

Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Rejeski WJ, Ip EH, Bertoni AG, et al. Lifestyle change and mobility in obese adults with type 2 diabetes. *N Engl J Med* 2012;366:1209-17.

SUPPLEMENTAL APPENDIX

Table of Contents	Page #
1. Table 1: Percent Reporting Exercise Related Symptoms by Group.....	2
2. Fig. 1: The CONSORT Diagram.....	3
3. Fig. 2: The 9-State Empirically Derived Model.....	4
4. Look AHEAD Research Groups, Central Resource Centers, and Federal Sponsors.....	5-7

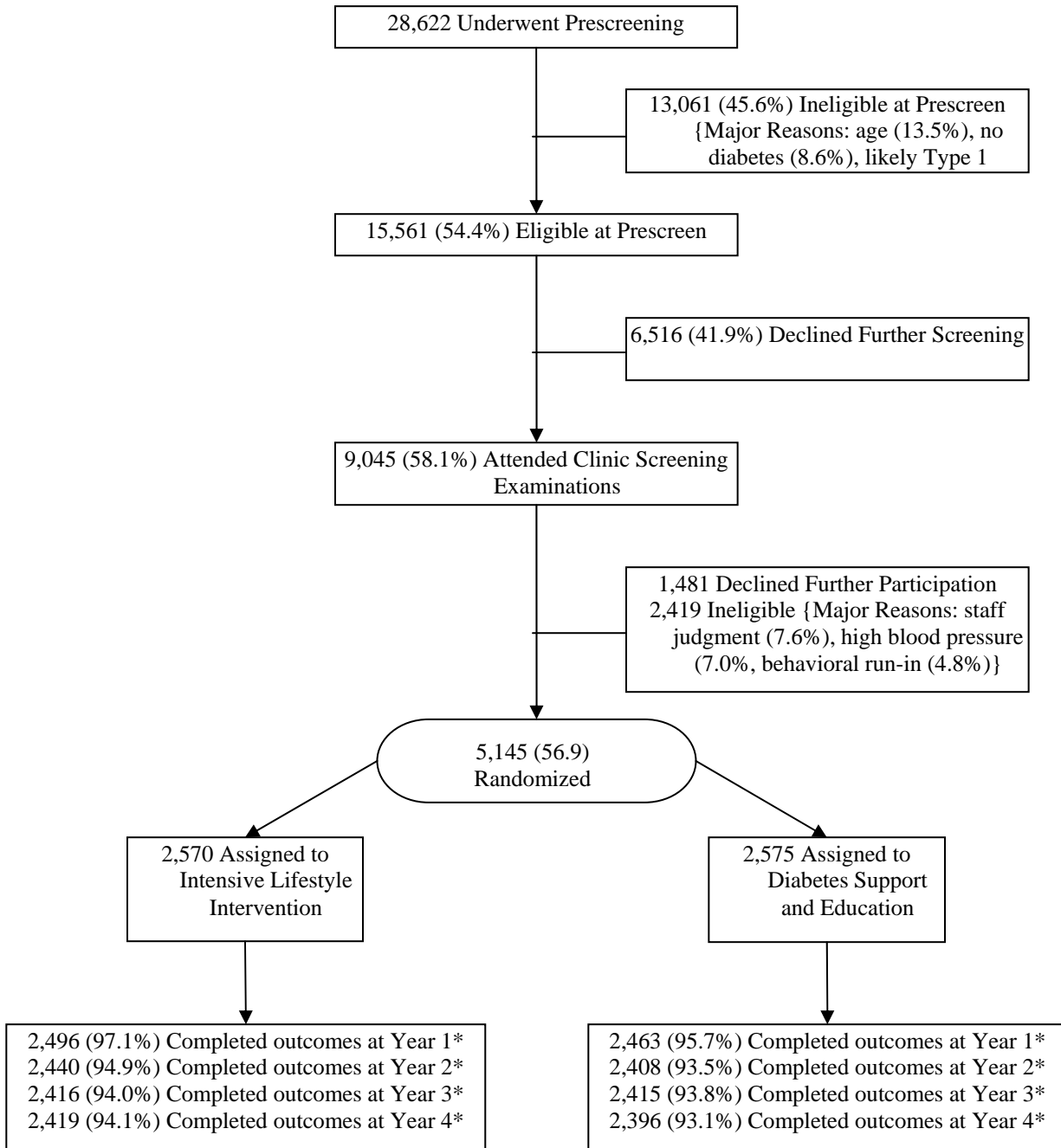
Supplement Table 1

Percent Reporting Exercise Related Symptoms by Group

Question (YES/NO)		Treatment Group		Chi-Square P-value
		Diabetes Support And Education	Intensive Lifestyle Intervention	
Q1	Baseline	793 (30.9%)	813 (31.7%)	0.5101
	Year 1	868 (36.4%)	891 (36.6%)	0.8866
