

Obesity in Older Adults: A Challenge for North Carolina Health Care Professionals and Policy Makers

Martha L. Taylor, PhD, RD, LDN, FADA; Burgin Ross, MS, RD, LDN; Carinthia A. Cherry, MS

Improvements in health care have contributed to an exponential increase in life expectancy and have influenced growth of the older adult population. This increase is accompanied by a similar rise in the occurrence of age- and nutrition-associated diseases, including obesity, cardiovascular disease, and diabetes.¹ As emphasized in *Healthy People 2010*, the burden of these chronic conditions is a public health concern that warrants closer examination of not only their cause but also their prevention and subsequent improved quality of life.² The World Health Organization reports 605 million people (20%) worldwide are currently over 60 years old, and population estimates suggest that in the year 2025 this number will have reached 1.2 billion, or 29%.³ These data highlight older adults as a distinctive group with specific health concerns that will continue to demand attention as the population ages.

The prevalence of obesity has dramatically increased in both North Carolina and the US over the past decade. (See Figure 1.) One in 4 adults in North Carolina are obese today, with 62% of those aged 50 years and older being designated as overweight or obese. For older adults in North Carolina, heart disease is the number one cause of death, followed by cancer, stroke, and chronic lung disease.⁴ In 2006, diabetes was the 7th leading cause of death in North Carolina (4th for African Americans).⁵ Obesity is linked to increased risk of other diseases, including cardiovascular disease, hypertension, and diabetes. According to the NHANES III study, 86% of Americans aged 65 or older have a minimum of one nutrition-related risk factor for development of cardiovascular disease. Obesity is one of the characteristics of metabolic syndrome, along with elevated blood lipids, impaired glucose tolerance, and hypertension.⁶ Obesity is “predictive of disability” in older Americans.⁷ A 2003

report found 46% of older North Carolinians reporting at least one disability, with smoking, obesity, and lack of exercise identified as “key risk factors.”⁸

Obesity and diabetes are major public health problems in North Carolina and affect all socioeconomic population groups. Significant increases in both conditions have occurred over the past decade. These 2 conditions are linked as obesity is

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a major risk factor for type 2 diabetes mellitus, as well as for heart disease, hypertension, and stroke. A new term, *diabesity*, has been coined by Francine Kaufman, MD, to highlight the clinical relationships between obesity and diabetes. As noted in the recent report on the burden of diabetes in North Carolina by the North Carolina Division of Public Health, “North Carolina urgently needs important environmental changes to promote healthy eating, regular physical activity, and healthy weight maintenance in order to help reduce diabesity and prevent type 2 diabetes.”⁵ (See Figure 2.)

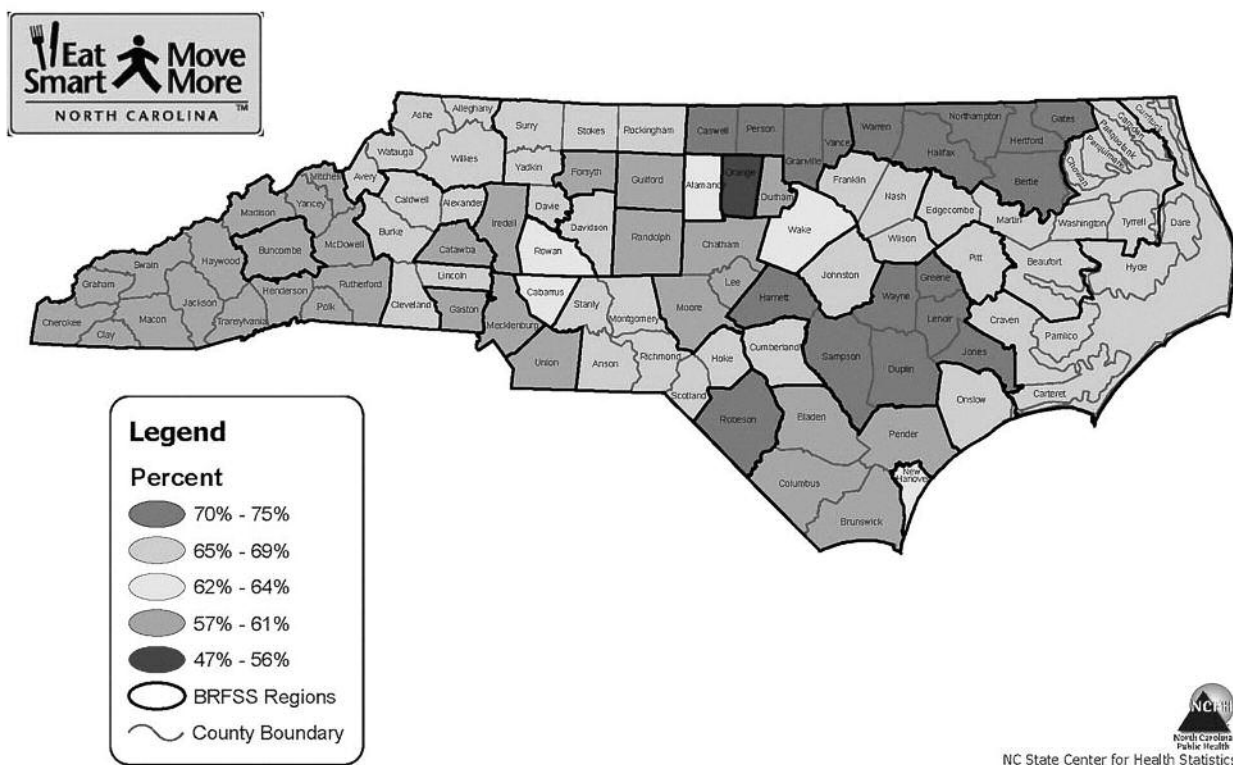
The population of North Carolina is aging at a rate that exceeds other states. In 2003, North Carolina was 10th in the US in the number of residents aged 50 years and older (28% of

