

## **Feasibility of exergaming to improve balance in older adults living in the community.**

### **What am I doing?**

I am comparing methods of balance training with those that don't train balance at all. In this study, there are two methods to train balance; the balance classes that are already running as part of the Staying Steady balance training programme across Gateshead and a balance focused Exergaming (exercise with computer games) programme. It is important that I compare these two forms of balance training with individuals that do nothing to maintain or improve their balance in the hope to see that exergames are indeed better for fall prevention than just doing nothing and are as effective as current methods of balance training and fall prevention.

### **In the end, why am I doing it?**

To see if exergaming can be an additional community wide option available for individuals interested in using it to train balance and assist in the prevention of falls for the older individual.

### **What do I need from you?**

I am looking for individuals that meet certain criteria to be part of the "no exercise group". This means that you will not have to take part in any of the training programmes. You will just need to schedule two assessment visits with myself to answer some questionnaires, have a physical activity monitor attached to your lower back with sticky tape and perform 14 balance tasks which are based on every day movements. You will then go about your daily activities as usual for 6 weeks. After 7 days, we will take off the activity monitor and you will schedule the second assessment visit in 5 weeks time. After the 5 weeks have passed we will do the exact same procedure again and after the 7 days activity monitoring you will be finished with the study.

### **What are the questionnaires about?**

The questionnaires are to obtain your perception of:

- Your general health
- Your mental state of mind
- Your levels of fatigue in doing your daily activities
- Your fear of falling over when going about daily activities
- Your balance confidence in and around the house and outdoors too.
- Your levels of depression

### **What is a physical activity monitor and why do I need to monitor your physical activity?**

The physical activity monitor is a small device that tells us about your levels of activity. It by no means gives us personal information on you or individuals in your immediate environment. There is video/audio recording software on the device. The device just monitors direction and acceleration. Once we crunch the numbers we can see if you have been more or less active 6 weeks apart.

The device can be stuck onto the skin with a medical sticky pad and covered over with an adhesive non-woven fabric and waterproof bandage. It can be worn in the shower no problem but we do ask if you have a bath or go swimming to take it off and pop it back on when you are done.

### **What are the 14 balance tasks?**

The 14 balance tasks will be observed by myself and I will make a judgement on your balance based on the score you receive at the end of the session. The 14 tasks resemble everyday situations where your balance may or may not be compromised. They include some sit to standing tasks, standing tasks on both one and two legs and some walking tasks.

### **What are the criteria to be involved?**

As part of my research I have to obtain specific criteria for individuals to meet. Seeing as we just finding out if this method to train balance is possible we have to test it on healthier populations before applying it to those with more disabling conditions. The inclusion criteria below are as follows:

- You must be aged 60 years or above
- You must not have been involved in a balance training programme 3 months prior to the assessment date.
- You must have had 1-2 falls in the last 12 months
- You must be without neurological, musculoskeletal or medical conditions that affect your ability to do everyday activities.
- You must be able to walk freely without assistance.

I will initially meet you to hand you the questionnaires (that can be completed at home) and we can arrange a date and time that suits to come to Deckham Village Hall in Gateshead for the balance assessment. Each session should last no longer than an hour.

If you feel you meet the criteria and are interested in taking part in this research please contact myself via email or via phone.

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