	Year 4	816 (35.6%)	847 (36.7%)	0.4325
Q2	Baseline	746 (29.1%)	740 (28.9%)	0.9239
	Year 1	828 (34.7%)	777 (31.9%)	0.0378
	Year 4	770 (33.6%)	798 (34.6%)	0.4765
Q3	Baseline	330 (12.8%)	310 (12.1%)	0.4190
	Year 1	374 (15.7%)	454 (18.6%)	0.0060
	Year 4	372 (16.2%)	412 (17.9%)	0.1402
Q4	Baseline	119 (4.6%)	131 (5.1%)	0.4236
	Year 1	123 (5.2%)	133 (5.5%)	0.6369
	Year 4	138 (6.0%)	123 (5.3%)	0.3124
Composite Q1-Q4	Baseline	1203 (46.8%)	1227 (47.9%)	0.4293
	Year 1	1270 (53.3%)	1307 (53.7%)	0.7668
	Year 4	1220 (53.2%)	1240 (53.8%)	0.7233

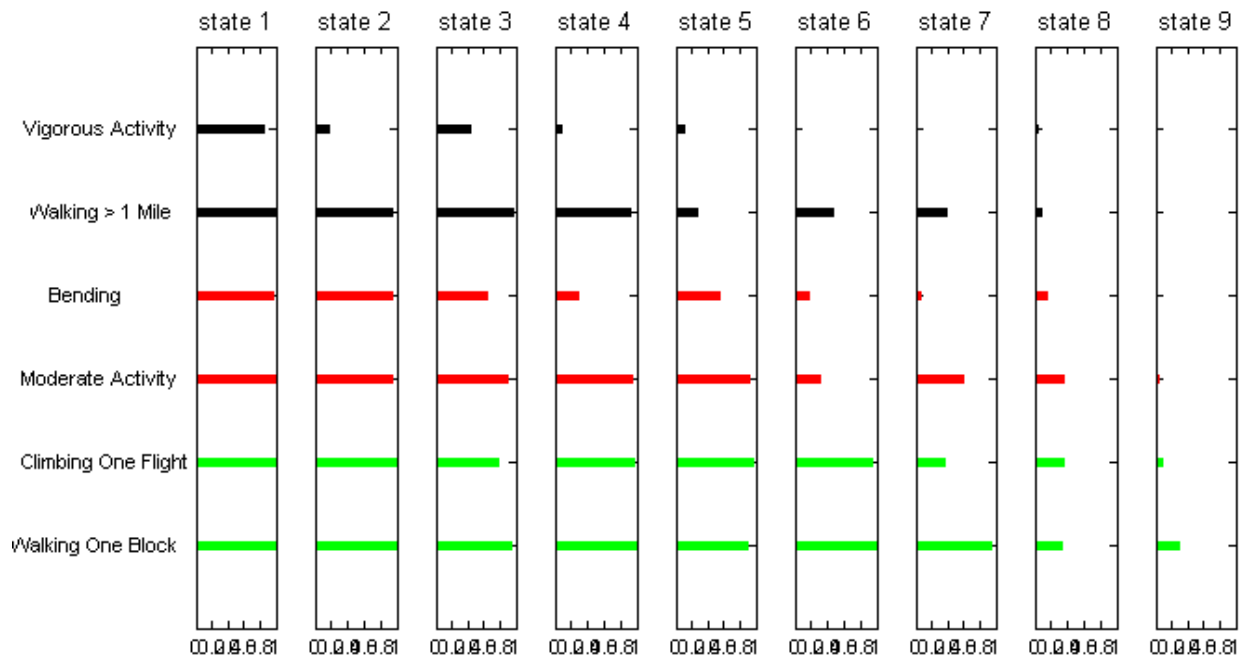
Legend: Q1—Pain in leg or arm during or following exercise (yes/no); Q2—Swollen/sore joints during or following exercise (yes/no); Q3—A pulled or strained muscle, tendon, or ligament during or following exercise; Q4—Sores on your feet that heal poorly.

