



PARTICIPANT RECRUITMENT EMAIL

Ethical Approval Number: LRS-18/19-8994

Title: 'The relationship between dual-task gait performance, physical activity levels, sleep and aging in healthy adults'.

Healthy volunteers aged 18-80 required for assessing the relationship between dual-task performance, physical activity levels, sleep and aging.

Circular email to be used for recruitment of volunteers for study Reference: LRS-18/19-8994, approved by the Biomedical Sciences, Dentistry, Medicine and Mathematical Sciences Research Ethics Subcommittee, King's College London. This project contributes to the College's role in conducting research, and teaching research methods. You are under no obligation to reply to this email, however if you choose to, participation in this research is voluntary and you may withdraw at any time without providing any reason for your decision.

We are recruiting volunteers for our study investigating the effects of a range of factors including cognitive task (numeracy, literacy) type, auditory noise, cognitive (thinking) function, physical activity levels, sleep and aging on the ability to perform complex gait tasks (i.e. walking while turning your head) with and without simultaneous performance of a secondary task (i.e. walking while performing a maths task) in healthy adults.

We are looking for healthy adults aged 18-80 years old without known inner ear disorder, neurological and/or orthopaedic/ musculoskeletal disorder influencing balance control, gait and/or cognitive function.

The co-ordination and control of body segments are integral in providing and maintaining postural stability. It is widely accepted that attentional demands for postural control are placed upon the individual, but these vary according to the nature of the task, the age of the individual and their postural stability. It is thought that divided attention (a technique whereby two tasks are performed at the same time whilst rapidly switching attention between the two tasks) is commonly used when multi-tasking. Divided attention may have important clinical implications to falls risk, in that older adults that experience falls have increased difficulty in switching attention between tasks such as walking and talking. Dual tasking paradigms which present postural and cognitive tasks are often used to test attentional demands for posture control and interference between the two tasks. At present it is not known what impact balance confidence, sleep, activity levels or cognitive ability impact on a person's ability to multi-task when performing complex walking tasks that reflect the complexity of mobilising in real-life situations.

The study itself requires you to attend a research laboratory at the Centre for Human and Applied Physiological Sciences, Guy's Campus, at King's College London. You will be required to complete some questionnaires regarding balance confidence, psychological state, sleep and physical function and to undertake some simple tests of cognitive function. You will also undertake a brief dynamic balance assessment and the dual-task gait test. The dual-task component involves two cognitive tasks (a numeracy and a literacy task) or auditory task. The

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gait test will be performed separately and then together with each of two cognitive tasks or auditory task. The whole test session will take approximately 2 hours to perform.

Prior to participating in the study, you will be required to fill in a brief screening questionnaire; this will take approximately 5 minutes to complete. If you agree to participate and you meet the eligible criteria, you will be invited to the research laboratory for the first appointment during which you will have to sign the written consent form, after any concerns have been discussed or any questions have been answered that you may have related to the study. On the day, you will, also, be provided a physical activity monitor (accelerometer) to wear on your wrist for 24 hours a day, seven days a week on the week prior to the beginning of the single testing session, which will be performed at the second appointment at research laboratory again. The physical activity device which you will wear is waterproof and can be worn during all daily activities.

If you are interested in taking part in the study, would like further information or would like to discuss the study then please contact:

Miss Viktoria Azoidou, by email at viktoria.azoidou@kcl.ac.uk or by phone on 0 207 848 6679