

# The Baltimore Longitudinal Study of Aging Newsletter

## Message from the Director Stephanie Studenski, M.D., M.P.H.

Welcome to the new BLSA Newsletter! We look forward to sharing stories, pictures and accomplishments of the study with you. The newsletter will be part of your appointment package and also available on the Participant Section of the BLSA website at [www.blsa.nih.gov](http://www.blsa.nih.gov). We know that BLSA is only successful because of your continued support and commitment. If you have ideas or suggestions for future issues of the newsletter, please send us an email at [nia\\_blsa\\_newsletter@mail.nih.gov](mailto:nia_blsa_newsletter@mail.nih.gov) or a letter at BLSA Newsletter, 3001 S Hanover St Baltimore MD 21225.

### “What’s that mask for?”

In BLSA, you are asked to wear a special breathing mask while you lie still and while you walk. The mask measures how much oxygen is needed by your body during these activities. We use this measure to estimate how much energy your body uses and how much spare energy you have. We have found that energy use and reserve energy are affected by aging and that alterations in walking affect energy efficiency. We expect these findings to lead to ways to preserve energy with aging and to develop new exercises to prevent and treat inefficient walking.



## Interview: Luigi Ferrucci MD PhD, Scientific Director, NIA and prior Director BLSA

**Q:** What do you find most exciting about your new position as Scientific Director?

**A:** As a trained geriatrician and scientist, I am especially committed to bringing together the many strands of research in the Intramural Program. My view of aging research is broad, and encompasses the integration of biological mechanisms with clinical science. Because I believe that synthesis of knowledge will lead to great breakthroughs, I am working to promote more collaboration among our scientists.

**Q:** What are your hopes for the future for BLSA?

**A:** In the past, much of the work of BLSA focused on individual body systems. During my time as BLSA Director, I worked to build an approach that focuses on how aging affects interactions among many body systems to bring about effects on the whole person. By linking a multiple system approach with cutting edge biology and outcomes that are important for successful aging, I hope the BLSA will produce important new insights that will benefit older adults and society.

## NIA News

With support from NIA and others, the Institute of Medicine recently released a Report on Cognitive Aging, describing normal cognitive changes with age, impact on individuals and society, and proposals for future action.

Research has shown that brain cells do not die with normal aging but undergo changes in the way they connect to each other. Findings suggest that cognitive aging may be modifiable. You may be able to promote your cognitive health through physical activity, health behaviors that reduce risk for heart disease, reviewing medication with your doctor to check for drugs that can affect cognition, good sleep practices and possibly, mental exercise. Because acute confusion and delirium may result from acute illness and can lead to long term cognitive problems, it is also important for health care providers to help you prevent these conditions during hospitalization. See [www.iom.edu/Reports/2015/Cognitive-Aging.aspx](http://www.iom.edu/Reports/2015/Cognitive-Aging.aspx)

In a related development, NIH recently provided recommendations to transform Alzheimer's disease research. A special Summit helped to identify key themes most relevant for human studies including the need to study all aspects of healthy brain aging and cognitive resilience, new opportunities related to wearable sensors and the importance of engaging the public, patients and caregivers as research partners. See [www.nia.nih.gov/newsroom/2015/05/nih-summit-delivers-recommendations-transform-alzheimers-disease-research](http://www.nia.nih.gov/newsroom/2015/05/nih-summit-delivers-recommendations-transform-alzheimers-disease-research).

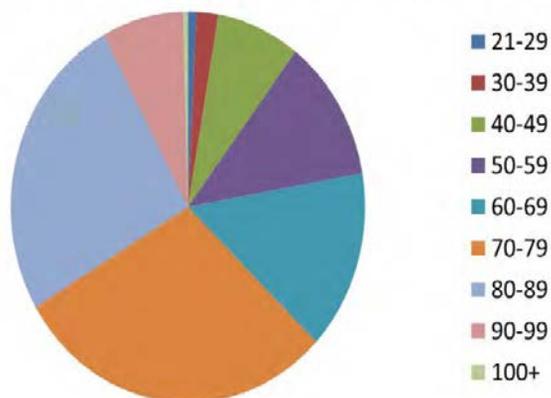
## BLSA Findings

Dr. Jennifer Schrack, PhD, started out as a member of the NIA clinical staff, performing treadmill tests for BLSA. She was inspired by her work with the study to complete a PhD and postdoctoral training in the epidemiology of aging and is now an Assistant Professor of Epidemiology at Johns Hopkins University. She studies how resting metabolic rate (RMR) reflects health in aging among BLSA participants. RMR reflects the energy needed for basic body functions, and can be considered a marker of the rate of living. It is measured by the volume of oxygen consumed at rest, corrected for body size and composition. While in general, the RMR declines with aging, Dr. Schrack has shown that chronic disease tends to increase the RMR, perhaps because more energy is needed to repair tissues and maintain inefficient metabolic processes. A high RMR can reduce the amount of energy available for activities and may contribute to age-related fatigue. In addition, the RMR appears to increase prior to the onset of new conditions, perhaps serving as a warning sign of deteriorating health. Ultimately, Dr. Schrack and others at BLSA hope to identify the biological causes of this RMR increase and develop novel treatments that help the aging body operate efficiently. (see Fabbri et al J Gerontol A Nov 2014, Schrack et al J Am Geriatr Soc April 2014)

## Your Questions about BLSA

How old are BLSA participants? How many visits have they made? See our pie charts below where each "slice" represents the % in the age or visit number category.

**BLSA Participant Age at Most Recent Visit**



**Number of Visits**

