ON-LINE APPENDIX: RESEARCH INVESTIGATORS FOR THE LIFE STUDY

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Dr Thomas Gill (Yale University) is the recipient of an Academic Leadership Award (K07AG3587) from the National Institute on Aging.

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Administrative Coordinating Center, University of Florida, Gainesville, Florida
Marco Pahor, MD, Principal Investigator of the LIFE Study
Jack M. Guralnik, MD, PhD, Co-Investigator of the LIFE Study (University of Maryland School of Medicine, Baltimore, Maryland)
Christiaan Leeuwenburgh, PhD
Connie Caudle
Lauren Crump, MPH
Latonia Holmes
Jocelyn Lee, PhD
Ching-ju Lu, MPH

Data Management, Analysis, and Quality Control Center, Wake Forest University, Winston-Salem, North Carolina
Michael E. Miller, PhD, Data Management, Analysis, and Quality Control Center Principal Investigator
Mark A. Espeland, PhD, Data Management, Analysis, and Quality Control Center Co-Investigator
Walter T. Ambrosius, PhD
William Applegate, MD
Daniel P. Beavers, PhD, MS
Robert P. Byington, PhD, MPH, FAHA

Delilah Cook, CCRP
Curt D. Furberg, MD, PhD
Lea N. Harvin, BS
Leora Henkin, MPH, MEd
John Hepler, MA
Fang-Chi Hsu, PhD
Laura Lovato, MS
Wesley Roberson, BSBA
Julia Rushing, BSPH, MStat
Scott Rushing, BS
Cynthia L. Stowe, SPH
Michael P. Walkup, MS
Don Hare, BS
W. Jack Rejeski, PhD
Jeffrey A. Katula, PhD, MA
Peter H. Brubaker, PhD
Shannon L. Mihalko, PhD
Janine M. Jennings, PhD

National Institutes of Health, Bethesda, Maryland
Evan C. Hadley, MD (National Institute on Aging)
Sergei Romashkan, MD, PhD (National Institute on Aging)
Kushang V. Patel, PhD (National Institute on Aging)

National Heart, Lung, and Blood Institute, Bethesda, Maryland
Denise Bonds, MD, MPH

Field Center: Northwestern University, Chicago, Illinois
Mary M. McDermott, MD, Field Center Principal Investigator
Bonnie Spring, PhD, Field Center Co-Investigator
Joshua Hauser, MD, Field Center Co-Investigator
Diana Kerwin, MD, Field Center Co-Investigator
Kathryn Domanchuk, BS
Rex Graff, MS
Alvito Rego, MA

Field Center: Pennington Biomedical Research Center, Baton Rouge, Louisiana
Timothy S. Church, MD, PhD, MPH, Field Center Principal Investigator
Steven N. Blair, PED (University of South Carolina)
Valerie H. Myers, PhD
Ron Monce, PA-C
Nathan E. Britt, NP
Melissa Nauta Harris, BS
Ami Parks McGucken, MPA, BS
Ruben Rodarte, MBA, MS, BS
Heidi K. Millet, MPA, BS
Catrine Tudor-Locke, PhD, FACSM
Ben P. Butitta, BS
Sheletta G. Donatto, MS, RD, LDN, CDE
Shannon H. Cocreham, BS

Field Center: Stanford University, Palo Alto, California
Abby C. King, PhD, Field Center Principal Investigator
Cynthia M. Castro, PhD
Field Center: Tufts University, Boston, Massachusetts
Roger A. Fielding, PhD, Field Center Principal Investigator
Miriam E. Nelson, PhD, MD, Field Center Co-Investigator
Sara C. Folta, PhD, Field Center Co-Investigator
Edward M. Phillips, MD
Christine K. Liu, MD
Erica C. McDavitt, MS
Kieran F. Reid, PhD, MPH
Dylan R. Kirn, BS
Evan P. Pasha, BS
Won S. Kim, BS
Vince E. Beard, BS
Eleni X. Tsiroyannis, BS
Cynthia Hau, BS, MPH

Field Center: University of Florida, Gainesville, Florida
Todd M. Manini, PhD, Field Center Principal Investigator
Marco Pahor, MD, Field Center Co-Investigator
Stephen D. Anton, PhD
Susan Nayfield, MD
Thomas W. Buford, PhD
Michael Mariske, PhD
Bhanuprasad D. Sandesara, MD
Jeffrey D. Knaggs, BS
Megan S. Lorow, BS
William C. Marena, MT, CCRC
Irina Korytov, MD
Holly L. Morris, MSN, RN, CCRC (Brooks Rehabilitation Clinical Research Center, Jacksonville, Florida)
Margo Fitch, PT (Brooks Rehabilitation Clinical Research Center, Jacksonville, Florida)
Floris F. Singletary, MS, CCC-SLP (Brooks Rehabilitation Clinical Research Center, Jacksonville, Florida)
Jackie Causer, BSH, RN (Brooks Rehabilitation Clinical Research Center, Jacksonville, Florida)
Katie A. Radcliff, MA (Brooks Rehabilitation Clinical Research Center, Jacksonville, Florida)