Supplemental Fig. 1
The CONSORT Diagram



Supplemental Fig. 2

The 9-State Empirically Derived Model



Legend: For all items, the length of the horizontal line adjacent to each item within each state the higher the probability that participants in this state could perform the task without difficulty. State 1 is the healthiest state and state 9 depicts the most severe level of disability with mobility related tasks.

Note: We had a panel of 3 experts in disability and our lead statistician examine the empirically derived 9-state model. Independently, we all agreed that states 1 & 2 really involved shifts in vigorous physical activity with hardly any movement on the other items. Similarly, it was clear to all of us that another state was being captured by 8 & 9 which represented severe loss in mobility. The uniqueness of states 6 & 7 was the substantial shift in the ability to perform moderate level activity along with deficits in stair climbing, whereas states 3, 4 & 5 were describing increased challenges with bending in conjunction with the inability to engage in vigorous activities and walk long distances. These four states were meaningful from a clinical perspective and the model in Figure 1 served to support this conceptualization.

**Look AHEAD Research Group at Year 4
Clinical Sites**

The Johns Hopkins Medical Institutions: Frederick L. Brancati, MD, MHS¹; Lee Swartz²; Lawrence Cheskin, MD³; Jeanne M. Clark, MD, MPH³; Kerry Stewart, EdD³; Richard Rubin, PhD³; Jean Arceci, RN; Suzanne Bau; Jeanne Charleston, RN; Danielle Diggins; Mia Johnson; Joyce Lambert; Kathy Michalski, RD; Daron Niggett; Chanchai Sapun. **Pennington Biomedical Research Center:** George A. Bray, MD¹; Kristi Rau²; Allison Strate, RN²; Frank L. Greenway, MD³; Donna H. Ryan, MD³; Donald Williamson, PhD³; Brandi Armand, LPN; Jennifer Arceneaux; Amy Bachand, MA; Michelle Begnaud, LDN, RD, CDE; Betsy Berhard; Elizabeth Caderette; Barbara Cerniauskas, LDN, RD, CDE; David Creel, MA; Diane Crow; Crystal Duncan; Helen Guay, LDN, LPC, RD; Carolyn Johnson, Lisa Jones; Nancy Kora; Kelly LaFleur; Kim Landry; Missy Lingle; Jennifer Perault; Cindy Puckett; Mandy Shipp, RD; Marisa Smith; Elizabeth Tucker. **The University of Alabama at Birmingham:** Cora E. Lewis, MD, MSPH¹; Sheikilya Thomas MPH²; Monika Safford, MD³; Vicki DiLillo, PhD; Charlotte Bragg, MS, RD, LD; Amy Dobelstein; Stacey Gilbert, MPH; Stephen Glasser, MD³; Sara Hannum, MA; Anne Hubbell, MS; Jennifer Jones, MA; DeLavallade Lee; Ruth Luketic, MA, MBA, MPH; L. Christie Oden; Janet Raines, MS; Cathy Roche, RN, BSN; Janet Truman; Nita Webb, MA; Casey Azuero, MPH; Jane King, MLT; Andre Morgan. **Harvard Center: Massachusetts General Hospital:** David M. Nathan, MD¹; Enrico Cagliero, MD³; Kathryn Hayward, MD³; Heather Turgeon, RN, BS, CDE²; Linda Delahanty, MS, RD³; Ellen Anderson, MS, RD³; Laurie