

DIETARY APPROACHES FOR WEIGHT MANAGEMENT IN AFRICAN AMERICANS

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INTRODUCTION

Obesity is a serious health condition that has reached epidemic proportions. About 60% of adults in the United States are overweight, with the prevalence of obesity increasing in the last decade for all age, race, and gender groups.^{1,2} Although obesity is becoming more prevalent in the US population overall, African-American and low-income women are disproportionately affected.³ Based on data from the most recent National Health and Nutrition Examinations Survey (NHANES III), the prevalence of overweight for non-Hispanic Black women was 48.6% compared to 32.2% for non-Hispanic White women and 30.9% for non-Hispanic Black men.² Especially alarming is the high prevalence of Class III obesity (BMI > 40), which affects more than 10% of Black women, ages 40–59. Overweight and obesity are linked with a host of chronic health conditions, including cardiovascular disease, diabetes mellitus, osteoarthritis, hyperlipidemia and hypertension.^{4–5} Approximately 300,000 deaths a year are attributable to overweight and obesity.⁶ In 1995, it was estimated that the direct and indirect economic consequences associated with obesity and its related health problems was an alarming \$99 billion, which included healthcare costs incurred for treatment of weight-related conditions, as well as loss of wages resulting from illness or disability.⁷

To alleviate the social and economic burden related to obesity, the development of successful weight loss strategies is essential. Diet therapy is a key component in effective weight management. Identifying appropriate dietary approaches for weight loss is crucial because studies show that even modest reductions in weight can have significant implications for chronic disease preven-

tion and management.⁸ Weight loss programs are particularly important for African-American women who bear the excess burden of obesity and overweight, as well as the associated chronic conditions. Blacks show lower levels of dietary adherence to guidelines, compared to Whites.⁹ Furthermore, while weight loss interventions have not been an overwhelming success in promoting long-term weight management for the White population, efforts to address weight-related issues in Blacks have been even less effective.¹⁰ In a study examining race- and sex-specific weight reduction results from 2 randomized multicenter trials, Kumanyika and colleagues reported that Black participants had smaller net weight loss, compared to White participants in the same program.¹¹ Wing and colleagues described similar results for Blacks and Whites in a behavioral weight control program for adults with type 2 diabetes.¹²

WEIGHT LOSS STRATEGIES AND RECOMMENDATIONS

Despite the increasing prevalence of obesity in the United States, evidence suggests that the majority of Americans are concerned about their weight. Two-thirds of Americans report that they are currently trying to lose or maintain their weight.¹³ Women, of all races, and at all education and age levels, have a higher prevalence of trying to lose weight, as compared to men.¹⁴ Adults with higher levels of income and education are more likely to report participating in weight control behavior than those in lower socioeconomic groups.^{13–15} Although Blacks overall seem to be less concerned about losing weight as compared to Whites, the prevalence of current weight loss attempts among Black and White women appear to be similar.¹⁶ Still,

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Table 1. Nutrient content for a low-calorie diet (LCD)

Nutrient	Recommended Intake
Calories*	Approximately 500 to 1,000 kcal/day from usual intake
Total fatt†	30% or less of total calories
Saturated fatty acids‡	8% to 10% of total calories
Monounsaturated fatty acids	Up to 15% of total calories
Polyunsaturated fatty acids	Up to 10% of total calories
Cholesterol‡	<300 mg/day
Protein§	Approximately 15% of total calories
Carbohydrate	55% or more of total calories
Sodium chloride	No more than 100 mmol/day (approximately 2.4 g of sodium or approximately 6 g of sodium chloride)
Calcium¶	1,000 to 1,500 mg/day
Fiber	20 to 30 g/day

* A reduction in calories of 500 to 1,000 kcal/day will help achieve a weight loss of 1 to 2 pounds/week. Alcohol provides unneeded calories and displaces more nutritious foods. Alcohol consumption not only increases the number of calories in a diet but has been associated with obesity in epidemiologic studies as well as in experimental studies. The impact of alcohol calories on a person's overall caloric intake needs to be assessed and appropriately controlled.

