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Volunteers needed to Test the Link Between Blood Pressure and Brain Power

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Researchers at the University of Birmingham are looking for volunteers to be part of a unique study, funded by the British Heart Foundation, which aims to find out whether having high blood pressure has a negative effect on our memory and attention span.

Nearly 16 million people in the UK suffer from high blood pressure, but how it can affect the brain is not well understood.

Now researchers from the Schools of Medicine and Sport and Exercise Sciences are looking for 50 healthy volunteers aged between 30 and 50, to help assess how high blood pressure can alter the electrical activity in the brain. Each volunteer will be paid £30 for taking part in the research and have travel expenses paid.

Dr Louisa Edwards explains: “Some earlier studies have shown that people with high blood pressure do worse on tests of attention and memory. But there hasn’t been much work done to investigate why this happens and how we can use this information to help identify people at risk of developing high blood pressure

We want to try and link any effects on attention and memory to specific electrical changes in the brain. This could help locate the source of the problems in the brain.”

The study is split into two parts: firstly volunteers will be asked to wear a blood pressure monitor for 24 hours. Each participant will then be asked to perform two simple tests that measure memory and attention span, whilst the research team monitor changes to electrical activity in the brain.

Louisa continues “We will be asking everyone to try the same simple tests, firstly we will ask our volunteers to press a button every time they hear a pip in a series of pops. This is designed to test attention and concentration. The second test focuses on visual memory by getting people to memorise sequences of flashing lights as they appear on a board. This starts off as a very simple task but gets progressively more difficult.”

Dr Una Martin who runs the hypertension service at University Hospital Birmingham adds: “High blood pressure is an incredibly common condition in the UK. Most people are aware of the long term damage it can do to the arteries, but in many cases the symptoms of hypertension are not obvious. This makes identifying people at risk even more important.

The long term goal of this research is to understand the changes in the brain that are linked to high blood pressure. This could lead to the development of a test to identify which people may be at the greatest risk of developing high blood pressure.”

To take part in the study contact Louisa Edwards on 0121 4158785 or email l.edwards@bham.ac.uk

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For further information contact: Ben Hill, Press Officer, University of Birmingham, Tel 0121 4145134, Mob 07789 921 163 – Dr Louisa Edwards is available for interview.

NOTES TO EDITORS

The School of Sport and Exercise Sciences

The School has an excellent research base. It achieved a 5*A rating in 2001 national Research Assessment Exercises (RAE), the highest rating available. Recently, the HEFCE research re-grading exercise among 5* departments has elevated the School's rating from 5* to 6*. The School’s research activities are organised into three broad areas: Exercise Physiology; Motor Control and Applied Psychology.

There are currently over 40 postgraduates pursuing PhD degrees within the School.

Our expertise has had a significant influence on the sporting world in general, with some of our academic staff being invited to consult on the training and nutrition for several top athletes in Europe, UK Athletics and some Premiership football clubs.

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