ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Arterial Elasticity and Aging

Cognitive Neuroimaging Lab at the Beckman Institute
Exercise Psychology Lab at Freer Hall

If you are 50-70 years old, we would like to invite you to participate in a study we are conducting at the University of Illinois. **The purpose of this research is to investigate the relationship between arterial health and aging, and how fitness may play a role in this relationship.**

We are asking participants to come in for 5 sessions now, and we will invite you back to repeat those 5 sessions 2 ½ years from now. The sessions will last between 30 minutes and 4 hours.

Session 1 will include several measures of cognitive and motor function. We also have a mock-up of the real MRI (Magnetic Resonance Imaging) scanner which you will try out so that you will be familiar with what will happen in session 4.

Session 2 will involve an exercise test which may involve walking on an inclined treadmill or walking on an indoor track. We may also ask your permission to contact your physician regarding participation in the exercise testing. You will also be given a motion sensor (worn on a belt or the wrist) to wear for 7 days/nights.

Session 3 will involve a finger prick to collect a small sample of blood to measure cholesterol and sugar levels. You will be asked to fast for 12 hours prior to this session, so it will be scheduled in the morning hours.

Session 4 will be the MRI session. While lying in the scanner, we will collect several types of images designed to measure brain structure and function. To assess the reactivity of arteries in the brain, we will ask you to breathe a mixture of 5% CO_2 (carbon dioxide) in air for 1 minute followed by breathing regular air. Breathing the CO_2 mixture will feel similar to holding your breath or breathing into a paper bag for a short period.

Session 5 will be the optical imaging session. This is a safe brain imaging technique that uses light to measure the elasticity and reactivity of the arteries in the brain. We will collect images while sitting quietly and also while breathing the CO_2 in air mixture similar to session 4.

Contact information

We very much hope that you will be able to help us explore the relationship between brain/arterial health and aging. If you would like to participate in this study, please contact us at **(217) 244-1619** or by e-mail at **CNL-subjects@illinois.edu**. The first step will be a preliminary phone screening which should take about 15-20 minutes.

Appointments can be made to suit your schedule (mornings, afternoons, or evenings). Parking will be provided, and we offer **$15/hour** to compensate you for your time.

We look forward to talking with you more about this exciting study.

This research is approved by the Institutional Review Board of the University of Illinois.