Bissett, MS, RD; Valerie Goldman, MS, RD; Virginia Harlan, MSW; Theresa Michel, DPT, DSc, CCS; Mary Larkin, RN; Christine Stevens, RN; Kylee Miller, BA; Jimmy Chen, BA; Karen Blumenthal, BA; Gail Winning, BA; Rita Tsay, RD; Helen Cyr, RD; Maria Pinto. **Joslin Diabetes Center:** Edward S. Horton, MD¹; Sharon D. Jackson, MS, RD, CDE²; Osama Hamdy, MD, PhD³; A. Enrique Caballero, MD³; Sarah Bain, BS; Elizabeth Bovaird, BSN, RN; Barbara Fagnoli, MS, RD; Jeanne Spellman, BS, RD; Ann Goebel-Fabbri, PhD; Lori Lambert, MS, RD; Sarah Ledbury, MEd, RD; Maureen Malloy, BS; Kerry Ovalle, MS, RCEP, CDE. **Beth Israel Deaconess Medical Center:** George Blackburn, MD, PhD¹; Christos Mantzoros, MD, DSc³; Ann McNamara, RN; Kristina Spellman, RD. **University of Colorado Health Sciences Center:** James O. Hill, PhD¹; Marsha Miller, MS, RD²; Brent Van Dorsten, PhD³; Judith Regensteiner, PhD³; Ligia Coelho, BS; Paulette Cohrs, RN, BSN; Susan Green; April Hamilton, BS, CCRP; Jere Hamilton, BA; Eugene Leshchinskiy; Lindsey Munkwitz, BS; Loretta Rome, TRS; Terra Worley, BA; Kirstie Craul, RD, CDE; Sheila Smith, BS. **Baylor College of Medicine:** John P. Foreyt, PhD¹; Rebecca S. Reeves, DrPH, RD²; Henry Pownall, PhD³; Ashok Balasubramanyam, MBBS³; Peter Jones, MD³; Chu-Huang Chen, MD, PhD³; Michele Burrington, RD, RN; Allyson Clark Gardner, MS, RD; Molly Gee, MEd, RD; Sharon Griggs; Michelle Hamilton; Veronica Holley; Jayne Joseph, RD; Julieta Palencia, RN; Jennifer Schmidt; Carolyn White. **The University of Tennessee Health Science Center: University of Tennessee East:** Karen C. Johnson, MD, MPH¹; Carolyn Gresham, RN²; Stephanie Connelly, MD, MPH³; Amy Brewer, RD, MS; Mace Coday, PhD; Lisa Jones, RN; Lynne Lichtermann, RN, BSN; Shirley Vosburg, RD, MPH; and J. Lee Taylor, MEd, MBA. **University of Tennessee Downtown:** Abbas E. Kitabchi, PhD, MD¹; Ebenezer Nyenwe, MD³; Helen Lambeth, RN, BSN²; Amy Brewer, MS, RD, LDN; Debra Clark, LPN; Andrea Crisler, MT; Debra Force, MS, RD, LDN; Donna Green, RN; Robert Kores, PhD. **University of Minnesota:** Robert W. Jeffery, PhD¹; Carolyn Thorson, CCRP²; John P. Bantle, MD³; J. Bruce Redmon, MD³; Richard S. Crow, MD³; Scott Crow, MD³; Susan K Raatz, PhD, RD³; Kerrin Brelje, MPH, RD; Carolyn Campbell; Jeanne Carls, MEd; Tara Carmean-Mihm, BA; Julia Devonish, MS; Emily Finch, MA; Anna Fox, MA; Elizabeth Hoelscher, MPH, RD, CHES; La Donna James; Vicki A. Maddy, BS, RD; Therese Ockenden, RN; Birgitta I. Rice, MS, RPh, CHES; Tricia Skarphol, BS; Ann D. Tucker, BA; Mary Susan

Voeller, BA; Cara Walcheck, BS, RD. **St. Luke's Roosevelt Hospital Center:** Xavier Pi-Sunyer, MD¹; Jennifer Patricio, MS²; Stanley Heshka, PhD³; Carmen Pal, MD³; Lynn Allen, MD; Lolline Chong, BS, RD; Marci Gluck, PhD; Diane Hirsch, RNC, MS, CDE; Mary Anne Holowaty, MS, CN; Michelle Horowitz, MS, RD; Nancy Rau, MS, RD, CDE; Dori Brill Steinberg, BS.