Field Center: University of Pittsburgh, Pittsburgh, Pennsylvania
Anne B. Newman, MD, MPH, Field Center Principal Investigator
Stephanie A. Studenski, MD, MPH, Field Center Co-Investigator
Bret H. Goodpaster, PhD
Nancy W. Glynn, PhD
Oscar Lopez, MD
Neelesh K. Nadkarni, MD, PhD
Kathy Williams, RN, BSEd, MHSA
Mark A. Newman, PhD
George Grove, MS
Janet T. Bonk, MPH, RN

Jennifer Rush, MPH
Piera Kost, BA (deceased)
Diane G. Ives, MPH

Field Center: Wake Forest University, Winston-Salem, North Carolina
Stephen B. Kritchevsky, PhD, Field Center Principal Investigator
Anthony P. Marsh, PhD, Field Center Co-Investigator
Tina E. Brinkley, PhD
Jameh S. Demons, MD
Kaycee M. Sink, MD, MAS
Kimberly Kennedy, BA, CCRC
Rachel Shertzer-Skinner, MA, CCRC
Abbie Wrights, MS
Rose Fries, RN, CCRC
Deborah Barr, MA, RHEd, CHES

Field Center: Yale University, New Haven, Connecticut
Thomas M. Gill, MD, Field Center Principal Investigator
Robert S. Axtell, PhD, FACSM, Field Center Co-Investigator
(Southern Connecticut State University, Exercise Science Department)
Susan S. Kashaf, MD, MPH (VA Connecticut Healthcare System)
Nathalie de Rekeneire, MD, MS
Joanne M. McGloin, MDiv, MS, MBA
Karen C. Wu, RN
Denise M. Shepard, RN, MBA
Barbara Fennelly, MA, RN
Lynne P. Iannone, MS, CCRP
Raeleen Mautner, PhD
Theresa Sweeney Barnett, MS, APRN
Sean N. Halpin, MA
Matthew J. Brennan, MA
Julie A. Bugaj, MS
Maria A. Zenoni, MS
Bridget M. Mignosa, AS

Field Center: Cognition Coordinating Center, Wake Forest University, Winston-Salem, North Carolina
Jeff Williamson, MD, MHS, Center Principal Investigator
Kaycee M Sink, MD, MAS, Center Co-Investigator
Hugh C. Hendrie, MB, ChB, DSc (Indiana University)
Stephen R. Rapp, PhD
Joe Verghese, MB, BS (Albert Einstein College of Medicine of Yeshiva University)
Nancy Woolard
Mark Espeland, PhD
Janine Jennings, PhD
Valerie K. Wilson, MD

Field Center: Electrocardiogram Reading Center, University of Florida, Gainesville, Florida
Carl J. Pepine MD, MACC
Mario Ariet, PhD
Eileen Handberg, PhD, ARNP
Daniel Deluca, BS
**ON-LINE FIG 1.** LIFE MRI study flow at baseline. The LIFE study began in March 2010, and LIFE MRI began in December 2010.

**ON-LINE FIG 2.** Sample ROI placement in the right hemisphere. A, The last section on which visible CSF is found. B, Then the 4 × 1 cm ROI (green box) is placed on the section where the ventricle is visible, 1 section below A. The minimum intensity projection is used over 3 sections (4.5 mm) to improve visualization of the continuity of low-intensity venous structures.

**ON-LINE FIG 3.** Sample right hemisphere ROIs of individuals with low (A) and high (B) tortuosity ratios.

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**On-line Table: Inclusion/exclusion criteria for the LIFE MRI study**

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
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<tbody>
<tr>
<td><strong>Parent study criteria</strong></td>
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<tr>
<td>1) Age 70–89 years</td>
<td>1) 3MS score ≥1.5 SDs below education- and race-specific norms</td>
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<tr>
<td>2) Sedentary activity level: &lt;20 minutes per week of regular physical activity in the past month and &lt;125 minutes per week of moderate physical activity</td>
<td>2) Inability to safely participate in the intervention as determined by medical record review, physical exam, and electrocardiogram</td>
</tr>
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<td>3) High risk of mobility disability: ≤9 on the Short Physical Performance Battery</td>
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<td>4) Ability to walk 400 m in &lt;15 minutes without sitting, leaning, or getting assistance</td>
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<tr>
<td><strong>LIFE MRI-specific criteria</strong></td>
<td></td>
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<tr>
<td>1) Willingness to complete an MRI scan at study baseline and after 2 years</td>
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</tr>
</tbody>
</table>

N=216 Enrolled in LIFE study at Pittsburgh site

N=101 Screened

N=39 Refused or ineligible

N=62 Enrolled

N=9 Not used in this analysis
N=3 at 3T MRI
N=2 no SWI sequences
N=4 poor quality scans

N=53 Analyzed