

# Struggling to overcome obstacles in undertaking behavioural and dietary changes for type 2 diabetes prevention and control in Africa.

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## Abstract

**Diabetes mellitus is a severe chronic ailment in Africa that necessitates lifelong lifestyle changes as well as pharmacological treatment. Diabetes self-management education and support, medical nutrition therapy, physical exercise, smoking cessation counselling, and psychological care are all key aspects of diabetes care. Hurdles to lifestyle modifications and solutions for overcoming them, dietary pattern adjustments for all type 2 diabetes patients, self-care behaviour of type 2 diabetic patients, the expense of diabetes in Africa, and hurdles to adherence to lifestyle and dietary changes in Africa, including solutions to overcome such barriers. Lifestyle measures such as regular physical activity, weight management, and adhering to health care providers' recommendations on a balanced diet are the bedrock of diabetes prevention and management in Africa.**

**Keywords:** Type 2 diabetes, Health care, Diabetes mellitus.

## Introduction

Diabetes mellitus is an endocrine illness with multiple aetiologies that is defined by elevated glucose levels in the blood and disruptions in macromolecule metabolism such as carbohydrate, lipid, and protein metabolism as a result of problems in insulin secretion, insulin action, or both. A shortage of insulin, or the inability of cells to respond to it, results in high levels of blood glucose (hyperglycaemia), which is a clinical sign of diabetes. Type 1 DM is characterized by insulin deficiency and a tendency to develop diabetic ketoacidosis, whereas type 2 DM is characterized by variable degrees of insulin resistance, impaired insulin secretion, and excessive hepatic glucose production [1].

The cornerstone of type 2 diabetes management is the promotion of lifestyle interventions that include a healthy diet, regular physical activity, smoking cessation, and maintenance of a healthy body weight. T2D is a lifestyle disease, which can and should be prevented by intensive lifestyle interventions, characterized by changes in dietary habits and increased physical activity. Changes in lifestyle and dietary habits are critical for T2DM control. Changes in lifestyle, such as regular physical activity, weight management, and nutrition control, can assist to reduce the long-term complications of diabetes [2]. Diabetes self-management education and support are crucial parts of diabetes care for the health care team, as are lifestyle intervention and education.

Diabetes prevention and management require lifestyle modifications and interventions such as diabetes self-management education, social support, medical nutrition

therapy, and physical activity. The papers' important findings demonstrated those proper lifestyle therapies such as regular physical exercise, an adequate eating pattern, frequent blood glucose testing, and having a support group improve type 2 diabetes management and minimise diabetes complications. Dietary patterns have a significant impact on type 2 diabetes management. Healthy diets, such as vegetables, fruits, and a low-fat diet, can assist to minimise the risk of diabetes [3]. Plant foods are generally associated with lower T2D risk than meat foods, low energy density foods are thought to be more protective than high energy density foods, associations between fish consumption and diabetes risk are variable, and fermented dairy products may be more beneficial than no fermented dairy products. Ancel Keys developed the Mediterranean Diet (MD) in the 1960s after studying the eating habits of Mediterranean communities. The Mediterranean diet is one of the most well-known dietary patterns for human health. MD components include a high consumption of plant-based foods such as fruits, vegetables, and legumes, a moderate consumption of fish and dairy products, and a reduced consumption of red meat and red wine. The Mediterranean diet has a major impact on type 2 diabetes prevention and control. It minimises oxidative stress, insulin resistance, acts as an anti-inflammatory dietary pattern, and reduces chronic disease consequences. Diabetes prevention and management rely heavily on nutritional therapy.

## *Interventions and lifestyle and diet changes for type 2 diabetes prevention and management in Africa*

Type 2 diabetes is a growing health problem in Africa, and

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lifestyle and diet changes can play a significant role in its prevention and management. Here are some interventions and changes that can help:

A healthy diet that is low in processed foods, added sugars, and saturated fats and high in fruits, vegetables, and whole grains can help prevent and manage diabetes. Encourage the consumption of traditional African foods that are rich in fibre, such as cassava, yams, beans, and lentils. Regular physical activity: Physical activity is essential for preventing and managing diabetes. Encourage regular exercise or physical activity, such as walking, jogging, or dancing, for at least 30 minutes a day, five days a week.

**Weight management:** Maintaining a healthy weight is essential for preventing and managing diabetes. Encourage individuals with diabetes to achieve and maintain a healthy Body Mass Index (BMI) through healthy eating and regular physical activity.

For those who are already diagnosed with diabetes, medications may be necessary to help control blood sugar levels. Encourage individuals to take their medications as prescribed and to follow up with healthcare providers regularly.

**Regular blood sugar monitoring:** Regular blood sugar monitoring is essential for individuals with diabetes to manage their condition effectively. Encourage regular monitoring of blood sugar levels and educate individuals on how to interpret their results and take action when necessary.

Providing education and support for individuals with diabetes and their families is essential for effective management. Encourage access to diabetes education programs, support groups, and healthcare providers who specialize in diabetes management.

**Community involvement:** Community-based interventions and programs can also play a significant role in diabetes prevention and management. Encourage community involvement and engagement in activities such as healthy cooking classes, physical activity programs, and diabetes screening events [4].

According to the studies evaluated, adherence and non-adherence are defined in terms of lifestyle and nutritional patterns. Adherence is a collaborative relationship developed between the patient and the healthcare professional in which the patient attentively adheres to the lifestyle alterations that are

mutually beneficial to the patient [5]. Non-adherence occurs when a diabetic patient fails to adhere to the mutually agreed-upon lifestyle and nutritional adjustments. Multiple reasons for non-adherence to lifestyle and nutritional interventions were outlined in the examined articles, including the patient's educational status, income level, perceived severity, and perceived hurdles.

## Conclusion

Despite efforts to improve awareness and education, the prevalence of type 2 diabetes continues to rise. Cultural beliefs, poverty, and limited access to healthcare and healthy food options are some of the major obstacles that need to be addressed to prevent and control type 2 diabetes in Africa. Additionally, there is a need for innovative approaches that are culturally relevant and sensitive to the unique challenges faced by communities in Africa. Such approaches should also take into account the importance of community engagement and empowerment. By addressing these challenges and implementing effective prevention and control strategies, it is possible to reduce the burden of type 2 diabetes in Africa and improve the overall health and well-being of its people.

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