

Preventing the onset of hyperglycemia: Effective approaches for a healthier life

Nadine Bernhardt*

Received: 28-Oct-2024, Manuscript No. FMDM-24-157448; **Editor assigned:** 31-Oct-2024, PreQC No. FMDM-24-157448 (PQ); **Reviewed:** 15-Nov-2024, QC No. FMDM-24-157448; **Revised:** 22-Nov-2024, Manuscript No. FMDM-24-157448 (R); **Published:** 29-Nov-2024, DOI: 10.37532/1758-1907.2024.14(6).681-682.



Description

Hyperglycemia, commonly referred to as high blood sugar, occurs when the glucose (sugar) levels in the bloodstream become elevated beyond normal ranges. It is a condition frequently associated with diabetes, but it can also affect individuals without diabetes. Left unchecked, hyperglycemia can lead to serious health complications such as cardiovascular disease, kidney damage, nerve damage, and even diabetic coma. Therefore, preventing hyperglycemia is essential for maintaining long-term health.

Hyperglycemia occurs when the body is unable to effectively regulate blood sugar. Normally, the pancreas releases insulin, a hormone that helps move glucose from the bloodstream into cells for energy. In people with insulin resistance or insufficient insulin production (such as in diabetes), blood glucose levels rise.

The symptoms of hyperglycemia can include:

- Frequent urination
- Excessive thirst
- Fatigue
- Blurred vision
- Unexplained weight loss

In severe cases, hyperglycemia can lead to conditions such as Diabetic Keto Acidosis (DKA) or Hyperosmolar Hyperglycemic State (HHS), which are medical emergencies.

■ Strategies for preventing hyperglycemia

Carbohydrate control: Carbohydrates directly impact blood sugar levels. Choosing complex

carbohydrates, such as whole grains, vegetables, and legumes, over refined carbs (like white bread or sugary snacks) can help maintain stable blood sugar levels. The Glycemic Index (GI) of foods is another important consideration—foods with a low GI cause slower, more gradual increases in blood sugar.

Portion control: Consuming meals in appropriate portion sizes helps prevent large spikes in blood sugar. It is important to avoid overeating and to balance carbohydrate intake with other macronutrients, such as proteins and healthy fats, to slow down sugar absorption.

Frequent, smaller meals: Instead of eating large meals, aim for smaller meals and snacks throughout the day. This can help prevent large fluctuations in blood sugar and prevent overloading the system.

Exercise and insulin sensitivity: Physical activity is one of the most effective ways to prevent hyperglycemia. Regular exercise helps the body become more sensitive to insulin, allowing glucose to be used more efficiently. Both aerobic exercises (like walking, jogging, or swimming) and strength training (like weightlifting) are beneficial.

Frequent monitoring: Regular blood sugar monitoring is important for people with diabetes and those at risk for hyperglycemia. Checking blood sugar levels regularly can provide valuable insights into how diet, exercise, and medications are affecting blood sugar control.

Technology aids: Continuous Glucose Monitors (CGMs) can provide real-time information about blood sugar trends, which can be helpful for making immediate adjustments in diet or

Department of Endocrinology, Usmanu Danfodiyo University, Sokoto, Nigeria

*Author for correspondence: E-mail: Nadineb123@gmail.com

activity.

Medications for diabetes: For individuals with diabetes, taking prescribed medications as directed by a healthcare provider is essential in preventing hyperglycemia. Medications like metformin, GLP-1 agonists, and SGLT-2 inhibitors can help regulate blood glucose levels.

Insulin therapy: For individuals with type 1 diabetes or advanced type 2 diabetes, insulin therapy may be necessary. Proper insulin management is vital to avoid both hyperglycemia and hypoglycemia (low blood sugar). Working with an endocrinologist can ensure that insulin doses are calibrated correctly based on the individual's needs.

Stress and blood sugar: Stress can have a significant impact on blood sugar levels. During periods of stress, the body releases hormones like cortisol and adrenaline, which can increase blood sugar. Finding ways to manage stress—such as practicing yoga, meditation, mindfulness, or engaging in hobbies—can help keep blood sugar levels in check.

Adequate sleep: Poor sleep is a major contributor to blood sugar imbalances. Aim for 7-9 hours of quality sleep each night. Lack of sleep affects insulin sensitivity and contributes to increased hunger, which can lead to overeating and high blood sugar.

Drink water: Staying hydrated is important for preventing hyperglycemia. Dehydration can cause blood sugar levels to rise, and it also puts strain on the kidneys. Drinking water throughout the day helps flush excess sugar out

of the bloodstream through urine and supports overall body functions.

Limit alcohol consumption: While moderate alcohol intake may not directly cause hyperglycemia, excessive alcohol consumption can affect blood sugar control. It can cause fluctuations in glucose levels and interact with diabetes medications. It is advisable to consult with a healthcare provider regarding safe alcohol consumption.

Quit smoking: Smoking is a risk factor for insulin resistance, which can lead to hyperglycemia. Quitting smoking can improve insulin sensitivity and overall blood sugar management.

Maintain a healthy weight: Excess body weight, especially around the abdomen, is a significant risk factor for developing insulin resistance and hyperglycemia. Achieving and maintaining a healthy weight through a balanced diet and regular exercise can significantly reduce the risk of hyperglycemia and help manage existing conditions like type 2 diabetes.

Hyperglycemia prevention requires a multifaceted approach that includes maintaining a balanced diet, staying physically active, managing stress, monitoring blood sugar, and taking medications as prescribed. By implementing these strategies and adopting a healthy lifestyle, individuals can significantly reduce their risk of hyperglycemia and its associated complications. Regular consultation with a healthcare provider is important to ensure that prevention strategies are tailored to individual needs.