† Fat-modified foods may provide a helpful strategy for lowering total fat intake but will only be effective if they are also low in calories and if there is no compensation by calories from other foods.

‡ Patients with high blood cholesterol levels may need to achieve further reductions in LDL-cholesterol levels. Diet should modify saturated fats to less than 7% of total calories, and cholesterol levels to less than 200 mg/day.

§ Protein should be derived from plant sources and lean sources of animal protein.

|| Complex carbohydrates from different vegetables, fruits, and whole grains are good sources of vitamins, minerals, and fiber. A diet rich in soluble fiber, including oat bran, legumes, barley, and most fruits and vegetables, may be effective in reducing blood cholesterol levels. A diet high in all types of fiber may also aid in weight management by promoting satiety at lower levels of calorie and fat intake. Some authorities recommend 20 to 30 grams of fiber daily, with an upper limit of 35 grams.

¶ During weight loss, attention should be given to maintaining an adequate intake of vitamins and minerals. Maintenance of the recommended calcium intake of 1,000 to 1,500 mg/day is especially important for women who may be at risk of osteoporosis.⁴⁹

Source. Adapted from NHLBI Obesity Education Initiative Expert Panel.²⁸

among those attempting to lose weight, Black women initiate weight loss at higher weights, initiate dieting later in life, and participate in weight loss efforts for a shorter duration.¹⁷⁻¹⁹ Dieting behaviors may be associated with study findings showing that Black women are more accepting of a larger body image and experience less social pressure concerning their weight.¹⁹⁻²⁰

Although many individuals report engaging in weight loss activities, these efforts are not always consistent with national weight loss recommendations. Consumers spend about \$33 billion per year on weight loss products and services.²² According to the Federal Trade Commission, many of these so-called weight loss remedies (eg, diet patches, fat or starch blockers, appetite suppressing eyeglasses) offer a quick solution and range from being simply ineffective to being harmful to health.²³ Consumers may also adopt popular diets that lack the scientific evidence to support their effectiveness and proscribe regimens that are not practical for long-term adherence.²⁴ Popular dietary programs that

restrict or encourage intakes of certain macronutrients, such as excessive amounts of protein, may not be nutritionally adequate or may contradict dietary standards that reduce the risk of chronic disease.²⁴

National and professional organizations recommend diet therapy as part of a plan for effective weight loss and weight management and to sustain overall health.²⁵⁻²⁷ Evidence supports that low-fat, low-calorie diets (LCDs) are the most successful in maintaining weight loss.^{26,28} According to the National Heart, Lung, and Blood Institute's report, *Practical Guidelines for the Identification, Evaluation, and Treatment for Overweight and Obesity in Adults*, diets containing 1,000 kcal/day to 1,200 kcal/day are appropriate for the majority of women and 1,200 kcal/day to 1,600 kcal/day are recommended for men, as well as women who weigh at least 165 pounds or participate in physical activity.²⁶ Very low calorie diets (VCLDs) have been shown to be no more effective than LCDs at producing weight loss.²⁸ Table 1 provides a description of

the nutrient content for a LCD recommended for a 1- to 2-lb/per week weight loss.²⁶

Data from the Behavioral Risk Factor Surveillance System (BRFSS) reveal that among persons trying to lose weight, 90% are doing so by modifying diets. However, only about half report consuming fewer calories.¹³ Furthermore, 21.5% of men and 19.4% of women report following the recommendation of combining a reduced caloric intake with exercising 150 minutes or more per week.¹³ In both men and women, recommended guidelines were being followed by a greater percentage of Whites than Blacks.¹³ Other studies indicate that Blacks trying to lose weight may be more likely to engage in risky strategies, such as skipping meals and fasting, when compared to their White counterparts.¹⁶ Findings from mainly qualitative studies suggest that many of these eating behaviors may be common practices among Black women whether they are engaged in weight control behaviors or not.^{29,30} In a study conducted by Kumanyika, Wilson, and

