

**Issues and Options**

# **Boom, Boom, Boom**

**Obesity Among Baby Boomers and Older Adults**

#### **About the American Federation for Aging Research**

The American Federation for Aging Research (AFAR) is a private, nonprofit, 501(c)3, organization whose mission is to support biomedical research on aging. Since 1981, the American Federation for Aging Research has awarded nearly \$80 million to more than 2,000 new investigators and students, with the goal of encouraging more of the nation's scientists and physicians to enter and stay in the fields of gerontology and geriatric medicine.

The American Federation for Aging Research has given many of the leading scientists in the field their start. These are the scientists conducting cutting-edge research on aging and age-related diseases, such as Alzheimer's, cancer, osteoporosis, diabetes and heart disease. AFAR is also a powerful advocate for the public about the role research plays in promoting health and longevity.

#### **About the AFAR Briefing Series**

Through an educational grant from Pfizer Inc and the Pfizer Medical Humanities Initiative, the American Federation for Aging Research is hosting a series of media and policy briefings on a variety of topics. The initial briefing, held in the Spring 2004 focused on "Hype and Hope: Anti-Aging Medicine." This paper was generated through a second briefing held in Washington, D.C. on "The Politics of Older Adult Obesity." A third media briefing further explored issues related to obesity, this time focusing on the growing incidence of obesity among Baby Boomers.

Obesity has become an increasingly visible national concern. During the last two decades, the incidence of obesity (BMI>30 kg/mg<sup>2</sup>) has risen at a dramatic, even startling pace—doubling to 30 percent of the adult population since the mid-1970s.<sup>1</sup> While public attention has focused on the implications of growing rates of obesity among children and young people, the effects of obesity on the health of older adults and its impact on the rates of chronic disease and mortality and the costs of health care have received relatively little consideration. • Research during the last decade demonstrates important associations between obesity and the most serious age-associated diseases including cardiovascular disease, stroke, diabetes, a growing list of cancers, and, according to recent reports, even Alzheimer’s disease.<sup>2</sup> In Centers for Disease Control reports, obesity consistently ranks behind smoking as the second leading “actual cause” of death.<sup>3</sup> Estimates put the health care expenditures associated with obesity at somewhere between \$26-75 billion annually, or between 5 and 15 percent of total annual medical expenditures in the United States. Public insurance programs—Medicaid and Medicare—pay almost one half of these costs.<sup>4</sup> • Despite the scope and increasing severity of this issue, important gaps in our knowledge of the mechanisms underlying the development of obesity and how to treat it effectively remain. Nor has a consensus emerged about how to address this problem. Public health exhortations to eat better and get more exercise place responsibility squarely on the individual, but fail to take broader environmental, economic, and age considerations into account. The causes of America’s expanding waistline are complex and require a multi-faceted effort to confront.

## • **Politics of Older Adult and Boomer Obesity**

To explore these issues and possible options for action, the American Federation for Aging Research (AFAR) sponsored a policy and information briefing in December 2004 in Washington, DC, on “The Politics of Older Adult Obesity.” • We invited a panel of experts to examine various aspects of the obesity dilemma along with more than 40 members of Washington’s policy community (see Page 8). The ideas generated at this meeting provided a powerful foundation for this report. The briefing and subsequent discussion also prompted us to think more critically about the issue. Clearly, many people 65+ are overweight or obese. As briefing moderator, Jesse Roth, MD, of the North Shore–Long Island Jewish Health System says, there is an “obesity pandemic” in the United States. However, after careful evaluation, the bigger issue we discovered was with the Baby Boom generation. The highest rates of obesity can be found in so-called “leading edge” Boomers, those 51-60, with the late Boomers, those 41-50, not far behind. This is especially true for women, as the highest prevalence of obesity occurs in women in their fifties.<sup>5</sup> This has far-ranging and long-term implications for Boomers’ health, especially with respect to the development of cardiovascular disease, hypertension, and diabetes. • As briefing panelist Robert Friedland, PhD, of the Center on an Aging Society at Georgetown University points out, we are already seeing a disproportionate number of people dying before age 70. And from a policy perspective, a recent study in the *Journal of the American Medical Association* reports that men and women who are obese in middle age are projected to be twice as expensive to cover under Medicare compared to normal weight people.<sup>6</sup> This realization has helped us redefine the locus of our attention towards obesity among people 50+, those Boomers who, if nothing is done, will create the largest generation of obese older Americans in our history. Importantly, their weight and health status will have significant effects on how our country is able to pay for health care in the 21st Century. • We offer this analysis not as the last word on the topic, but as a continuation of this important discussion, an effort to draw the attention of individuals, government, corporate and community interests to the issue of obesity. Our hope is to motivate all of us to examine our roles in creating the obesity epidemic and just as importantly, assess what we can all do to help more older Americans (indeed all Americans) live healthier, active, and better lives.