Martha L. Taylor, PhD, RD, LDN, FADA, is an associate professor in the Department of Nutrition at the University of North Carolina Greensboro. She can be reached at martha_taylor (at) uncg.edu.

Burgin Ross, MS, RD, LDN, is a consultant nutritionist based out of Winston-Salem, North Carolina.

Carinthia A. Cherry, MS, is a doctoral student in the Department of Nutrition at the University of North Carolina Greensboro.

Figure 1.
Percentage of North Carolina Adults Who are Overweight or Obese (BMI* ≥ 25)



Body mass index is computed as weight in kilograms divided by height in meters squared: (kg/m²).

BMI is an intermediate variable used in defining overweight and obesity. Underweight=BMI less than 18.5, Recommended Range=BMI 18.5 to 24.9, Overweight=BMI 25.0 to 29.9 and Obese=BMI greater than 30.0

Source: 2006 NC Behavioral Risk Factor Surveillance System (BRFSS)

the population, or 2.3 million). By 2030, an estimated 35% of North Carolinians will be 50 years and older.⁸ Older adults in North Carolina have high rates of both obesity and diabetes, and as the numbers of older adults continues to increase over the next 2 decades, an increased prevalence of these conditions will present significant challenges for individuals, families, and health care providers.⁵

Aging brings about specific physiological changes in the human body, including loss of lean body mass, along with an increase in adipose (fat) tissue. Physical limitations contribute to poor exercise habits. Changes in mental acuity may impact the ability to engage in either exercise or medical nutrition therapy consistently. Limitations in income and transportation may be barriers to purchasing healthy foods and beverages.⁹

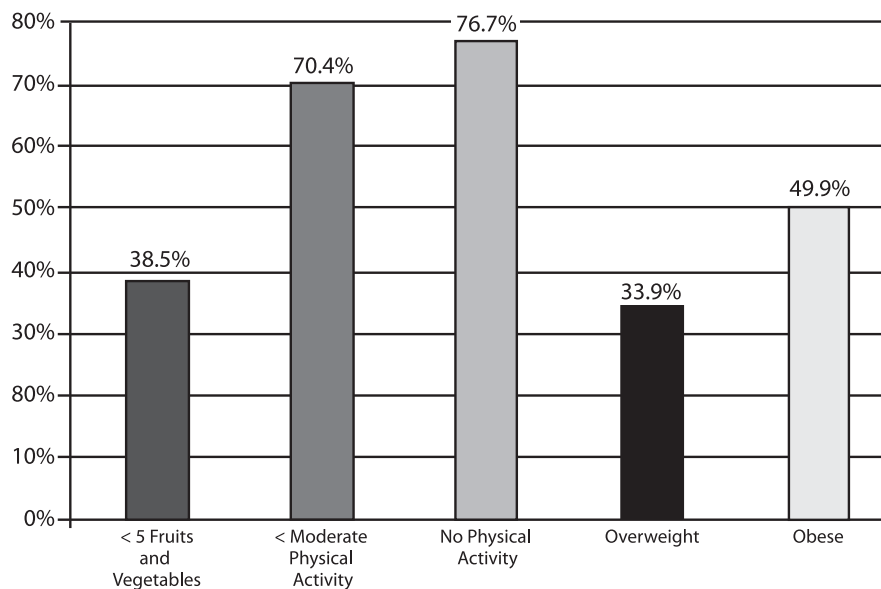
Good nutritional practices (healthful eating) are important to successful aging. Nutrition as a primary prevention strategy promotes health and helps maintain functional fitness (ability to lead an active and healthy life). For secondary and tertiary prevention, medical nutrition therapy is an effective component

of chronic disease risk and disease management (slowing disease progression and reducing symptoms). Hence, effective prevention or management of chronic diseases or conditions can assist in providing healthful, enjoyable, and productive years for older adults.¹⁰ The Centers for Disease Control and Prevention acknowledge that a combination of the practices of healthful eating, being physically active, and not using tobacco products is beneficial in helping avoid aging-related deterioration.¹¹