Guilford-Davenport exploring Black women's weight-related attitudes and behaviors, 70% of the Black women in the study reported skipping at least one meal.³¹ McNutt and colleagues found similar patterns among Black girls, who were more than twice as likely as White girls to engage in weight-related eating practices, such as skipping meals and eating while watching TV.³²

THE INFLUENCE OF SOCIAL AND CONTEXTUAL FACTORS ON WEIGHT CONTROL EFFORTS

Social and environmental contexts may play a major role in Blacks' ability to sustain weight control efforts. Availability of healthy food at the community level has been linked to healthfulness of individual diets.³³ Environmental factors such as limited access to healthy foods and/or a high prevalence of fast food restaurants may be a major barrier for Blacks living in inner-city neighborhoods.^{34,35} According to data from the Survey of Income and Program Participation Study (SIPP) on well-being, when compared to Whites, Blacks were more likely to experience difficulty meeting basic needs, such as paying for utility bills, rent, health care, food and other essential expenses.³⁶ Thus, obtaining healthy foods may be difficult for low-income adults with inadequate resources, particularly if food items are not acceptable by other family members. Cost and family acceptability has been reported as a barrier for Blacks in purchasing fruits and vegetables.³⁷ Family and cultural food habits, such as preference for high fat foods, can also provide a barrier for weight control efforts.^{34,38,39} Other factors including social support, self-efficacy, and nutrition knowledge have also been noted to be important in maintaining healthy dietary practices and weight loss efforts among Blacks.^{40,41}

WEIGHT CONTROL APPROACHES FOR AFRICAN AMERICANS

Several studies designed to address overweight and obesity among Blacks have been conducted in a variety of settings including clinical settings (eg, hospitals and clinics) and community settings (eg, churches and community centers).⁴²⁻⁴⁶ The majority of these studies focused on weight control efforts in African-American women, very few specifically targeted African-American men. In addition, for the most part, programs have concentrated on Blacks living in urban areas; studies with rural populations have been less prevalent. Many clinical studies are directed toward patients with type 2 diabetes.^{47,48} Programs most often combine behavioral modification approaches with instruction to improve nutrition and physical activity. Overall, weight loss outcomes for the majority of the programs have been modest as compared to those achieved in White populations, with weight losses ranging from 0 to approximately 0.4 kg per week.⁴⁹ However, several studies demonstrate approaches that may provide insight for developing programs that will be effective for long-term weight control for Black women. A summary of the key components included in many of these approaches is presented in Table 2. Table 2 also includes a modified version of the recommendations described by Kumanyika⁴⁹ on adapting weight loss programs for effectiveness in diverse populations. The following two descriptions offer examples of ways in which some of these strategies have been implemented in weight management programs.

Agurs-Collins and colleagues conducted a randomized controlled trial at an urban hospital in Washington, DC for weight reduction in older African Americans with type 2 diabetes.⁴⁸ Sixty-four patients (49 women and 15 men) with a mean age of 62 years and a BMI of 34 kg/m² were recruited for the study

through medical and community referrals. The study compared a treatment group, who received 12 weekly, one individual, and 6 biweekly sessions over a 6 month period, with a group that received usual-care, including a general diabetes education class and educational mailing. Treatment group sessions consisted of nutrition education and 30 minutes of physical activity. The program was culturally adapted based on previous research with African Americans (particularly qualitative findings) and delivered by a registered dietitian and an exercise physiologist, both who were Black. Based on Social Learning Theory, program instruction emphasized cooperative learning techniques and promoted interactive discussions focused on issues important to program participants. Reported net weight loss at 3 and 6 months was 2 kg and 2.4 kg, respectively.