# background

## Who is obese?

Expanding waistlines and the health challenges that come with them are epidemic across the entire U.S. population. However, some groups have been affected more seriously than others. As briefing panelist Mike Magee, MD, of the Pfizer Medical Humanities Initiative notes, “obesity loves inequity. It disproportionately affects the poor, the less educated, and people of color.” According to statistics from the National Health Policy Forum at George Washington University, “In 2000, obesity was found in almost 30 percent of African Americans, slightly less than one-quarter of Hispanics, and 18 percent of whites.” The same statistics show that income also has a profound effect. People close to the poverty line are 50 percent more likely to be obese than those with higher incomes. Likewise, education has an effect. Twenty-four percent of individuals who did not graduate from high school are obese, says briefing panelist Robert Friedland, PhD, but that number drops to 19 percent of those with a high school diploma.

The prevalence of obesity among older Americans has also become a pressing concern. Incidence among all adults rises steadily for each successive age group until they reach the 65-to-74 year-old bracket, when it begins to decline. Even for this group, however, prevalence has risen dramatically during the past 40 years, with the percentage of obese women rising from 23 percent to 39 percent, and men from 10 percent to 33 percent. Among people over the age 74, the percentages are lower at 20 percent of men and 25 percent of women, but still remarkably high.<sup>7</sup> Past age 75, obesity is uncommon, possibly because obese people tend to die earlier, and the oldest old among us are more likely to be undernourished and chronically ill, rather than overweight.

## The dangers of obesity

The effect of obesity on health is profound and often deadly. As moderator Jesse Roth, MD, says, obese people show an increased risk for several types of cancer, gallbladder disease, hypertension, high cholesterol, osteoarthritis, coronary heart disease, sleep apnea, asthma, reduced endurance, impaired mobility, and type 2 diabetes.<sup>8</sup> The likelihood of developing some of these conditions is also associated with age. For example, among all people aged 65 and older, the three top causes of death are cardiovascular disease, cancer, and stroke.<sup>9</sup> Combining both risk factors, age and weight, exacerbates the likelihood that an individual will suffer from one of these diseases.

One study suggests that individuals with metabolic syndrome (a combination of symptoms that includes abdominal or central obesity, hypertension, and high levels of cholesterol, triglycerides, and glucose and low levels of good or HDL cholesterol in the blood) may even be more likely to develop cognitive dysfunction as they age. The study, led by Kristine Yaffe, MD, of the University of California, San Francisco, tracked 2,600 people, with an average age of 74, for five years. More of those with metabolic syndrome showed significant cognitive decline on standard neurological tests than those who did not have the syndrome.<sup>10</sup>

## The biology of obesity

Research into the causes of obesity is still in its early stages, although the National Institutes of Health (NIH) is currently funding a broad spectrum of molecular, clinical, behavioral, and environmental studies on the subject. What we do know suggests that genetics play a role in

an individual's risk for obesity, but it comprises only part of the picture. Available data from twin studies indicate that genetic background makes between a 50 and 70 percent contribution to an individual's risk for obesity. Family studies, however, put the number between 25 and 50 percent.<sup>11</sup>

We also know that leptin, a protein produced exclusively by fat cells, plays a key role in an individual's susceptibility to obesity. Leptin signals the brain about the adequacy or inadequacy of fat stores, and so plays a role in the way the body regulates weight. According to panelist Dr. Magee, our fat cells are endocrine factories, built to avoid starvation. Nowadays, more people are over-nourished than under-nourished, but our fat cells haven't adjusted. Research into substances like leptin may help us learn how to reverse the message inside fat cells that tell them to store fat. In one recent study, laboratory animals injected with leptin on average lost one-fourth of their body weight after two weeks. The reason? Cells that previously stored fat actually changed their structure and began to burn fat.<sup>12</sup> Although more research is needed, findings such as these may herald a medical solution to the weight gain epidemic.

Leptin has qualities that may prove especially advantageous to older, obese adults. Individuals who diet to reduce their weight lose muscle mass as well as adipose. Among older adults, dieting can also lead to under-nutrition, which may result in bone loss due inadequate mineral intake. In the study cited above, however, leptin caused the subjects to burn fat without muscle loss, and remained healthy, active, and had decreased appetite.

