final enrolment

15/12/2003

Locations

Countries of recruitment

Belgium

Study participating centre

Geriatric & Gerontology Department

Brussels

Belgium

B-1090

Sponsor information

Organisation

Free University of Brussels (VUB) - Gerontology (Belgium)

ROR

<https://ror.org/006e5kg04>

Funder(s)**Funder type**

University/education

Funder Name

Free University of Brussels (VUB) - Gerontology

Results and Publications**Individual participant data (IPD) sharing plan****IPD sharing plan summary**

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	Results:	22/12/2005		Yes	No