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The effect of whole body vibration therapy on older people

Submission date	Recruitment status
12/05/2010	No longer recruiting
Registration date	**Overall study status**
12/05/2010	Completed
Last Edited	**Condition category**
17/09/2012	Injury, Occupational Diseases, Poisoning

[_] 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

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
5370

Study information

Scientific Title

The effect of whole body vibration therapy on older people: a single centre randomised intervention trial

Study objectives
Exercise based programmes reduce the risk of falling and can improve quality of life for older people, but they are unlikely to increase bone strength. Although muscles become weaker with ageing, strengthening exercises are effective in all age groups but require a sustained effort over long periods of time. Many people, irrespective of age, do not enjoy exercise and also the type of exercise necessary to increase muscle and bone strength is difficult for the more frail to perform.

Whole body vibration (WBV) has been reported to increase muscle strength and power, bone mineral density, balance and speed of movement all factors affecting the risk of both falling and sustaining a subsequent injury. The literature suggests that it is more effective for older and frail people than young highly trained ones. As relatively little effort is required for short periods the technique has real potential for improving the physical status of older people.

We have therefore incorporated WBV exercise into a strength and balance exercise class run for older individuals who have had multiple falls. This randomised controlled trial is conducted over 8 weeks with measures of strength, balance, bone strength and health related quality of life being made at the start of the class, 4 weeks and at the end of the class. In addition a number of subjects will have a 6-month follow up.

Ethics approval required
Old ethics approval format

Ethics approval(s)
St Thomas' Hospital Research Ethics Committee approved on the 9th June 2008 (ref: 08/H0802 /65)

Study design
Single centre randomised interventional trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
GP practice

Study type(s)
Treatment

Participant information sheet
Not available in web format, please use the contact details below to request a patient information sheet

Health condition(s) or problem(s) studied

Topic: Generic Health Relevance and Cross Cutting Themes; Subtopic: Generic Health Relevance (all Subtopics); Disease: Age and ageing

Interventions
Intervention group: performing WBV for 5 mins at the end of the exercise class at a frequency of 15 - 30 Hz and amplitude of 1 - 4 mm
Control group: exercise class only

The exercise class runs 3 x per week for 8 weeks. The WBV group perform an additional 5 minutes of WBV at the end of each class. A follow up is performed 6 months after completion of the class.

Study entry: single randomisation only.

Intervention Type
Other

Phase
Not Applicable

Primary outcome measure
Physiological Profile Assessment, measured before and immediately upon completion of the exercise class

Secondary outcome measures
1. Six-metre walk test, measured at baseline, 4 and 8 weeks
2. Berg Balance Scale, measured at baseline, 4 and 8 weeks
3. Blood Analysis for markers of bone turnover, measured at baseline and 8 weeks
4. Falls Efficacy Scale - International (FES-I), measured at baseline and 8 weeks
5. 12-item short form health survey (SF12) version 2, measured at baseline and 8 weeks
6. Timed Up and Go Test, measured at baseline, 4weeks and 8 weeks

Overall study start date
01/09/2007

Completion date
30/05/2009

Eligibility

Key inclusion criteria
1. Men and women of all ages
2. Having had one or more falls
3. Attending the strength and balance group run in the Older Person Assessment Unit at Guy's Hospital

Participant type(s)
Patient

Age group
Adult

Sex
Both

Target number of participants
Planned sample size: 70

Key exclusion criteria
1. Artificial joints
2. Mini-mental state examination (MSSE) less than 20

Date of first enrolment
01/09/2007

Date of final enrolment
30/05/2009

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
King's College London
London
United Kingdom
WC2R 2LS

Sponsor information

Organisation
Kings College London (UK)

Sponsor details
Strand
London
England
United Kingdom
WC2R 2LS

Sponsor type

University/education

Website
http://www.kcl.ac.uk/

ROR
https://ror.org/0220mzb33

Funder(s)

Funder type
Charity

Funder Name
Research into Ageing (UK)

Results and Publications

Publication and dissemination plan
Not provided at time of registration

Intention to publish date

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	01/10/2012		Yes	No