## Ideal weight for older adults

The criteria for assessing the risks associated with obesity change as we age. Recent studies<sup>13</sup> suggest that the ideal BMI for older people should be slightly higher than that for the young and middle-aged. In fact, a low BMI comes with an increased risk of death among older adults, possibly because of malnutrition, osteoporosis, and fractures after falls, all conditions associated with low body fat.

## What works to reduce weight?

A combination of a low to moderate fat diet, physical activity, weight loss counseling, and peer group support are clearly essential keys to losing weight. Panelist Judith Salerno, M.D., of the National Institute on Aging points out that, although we don't know to what extent obesity contributes to mortality among older individuals, we do know that an older person who has a chronic disease such as osteoarthritis or diabetes is far more likely to suffer with functional disabilities. Two successful interventions, one an NIH diabetes intervention trial and another a Wake Forest Arthritis study called ADAPT, clearly show that not only can older people with medical conditions benefit from diet, exercise, and counseling, but also that they're surprisingly much better at making favorable lifestyle changes than their younger counterparts.

Even modest weight loss can make a difference. Researchers at the Joslin Diabetes Center at Harvard Medical School found obese adults who lost just 7 percent of their weight—or 16 pounds in a 220-pound, 5'5" tall woman—and did moderate-intensity physical exercise for six months improved their major blood vessel function by approximately 80 percent.<sup>15</sup> This confirms similar findings from larger NIH studies that point to the benefits of regular exercise on a variety of health problems in obese individuals, including diabetes and insulin resistance. For people with a BMI > 40 who haven't responded to conventional weight loss treatment and have

weight-related health complications, bariatric surgery may be the treatment of last resort. These procedures alter the anatomy so that either an individual's food intake or nutrient absorption is restricted. Bariatric surgery followed by positive lifestyle changes has demonstrated positive health outcomes. Diabetic patients have seen improvements in blood glucose control and sometimes a resolution of their diabetes. Others have significantly lowered their blood pressure or normalized their cholesterol and triglyceride levels.<sup>14</sup> Like any surgery, however, these procedures can cause serious complications and even death.

The Centers for Medicare and Medicaid Services are considering whether to change their reimbursement policies for this surgery, claiming that not enough data exists on the efficacy of the procedures among Medicare patients to justify the government's paying for them. Clearly, a need exists for researchers to gather more data about these and other interventions. As panelist Jessie Gruman, PhD, of the Center for the Advancement of Health says, "Future coverage will depend on evidence that particular therapies actually work."

## Environmental concerns

Unless we are to believe that the entire human gene pool had a sudden change of direction during the past 40 years, blaming genetics for the fattening of America—and much of the rest of the world—makes no sense. Obviously, the cultural environment we live in plays a role. For example, we exercise less, in part, because of labor saving machinery and cars that save us from walking. We also eat more, in part, because we eat out more often, and research shows that we consume bigger portions or higher calorie foods in restaurants than we do at home.<sup>16</sup> We live in a world that offers inexpensive, fast foods that are high in sugar and fat, and we are exposed daily to a barrage of marketing that tries to sell us snack foods. All of this contributes to more eating and less burning of calories through activity, and hence, to weight gain and the development of obesity.<sup>17</sup>

On the other side of the issue, more healthful foods, such as fresh fruits and vegetables, can be prohibitively expensive, especially for low-income people, and they're not always easily available. One study found that on average, there are five times as many larger grocery chain stores in white as compared to black neighborhoods, and that the more grocery stores there are available, the greater the competition, the lower the prices and the more healthful foods local people tend to buy.<sup>18</sup>

Overweight older adults who want to reach and maintain a healthful weight face a special set of challenges in the environment. *Investor's Business Daily* offers six effective tips for weight control: join a gym, hire a personal trainer, do yoga, quit smoking, change your exercise habits, buy sneakers, and use exercise equipment. Panelist Gruman, however, asks an important question: "How are low-income, older people supposed to pay for all this?" Gruman also explains that many low-income, older adults live in neighborhoods where auto traffic congestion, street crime, and environmental obstacles like poorly repaired sidewalks may make an exercise as simple as walking unsafe.

Gruman suggests there may be yet another cultural barrier that stands in the way of older, obese adults maintaining a healthful weight: ageism, which may even affect the judgment of medical professionals. "Professional caregivers say, 'Why bother? Folks of that age aren't likely to change

now.’ The children of older adults often make similar calculations. It’s simply easier to treat older people with a pill to relieve medical symptoms than to nag them every day about diet and exercise. But the evidence shows that teaching the elderly how to make lifestyle changes can work, and work well.”

