New tests in BLSA  Aging affects many aspects of movement, coordination and sleep. This year, we are adding several new tests, including a more detailed neurological examination during the physical exam, a test of reaction times, and a substudy on sleep. Starting in the summer of 2016, BLSA will introduce a test that measures your ability to move your hand smoothly between two targets. The ability to coordinate movements is critical for many daily tasks and is affected by age and brain health.

Study of Sleep and Aging  Healthy sleep is emerging as one important key to healthy aging. All BLSA participants will be asked to complete a sleep questionnaire during their regularly scheduled exam. For those BLSA participants who are already taking part in the special study involving PET scans of the brain, you may now choose to also take part in a study of sleep. Participants will undergo an overnight examination of brain and breathing activity during one night at the end of their usual visit.

Message from the BLSA Director  Thank you to everyone who reached out to us with thoughts about the newsletter. We appreciate all your helpful feedback. Keep it coming! Remember to please be sure we have your current email address so we can send you each issue of our newsletter.

Send us a note by email, BLSA_Newsletter@nih.gov or by mail, BLSA Newsletter, 3001 S Hanover St Baltimore, MD 21225.

BLSA represents NIA at the USA Science and Engineering Festival  Held April 15-17, 2016, this signature event attracts thousands of youth and families to the Washington Convention Center. The NIA booth, set within the NIH cluster, allowed young people to try some of the same tests that you all perform as BLSA participants. The booth was manned by BLSA investigators and staff. We had a great turnout and an enthusiastic response from the attendees. Thanks so much to our volunteers and to Kim Calvin of the NIA Office of Communications & Public Liaison.
Recent Findings from the BLSA

Inner Ear Function Affects Visual Spatial Ability While inner ear (vestibular) function is important for balance, less is known about how it affects ability to perceive how objects relate to each other in space. This study found that people who have better inner ear function also do better on tests of spatial orientation. Association Between Visuospatial Ability and Vestibular Function in the Baltimore Longitudinal Study of Aging Bigelow RT Semenov YR Trevino C Ferrucci L Resnick SM Simonsick EM Xue QL Agrawal Y J Am Geriatrc Soc 2015 Sep;63(9):1837-44

What is the Best Way to Measure Fatigue? Feeling tired affects ability to live a full life. But fatigue but has been difficult to measure because some people feel tired only when they have done heavy physical activity while others feel tired even when resting. This new scale, evaluated in BLSA, measures “fatigability” (how tired people get during a standardized task). The Pittsburgh Fatigability scale for older adults: development and validation Glynn NW Santanasto AJ Simonsick EM Bourdreaux RM Beach SR Schulz R Newman AB J Am Geriatr Soc 2015 Jan;63(1):130-5


Energy Capacity of Muscle and Walking Speed Walking speed slows and aerobic fitness declines with age, but the reasons are not clear. Using a cutting-edge imaging technique to measure the ability of muscle to generate energy, older people were found to have lower ability to generate energy, which was related to walking speed and fitness. Older people with better ability to generate energy performed better. 31P Magnetic Resonance Spectroscopy Assessment of Muscle Bioenergetics as a Predictor of Gait Speed in the Baltimore Longitudinal Study of Aging Choi S Reiter DA Shardell M Simonsick EM Studenski S Spencer RG Fishbein KW Ferrucci L J Gerontol .Med Sci 2016 Apr Epub ahead of print

Energy Consumption During Usual Walking Affects Future Walking Ability Just as a car engine that uses more gas per mile may be inefficient, people who use more energy to walk have “walking inefficiency,” which can make walking more difficult and tiring. This study shows that walking efficiency affects future mobility and should be a target for preventive interventions. Rising Energetic Cost of Walking Predicts Gait Speed Decline With Aging Schrack JA Zipunnikov V Simonsick EM Studenski S Ferrucci L J Gerontol Med Scie 2016 Feb Epub ahead of print

Dental Health in Midlife Affects Later Cardiovascular Disease People with better dental health in midlife (age in the fifth decade) who had less periodontal disease and fewer root canal treatments were less likely to develop cardiovascular disease later in life. Apical periodontitis and incident cardiovascular events in the Baltimore Longitudinal Study of Ageing Gomes MS Hugo FF Hilgert JB Sant’Ana Filho M Padilha DM Simonsick EM Ferrucci L Reynolds MA 2016 Apr;49(4):334-42