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# The effect of whole body vibration therapy on older people

**Submission date**
12/05/2010

**Recruitment status**
No longer recruiting

**Registration date**
12/05/2010

**Overall study status**
Completed

**Last Edited**
17/09/2012

**Condition category**
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

**Protocol serial number**
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)

## Primary study design
Interventional

## Study design
Single centre randomised interventional trial

## Study type(s)
Treatment

## 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(s)
Physiological Profile Assessment, measured before and immediately upon completion of the exercise class

### Key secondary outcome(s)
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

### 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

### Healthy volunteers allowed
No

### Age group
Adult

### Sex
All

### 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**
United Kingdom

England

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

# Sponsor information

**Organisation**
Kings College London (UK)

**ROR**
https://ror.org/0220mzb33

# Funder(s)

**Funder type**
Charity

**Funder Name**
Research into Ageing (UK)

# 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 | | | | |

| | | | |
|---|---|---|---|
| Results article | 01/10/2012 | Yes | No |