University of Pennsylvania: Thomas A. Wadden, PhD¹; Barbara J Maschak-Carey, MSN, CDE²; Robert I. Berkowitz, MD³; Seth Braunstein, MD, PhD³; Gary Foster, PhD³; Henry Glick, PhD³; Shiriki Kumanyika, PhD, RD, MPH³; Stanley S. Schwartz, MD³; Michael Allen, RN; Yuliis Bell; Johanna Brock; Susan Brozena, MD; Ray Carvajal, MA; Helen Chomentowski; Canice Crerand, PhD; Renee Davenport; Andrea Diamond, MS, RD; Anthony Fabricatore, PhD; Lee Goldberg, MD; Louise Hesson, MSN, CRNP; Thomas Hudak, MS; Nayyar Iqbal, MD; LaShanda Jones-Corneille, PhD; Andrew Kao, MD; Robert Kuehnel, PhD; Patricia Lipschutz, MSN; Monica Mullen, RD, MPH. **University of Pittsburgh:** John M. Jakicic, PhD¹, David E. Kelley, MD¹; Jacqueline Wesche-Thobaben, RN, BSN, CDE²; Lewis H. Kuller, MD, DrPH³; Andrea Kriska, PhD³; Amy D. Otto, PhD, RD, LDN³, Lin Ewing, PhD, RN³, Mary Korytkowski, MD³, Daniel Edmundowicz, MD³; Monica E. Yamamoto, DrPH, RD, FADA³; Rebecca Danchenko, BS; Barbara Elnyczky; David O. Garcia, MS; George A. Grove, MS; Patricia H. Harper, MS, RD, LDN; Susan Harrier, BS; Nicole L. Helbling, MS, RN; Diane Ives, MPH; Juliet Mancino, MS, RD, CDE, LDN; Anne Mathews, PhD, RD, LDN; Tracey Y. Murray, BS; Joan R. Ritchea; Susan Urda, BS, CTR; Donna L. Wolf, PhD. **The Miriam Hospital/Brown Medical School:** Rena R. Wing, PhD¹; Renee Bright, MS²; Vincent Pera, MD³; John Jakicic, PhD³; Deborah Tate, PhD³; Amy Gorin, PhD³; Kara Gallagher, PhD³; Amy Bach, PhD; Barbara Bancroft, RN, MS; Anna Bertorelli, MBA, RD; Richard Carey, BS; Tatum Charron, BS; Heather Chenot, MS; Kimberley Chula-Maguire, MS; Pamela Coward, MS, RD; Lisa Cronkite, BS; Julie Currin, MD; Maureen Daly, RN; Caitlin Egan, MS; Erica Ferguson, BS, RD; Linda Foss, MPH; Jennifer Gauvin, BS; Don Kieffer, PhD; Lauren Lessard, BS; Deborah Maier, MS; JP Massaro, BS; Tammy Monk, MS; Rob Nicholson, PhD; Erin Patterson, BS; Suzanne Phelan, PhD; Hollie Raynor, PhD, RD; Douglas Raynor, PhD; Natalie Robinson, MS, RD; Deborah Robles; Jane Tavares, BS. **The University of Texas Health Science Center at San Antonio:** Steven M. Haffner, MD¹; Maria G. Montez, RN, MSHP, CDE²; Carlos Lorenzo, MD³; Charles F. Coleman, MS, RD; Domingo Granado, RN; Kathy Hathaway, MS, RD; Juan Carlos Isaac, RC, BSN; Nora Ramirez, RN, BSN; Ronda Saenz, MS, RD. **VA Puget Sound Health Care System / University of Washington:** Steven Kahn MB, ChB¹; Brenda Montgomery, RN, MS, CDE²; Robert Knopp, MD³; Edward Lipkin, MD³; Dace Trence, MD³; Terry Barrett, BS; Joli Bartell, BA; Diane Greenberg, PhD; Anne Murillo, BS; Betty Ann Richmond, MEd; Jolanta Socha, BS; April Thomas, MPH, RD; Alan Wesley, BA. **Southwestern American Indian Center, Phoenix, Arizona and Shiprock, New Mexico:** William C. Knowler, MD, DrPH¹; Paula Bolin, RN, MC²; Tina Killean, BS²; Cathy Manus, LPN³; Jonathan Krakoff, MD³; Jeffrey M. Curtis, MD, MPH³; Justin Glass, MD³; Sara Michaels, MD³; Peter H. Bennett, MB, FRCP³; Tina Morgan³; Shandiin Begay, MPH; Paul Bloomquist, MD; Teddy Costa, BS; Bernadita Fallis RN, RHIT, CCS; Jeanette Hermes, MS,RD; Diane F. Hollowbreast; Ruby Johnson; Maria Meacham, BSN, RN, CDE; Julie Nelson, RD; Carol Percy, RN; Patricia Poorthunder; Sandra Sangster; Nancy Scurlock, MSN, ANP-C, CDE; Leigh A. Shovestull, RD, CDE; Janelia Smiley; Katie Toledo, MS, LPC; Christina Tomchee, BA; Darryl Tonemah, PhD. **University of Southern California:** Anne Peters, MD¹; Valerie Ruelas, MSW, LCSW²; Siran Ghazarian Sengardi, MD²; Kathryn (Mandy) Graves Hillstrom, EdD,RD,CDE; Kati Konersman, MA, RD, CDE; Sara Serafin-Dokhan

