

# Plant-Based Diets in Black Populations

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Plant-based diets are associated with reduced risks of various chronic diseases in the general population. However, it is unclear how these benefits translate to Blacks living in the United States, who are disproportionately burdened with heart disease, cancer, diabetes, obesity, and chronic kidney disease.

Keywords: diet patterns ; plant-based ; vegetarian ; vegan ; African American ; health disparities ; chronic disease

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## 1. Introduction

Chronic diseases, such as type 2 diabetes, obesity, stroke, heart disease, and cancer have significant health and economic costs. Currently, 60% of Americans have at least one chronic condition, and 40% have multiple chronic conditions <sup>[1]</sup>. As the leading contributors of the nation's \$3.3 trillion in annual health care expenditures, chronic illnesses are financially burdensome. Affected patients utilize and spend more on health care services and may have reduced physical and social functioning compared to individuals who are not suffering from chronic diseases <sup>[1]</sup>.

Blacks in the United States (people of African ancestry, including African-Americans, Africans, Afro-Caribbeans, and Afro-Latinos) are disproportionately affected with chronic diseases compared to the general population. Several factors contribute to this finding, including genetic predisposition (having high-risk alleles for certain conditions), environmental factors (e.g., poor quality health care), and lifestyle behaviors (diet and physical activity) <sup>[2]</sup>. A healthy diet and regular physical activity may reduce risks for, delay, and assist in managing, chronic diseases. Fruit and vegetable consumption is a protective factor for cardiovascular disease and a dietary pattern that emphasizes fruits, vegetables, whole grains, legumes, nuts, and seeds may assist in weight management and overall health <sup>[3]</sup>. Despite the health benefits of increasing fruit and vegetable consumption, only 1 in 10 US adults meet the federal fruit and vegetable recommendations. This is even more of a problem among Blacks, who typically consume lower amounts than Whites <sup>[4]</sup>. Notably, the diets of Blacks were historically predominantly plant-based in Africa, and elements of that are still seen in some of today's cultural cuisine <sup>[5]</sup>. The African Heritage Diet created by Oldways Cultural Foods Tradition emphasizes that the "old ways" of eating consisted mainly of green leafy vegetables, sweet potatoes, fruits, beans, peanuts, coconuts, homemade sauces, herbs, and spices <sup>[5]</sup>. However, these traditions have shifted, partly through a heavy influence of Western culture, although some remnants of it still remain and commonalities can be seen in the diets of the African diaspora across the Caribbean, Latin America, and the United States <sup>[5]</sup>. Today, the typical Southern-style diet pattern, as seen in the southeastern region of the United States and among Blacks, is high in fried foods, sweetened beverages, and red and processed meats <sup>[6]</sup>. Additionally, when compared to more affluent neighborhoods, accessible food outlets in lower-income rural communities where some Blacks reside may not offer fresh fruits and vegetables <sup>[7][8][9]</sup>. These factors contribute to an unhealthy diet and increased risks for obesity and its related diseases.

## 2. Plant-Based Diets and Their Health Effects

Plant-based diets are dietary patterns that emphasize foods of plant origin, rather than meats and animal byproducts. There is still a degree of heterogeneity in the definition of "plant-based", since it can describe vegan or vegetarian diets, or semi-vegetarian diets <sup>[10][11]</sup>. The 2015–2020 USDA Dietary Guidelines describe a "Healthy Vegetarian Eating Pattern" which eliminates meat, poultry, and seafood, and increases intake of legumes, nuts and seeds, and whole grains. Dairy and eggs may also be excluded in a vegan pattern <sup>[12]</sup>. For the purpose of this review, the terms "plant-based diet" and "plant-based dietary pattern" will include both vegan and vegetarian diets, although reference will be made to predominantly plant-based dietary patterns.

A 2018 Gallup poll recorded that 5% of Americans identify as vegetarian, and 3% as vegan <sup>[13]</sup>. Some studies have reported that adherence to a plant-based dietary pattern is associated with lower risks of an array of chronic diseases. Although the dynamics of cultural heritage and genetic characteristics should also be considered, in general, these diets reduce risks for major diseases that disproportionately affect Blacks, such as heart disease, cancer, diabetes, obesity, and

chronic kidney disease. Multiple reasons for their benefits exist, including the synergistic effects of nutrients typically found in whole plant foods, such as fruits, vegetables, whole grains, legumes, and nuts <sup>[14][15]</sup>.

### **3. Current Evidence Addressing Plant-Based Diets in Black Populations**

Considering the data that exists on the benefits of a plant-based diet for health conditions that commonly affect Blacks, unfortunately, specific evidence that addresses Black populations is limited. The majority of studies are epidemiological in design and have been conducted on a Seventh-day Adventist population, one known for encouraging vegetarianism and healthy lifestyle behaviors among its members <sup>[16]</sup>. Seventh-day Adventists discourage smoking and drinking alcohol, and many members also limit coffee intake <sup>[16]</sup>. In addition, for non-vegetarians, consumption of certain meats like pork and shellfish is forbidden <sup>[16]</sup>. Therefore, while these studies are crucial in order to make public health recommendations, results are limited since they may not be generalizable to various Black populations.

Another epidemiological study, the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study, has also examined dietary patterns and chronic disease risks in 30,239 Black and White participants and offers valuable insight into the connection between diet and disease. Black participants were oversampled, comprising 42% of the study population <sup>[6][17]</sup>. However, plant-based (vegan/vegetarian) diets were not exclusively examined in this study. Instead, a posteriori dietary patterns were derived using a principal component analysis of 56 different food groups, which identified foods that were customarily consumed as part of specific patterns <sup>[6]</sup>. As the dietary patterns were identified, a “plant-based” diet emerged, which emphasized vegetables (cruciferous, green-leafy, dark yellow, and other vegetables), fruits, whole grains, legumes, and fish <sup>[17]</sup>. The inclusion of fish in this pattern makes it difficult to isolate the benefits of an exclusively plant-based diet. Nevertheless, the results of REGARDS offer some insight into how gradually increasing intake of healthy plant-based foods and decreasing intake of animal foods can offer health benefits for Blacks.

### **4. Nutrition Considerations for Black Adults Following a Plant-Based Diet**

According to the official position of the Academy of Nutrition and Dietetics, “appropriately planned vegetarian, including vegan, diets are healthful, nutritionally adequate, and may provide health benefits for the prevention and treatment of certain diseases” <sup>[18]</sup>. Although the benefits of these diets are well recorded and supported, health professionals may be concerned that recommending them to patients could result in nutritional deficiencies. There are also unique concerns that Blacks could face in adopting a plant-based diet that need to be addressed. It should be remembered there are risks for nutritional deficiencies in any diet, and a plant-based one is no exception. As with any diet, they should be carefully planned. Black adults who follow a plant-based diet should take care to ensure that it is adequate to meet all their nutritional needs.

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