A similar study conducted by McNabb and colleagues also focused on weight reduction in an urban sample of African Americans with type 2 diabetes.⁴⁷ "PATHWAYS," targeted low-income African-American women at a university medical center in Chicago. The program included 12 initial small-group sessions that focused on behavioral modification, nutrition, and physical activity and 6 weekly follow-up sessions designed to provide strategies for participants to overcome weight-related barriers. Patients in the treatment group were compared with randomly selected patients receiving usual care. Program content was based on findings from qualitative research with the study population and was designed to include culturally appropriate materials that were written at a low literacy level. Thirteen patients with a mean BMI of 36 kg/m² and age of 57 years participated in the program. Nine of the 10 women who completed the program lost weight, and half lost more than 4.5 kg. An average weight loss of 4.1 kg was maintained after 1 year for patients in the intervention group, the usual care comparison

Table 2. Summary of recommendations for weight management programs in African Americans

1. Provides setting or treatment venue that is:
 - Physically accessible and appealing to participants.
 - Incorporates features likely to be familiar to participants.
 - Is free of negative psychosocial connotations.
 - Is free of factors that create a large social distance among participants or between participants and counselors.
2. Involve staff who are:
 - Culturally self-aware.
 - Culturally competent with diverse audiences.
 - Interdisciplinary and who can provide different expertise such as nutritionists, exercise physiologists, physicians, and lay health educators.
3. Treatment program should:
 - Be based on formative research to tailor instruction to specific needs of participants.
 - Include self-monitoring, feedback, long duration, and follow-up.
 - Incorporate diet, physical activity, and behavior modification.
 - Focus on skill building.
4. Use educational and counseling approaches that anticipate a suitable diversity and range in participants':
 - Preexisting knowledge and skill base.
 - Day-to-day routine, discretionary time, and existing priorities.
 - Financial resources and living situation including neighborhood and social contexts.
 - Education and literacy levels.
 - Cultural preferences for food and activity.
 - Access to resources after initial program sessions are completed.
4. Facilitate integration of weight management advice with other aspects of health care and self care.
5. Expect and allow for program modifications based on patient feedback and preferences.

Source. Adapted from Kumanyika⁴⁹

patients gained 1.4 kg over the same period. The "PATHWAYS" program was subsequently adapted for use in a church-based weight loss program that was implemented by trained lay health educators.⁵¹ One segment of the program also included instruction from a registered dietitian. During the 14-week program, lay educators assisted participants in developing strategies to address barriers to nutrition and physical activity. Similar to the original program, the church-based version focused on providing culturally appropriate instruction and materials. Weight losses were comparable to those in the original program.

IMPLICATIONS

Given the disproportionate prevalence of overweight and obesity in Blacks, the need for effective, culturally appropriate weight management strategies is evident. Although the existing body of literature on weight management for African Americans provides some insight, more research and pro-

gram development are needed to address this issue. One important observation to note is that net differences in weight between Blacks and Whites are not only based on differences in initial weight loss but also regain.^{10,12} As a result, approaches need to have a strong focus on maintenance and followup, and must attempt to address environmental factors that may serve as a key barrier in long-term weight management. Studies suggest that health professionals appear to feel most comfortable focusing on education-based strategies and less confident with strategies targeting environmental change.⁵² Therefore, training for professionals in areas such as community-based participatory research, policymaking, political advocacy, and community organizing may be needed. Researchers and practitioners also need to explore approaches that have been applied to other health concerns (eg, violence, HIV/AIDS, and substance abuse) in the African-American community and must draw on information from various disciplines including anthropology, public health, sociology, Black

studies, and medicine. In closing, approaches should be sensitively based on the experience of those participating in the program. Therefore, health professions should consider multi-method approaches (eg, case studies, surveys, individual interviews, focus groups, ethnography) to understand the cultural, family, and individual processes in which weight-related behaviors and perceptions are based.

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WEIGHT MANAGEMENT IN AFRICAN AMERICANS - Odoms

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