The effects of the environment on rates of obesity are profound, and even more so among Boomer and older adults. “We need a financial commitment from a public that values health and views ensuring equal access to healthy choices as a normal responsibility for public and private interests,” Gruman says. The U.S. Surgeon General agrees. Among the recommendations made in the Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity, is the following priority: “Make community facilities available and accessible for physical activity for all people, including the elderly.”

## Endnotes

- <sup>1</sup> See: <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/obese/obse99.htm>.
- <sup>2</sup> Sturm, R. “The Effects of Obesity, Smoking and Drinking on Medical Problems and Costs,” *Health Affairs* 21(2)(March/April 2002): 245-253.
- <sup>3</sup> Mokdad, Ali H., Marks, J.S., Stroup, D.F., Gerberding, J.L. “Actual Causes of Death in the United States, 2000.” *JAMA*. 291(2004):1238-1245.
- <sup>4</sup> Finkelstein, E.A. Fiebelkorn, I.C. and Wang, G. (2004) “National Medical Spending Attributable to Overweight and Obesity: How Much and Who is Paying?” *Health Affairs*. Web Exclusive. Exhibit 4. This study points to the lower range of the estimate.
- <sup>5</sup> Kuczmarski, R.J., Flegal K.M., Campbell S.M., Johnson C.L. “Increasing prevalence of overweight among US adults.” *JAMA* (1994) ;272:205-211.
- <sup>6</sup> Daviglus, M.L., Liu, K., Yan, L.L., Pirzada, A., Manheim, L., Manning, W., Garside, D.B., Wang, R., Dyer, A.R., Greenland, P., Stamler, J. “Relation of body mass index in young adulthood and middle age to Medicare expenditures in older age.” *JAMA*. (December 8, 2004) ;292(22):2743-9.
- <sup>7</sup> U.S. Department of Health and Human Services, Centers for Disease Control and Prevention., Health, United States, 2002 (updated trend table 10/8/2002). 2002, National Center for Health Statistics: Hyattsville, MD.
- <sup>8</sup> See: [http://www.miaonline.org/resources/nursesnotes/articles/04\\_20\\_04.conquering\\_obesity.html](http://www.miaonline.org/resources/nursesnotes/articles/04_20_04.conquering_obesity.html).
- <sup>9</sup> National Obesity Education Initiative, Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults: the Evidence Report. 1998, U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute: Bethesda, MD.
- <sup>10</sup> Yaffe, K., et al. “The Metabolic Syndrome, Inflammation, and Risk of Cognitive Decline” *JAMA*, (November 10, 2004); 292: 2237 - 2242.
- <sup>11</sup> Hill, J.O. and Melanson, E.L., “Overview of the Determinants of Overweight and Obesity: Current Evidence and Research Issues,” *Medicine and Science in Sports and Exercise*, 31, suppl. 11, (November 1999): S515.
- <sup>12</sup> Orci, L., Cook, W., Ravazzola, M., Wang, M., Park, B.H., Montesano, R., and Unger, R.H. “Rapid transformation of white adipocytes into fat-oxidizing machines.” *Proceedings of the National Academy of Sciences* (2004); 101: 2058-2063; published online before print as 10.1073/pnas.0308258100.
- <sup>13</sup> Heiat, A., Vaccarino, V., Krumholz, H.M. “An evidence-based assessment of federal guidelines for overweight and obesity as they apply to elderly persons.” *Arch Intern Med*. 2001; 161:1194-1203.
- <sup>14</sup> McTigue, K.M., et al. “Screening and Interventions for Obesity in Adults: Summary of the Evidence for the U.S. Preventive Services Task Force.” *Annals of Internal Medicine*, in press.
- <sup>15</sup> Hamdy, O, et al. Lifestyle modification improves endothelial function in obese subjects with the insulin resistance syndrome. *Diabetes Care* (July 2003);26(7):2119-25.
- <sup>16</sup> Putnam, J. “U.S. Food Supply Providing More Food and Calories,” *Food Review*, 22, no. 3 (September-December 1999):3.
- <sup>17</sup> Koplan, J. and Dietz, W. “Caloric Imbalance and Public Health Policy,” *JAMA*, 282, no. 16 (October 27, 1999): 1579-1581
- <sup>18</sup> Morland K., Wing, S., and Roux, A.D. “The Contextual Effect of the Local Food Environment on Residents’ Diets: The Atherosclerosis Risk in Communities Study,” *American Journal of Public Health*, 92, no. 11 (November 2002): 1761-1767.

