ISRCTN62535013 https://doi.org/10.1186/ISRCTN62535013

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

Registration date
06/07/2005

Overall study status
Completed

Last Edited
15/04/2008

Condition category
Other

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
N/A

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

Study design
Randomised controlled trial

Primary study design
Interventional

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 occurence 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 osteosynthethical 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