Coordinating Center

Wake Forest University: Mark A. Espeland, PhD¹; Judy L. Bahnson, BA, CCRP³; Lynne E. Wagenknecht, DrPH³; David Reboussin, PhD³; W. Jack Rejeski, PhD³; Alain G. Bertoni, MD, MPH³; Wei Lang, PhD³; Michael S. Lawlor, PhD³; David Lefkowitz, MD³; Gary D. Miller, PhD³; Patrick S. Reynolds, MD³; Paul M. Ribisl, PhD³; Mara Vitolins, DrPH³; Haiying Chen,

PhD³; Delia S. West, PhD³; Lawrence M. Friedman, MD³; Brenda L. Craven, MS, CCRP²; Kathy M. Dotson, BA²; Amelia Hodges, BS, CCRP²; Carrie C. Williams, BS, CCRP²; Andrea Anderson, MS; Jerry M. Barnes, MA, Mary Barr; Daniel P. Beavers, PhD; Tara Beckner; Cralen Davis, MS; Thania Del Valle-Fagan, MD; Patricia A. Feeney, MS; Candace Goode; Jason Griffin, BS; Lea Harvin, BS; Patricia Hogan, MS; Sarah A. Gaussoin, MS; Mark King, BS; Kathy Lane, BS; Rebecca H. Neiberg, MS; Michael P. Walkup, MS; Karen Wall, AAS; Terri Windham.

Central Resources Centers

DXA Reading Center, University of California at San Francisco: Michael Nevitt, PhD¹; Ann Schwartz, PhD²; John Shepherd, PhD³; Michaela Rahorst; Lisa Palermo, MS, MA; Susan Ewing, MS; Cynthia Hayashi; Jason Maeda, MPH. **Central Laboratory, Northwest Lipid Metabolism and Diabetes Research Laboratories:** Santica M. Marcovina, PhD, ScD¹; Jessica Chmielewski²; Vinod Gaur, PhD³. **ECG Reading Center, EPICARE, Wake Forest University School of Medicine:** Elsayed Z. Soliman MD, MSc, MS¹; Ronald J. Prineas, MD, PhD¹; Charles Campbell²; Zhu-Ming Zhang, MD³; Teresa Alexander; Lisa Keasler; Susan Hensley; Yabing Li, MD. **Diet Assessment Center, University of South Carolina, Arnold School of Public Health, Center for Research in Nutrition and Health Disparities:** Robert Moran, PhD¹ **Hall-Foushee Communications, Inc.:** Richard Foushee, PhD; Nancy J. Hall, MA.

Federal Sponsors

National Institute of Diabetes and Digestive and Kidney Diseases: Mary Evans, PhD; Barbara Harrison, MS; Van S. Hubbard, MD, PhD; Susan Z. Yanovski, MD; Robert Kuczmarski, PhD. **National Heart, Lung, and Blood Institute:** Lawton S. Cooper, MD, MPH; Peter Kaufman, PhD, FABMR. **Centers for Disease Control and Prevention:** Edward W. Gregg, PhD; David F. Williamson, PhD; Ping Zhang, PhD.

¹ Principal Investigator

² Program Coordinator

³ Co-Investigator

All other Look AHEAD staffs are listed alphabetically by site.