# the research imperative

While the AFAR policy briefing provided the basis for a thoughtful analysis of the issue of Boomer and older adult obesity, there were admittedly few provocative or new suggestions about how to address the problem. Part of the issue is that our knowledge base surrounding the biology of obesity and what works to help Boomers and older adults lose weight is only now developing and incomplete. Given Boomers' current rates of obesity and their looming entrance into Medicare, we believe that we must significantly expand public and private investment in this research immediately.

The federal government has already begun to make an important start in this direction with its 2004 Strategic Plan for National Institutes of Health (NIH) Obesity Research, designed by the NIH Obesity Research Task Force. This multi-disciplinary effort is coordinating obesity-related research in a variety of disciplines from the bench to the bedside to the community.

Private funders could consider a similar, cross-discipline approach that would serve to extend and where appropriate sharpen government-supported efforts. For example, this collaborative could promote high-risk, high reward research that NIH may not be in a position to fund. Or it could focus on translational research needed to speed the movement of new knowledge into practical applications.

**Some of the most pressing research questions that merit intense focus and consideration include:**

- How does the fat cell really work? How can our endocrine system be encouraged to deal more efficiently with an overabundance of food?
- What is the relationship between weight loss and bone/muscle loss in older adults?
- Is there an ideal weight, BMI, and/or waist circumference for older adults that we should be promoting to reduce the risk of disease?
- Which types of interventions (or combinations of interventions) are most successful for preventing or reducing obesity for people 50+ and which are related to long-term weight loss and health?
- Which types of interventions are most effective for particular sub-groups (e.g., older adults vs. Boomers; majority vs. minority racial and ethnic groups, people who live in urban vs. suburban or rural areas)?
- How do we most effectively disseminate information about successful interventions (as well as unsuccessful fads) to people 50+, older adults, and their caregivers?
- What is the practical knowledge we need regarding the efficacy of community-based health promotion efforts and medical or surgical interventions that will support reimbursement by Medicare and other insurers?

# the action imperative

While there is clearly much research to be done, we cannot sit around (indeed that is what too many of us have been doing!) and wait for research breakthroughs and subsequent medical treatments or other interventions. Governments, businesses, communities, families, and individuals can all take steps now to help more American maintain a healthy weight.

Indeed, any thoughtful analysis of the growing incidence of Boomer and older adult obesity points to a variety of contributing factors. This is not just a question of individuals making better choices and becoming more active (though that would certainly help). Many overweight and obese people struggle over a lifetime with their weight and are all too often unsuccessful at slimming down. As noted by our panel, many Boomers and older adults, and particularly the poor, face significant and varied barriers when trying to pursue healthier behaviors. To address the growing incidence of obesity among people 50+, many groups must play a variety of roles.

We propose a few ideas here:

## Options for policymakers

- Define and build awareness around the health dangers of obesity and nutritional and physical activity guidelines as they pertain to people 50+.
- Provide funding to communities to support evidenced-based health promotion programs that would be appropriate for people 50+.
- Encourage funding and use of local Farmers' Markets to make fresh fruits and vegetables more readily available.
- Build public commitment to improve local infrastructure (e.g., lighting, better sidewalks, better public safety, age-appropriate recreation opportunities) that promote community activity for people 50+.
- Reward and recognize communities that come together around this issue and create healthy, active places to live.
- Use well-described Boomer interest in “staying young” to create public education campaigns that: Link obesity with the negative health aspects of getting older (i.e., age-associated diseases); and/or Address internalized and external “ageist” attitudes that suggest that behavior changes are no longer worthwhile or necessary.

## Options for corporations

- Examine/regulate marketing of foods for all people, particularly young people (who will become older people).
- Encourage the private sector to make available more healthy living options—fitness centers, restaurant menus, etc.—appropriate for people 50+.
- Promote innovative, “healthy” workplaces that encourage more walking and provide low-cost, healthy cafeteria choices.

## Options for families and individuals

- Encourage busy “ Boomers ” to eat more leisurely and make modest adjustments in portion sizes and the amount of fats and sugars in their diets.
- Find easy and enjoyable ways to incorporate more movement and activity into each day, particularly in office and home settings (e.g., climbing stairs, parking further from entrances, walking on errands on nice days where possible, etc.).
- Test and promote family-centered, intergenerational health programs and empower Boomer caregivers to practice healthier behaviors with their children, their parents, and importantly themselves.

The analysis presented in this briefing paper was developed in large measure from a meeting, “The Politics of Older Adult Obesity,” held in Washington, DC on December 2, 2004.

Panelists for this briefing included:

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Presenters: **Robert Friedland, PhD** Center on an Aging Society, Georgetown University  
**Jessie Gruman, PhD** Center for the Advancement of Health  
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