Hunger and food insecurity^a may result from limited income, transportation difficulties, or limited functional capability. Regardless of cause, the impact on the elderly is significant. Food insecurity occurs to a greater degree among African American, Hispanic, and Native American populations. Food insecurity is also more common in those who live alone. Poor intake of micronutrients can occur with obesity. Older adults who do not consume a nutrient dense diet are more likely to be deficient in fiber, calcium, vitamin D, vitamin B12, iron, and zinc.⁹ Nutritional professionals working with elderly clients in any setting must be alert to the possibility of micronutrient

a Food insecurity is the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in a socially acceptable manner.¹²

Figure 2.
Prevalence of Non-Healthy Conditions in People with Diabetes:
Lack of Physical Activity, Not Eating Enough Vegetables/Fruits, and
Overweight/Obesity, North Carolina, 2005



Source: 2005 NC Behavioral Risk Factor Surveillance System (BRFSS)

inadequacies, particularly when fat and total calories are restricted as part of appropriate medical nutrition therapy.

Lifestyles to support healthy aging must include healthful eating practices and regular physical activity as well as consideration of environmental components which can either present barriers or provide avenues to help develop and maintain healthy lifestyle behaviors. Early promotion and maintenance of healthy lifestyles are needed to help assure that as our population ages, people can live independently and as disability- and disease-free as possible.^{1,3}

The North Carolina State Center for Health Statistics conducts annual Behavioral Risk Factor Surveillance System (BRFSS) surveys to better identify the health practices and needs of the people of North Carolina. The 2007 BRFSS includes questions about specific dietary practices and physical activity. Results of this latest survey indicate that only 21.6% of 14,580 respondents reported consuming the recommended 5 or more servings of fruits and vegetables per day. Additionally, when asked to report their level of physical activity, only 44% of 13,951 respondents met the recommendations for physical activity, with 14.3% reporting being physically inactive. (Note: the recommended level of physical activity used for the survey is defined as doing moderate physical activity for 30 or more minutes per day, 5 days or more per week or doing vigorous physical activity 20 minutes or more per day, 3 or more days per week).¹³ (See Figure 3.)

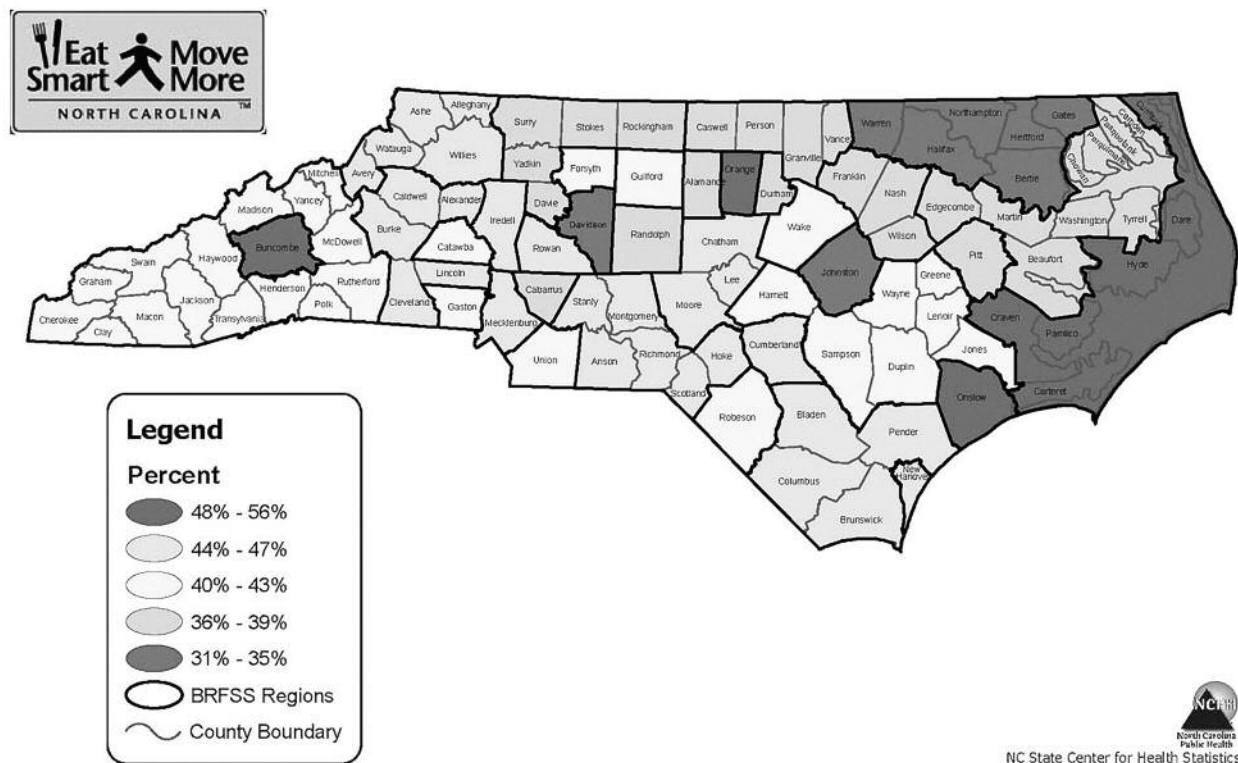
Under the leadership of several state agencies, North Carolina has implemented a number of community intervention programs designed to improve the eating practices and physical activity of all North Carolinians. These programs aim to reduce rates of

overweight and obesity and help reduce the development of type 2 diabetes and other co-morbidities of overweight/obesity such as hypertension and heart disease. Many state and private universities are involved in these efforts to better understand the multifaceted components of obesity and its related chronic diseases so that more effective intervention strategies can be developed for targeted populations, such as older adults. Faculty and students from these universities help design and implement community-based nutrition and health research projects in partnership with a variety of community agencies. The goal of all of these efforts is to improve the health and well-being of the people of North Carolina.

The most recent North Carolina Aging Services Plan for 2007-2011 is evidence of the state's commitment to healthy aging through management of chronic diseases as well as prevention programs that emphasize healthy eating and increased physical activity.¹⁴ The state of North Carolina also hosts an annual conference on aging, which brings together government agencies, educators, and service providers for purposes of education and networking.¹⁵ Among other programs in North Carolina that have a focus on improving health and wellness for seniors are Eat Smart/Move More, Prevention Partners, the annual North Carolina Senior Games, and the "Living Healthy" program. Eat Smart/Move More includes things such as monthly newsletters, recipes, a BMI calculator, and exercise guide. The Area Agencies on Aging work in conjunction with local providers to offer health screening, exercise, and nutritional education to seniors in their communities. North Carolina also is working to encourage the development of "Livable and Senior Friendly Communities" as a part of the State Aging Plan. Livable communities are communities that include parks, sidewalks, and pedestrian-friendly areas to encourage walking, and the building of key shopping areas such as grocery stores and medical centers so that citizens can easily walk to services.¹²

Access to healthful food and water, nutrition services, and other preventive health services can help many older adults remain independent and actively engaged in their respective communities. Others will need more support. Providing appropriate, culturally sensitive food and nutrition services, physical activities, and health and supportive care for our increasingly diverse population of older adults is necessary at the national, state, and local level.¹⁰ Further, coordination and

Figure 3.
Percentage of North Carolina Adults Meeting Physical Activity Recommendations*



*Moderate physical activity for 30 minutes or more per day, 5 or more days per week or vigorous physical activity for 20 or more minutes per day, 3 or more days per week.

Source: 2005 NC Behavioral Risk Factor Surveillance System (BRFSS)

integration of food and nutrition services into health and other supportive service systems will enable independence, functional ability, chronic disease management, and quality of life for all Americans. Research models developed to try to better understand the etiology of obesity that focus solely on altering personal

choices have not resulted in successful interventions for obesity prevention or treatment. Any long-term solution to the current obesity epidemic must address diet, physical activity, and environmental components that may interfere with healthy lifestyles.³ **NCMJ**

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Eat Smart, Move More Health Tip



Enjoy More Fruits and Veggies

What are low in calories, full of essential nutrients and can help reduce your risk for chronic diseases? Fruits and vegetables! Make fruits and vegetables half your plate at every meal and for every snack. Fresh, frozen, dried, canned—it all counts. Shake things up by enjoying a variety of colors to stay healthy and fit. Your body will thank you.

For more tips on how to eat your fruits and veggies every day where you live, learn, earn, play and pray, visit

www.EatSmartMoveMoreNC.com

