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Abstract

Individuals with diabetes are at increased risk of developing microvascular complications (retinopathy, nephropathy, and neuropathy) and cardiovascular disease (CVD). The Diabetes Control and Complications Trial (DCCT) (1) and U.K. Prospective Diabetes Study (UKPDS) (2) showed that treatment programs resulting in improved glycemic control, as measured by HbA1c , reduced the microvascular complications of diabetes. The effect of these treatment programs on reducing CVD was less clear. However, some epidemiological studies suggest that there may be a relationship between glycemic levels and CVD. In the management of diabetes, health care providers usually assess glycemic control with fasting plasma glucose (FPG) and premeal glucose measurements, as well as by measuring HbA1c . Therapeutic goals for HbA1c and preprandial glucose levels have been established based on the results of controlled clinical trials. Unfortunately, the majority of patients with diabetes fail to achieve their glycemic goals. Elevated postprandial glucose (PPG) concentrations may contribute to suboptimal glycemic control. Postprandial hyperglycemia is also one of the earliest abnormalities of glucose homeostasis associated with type 2 diabetes and is markedly exaggerated in diabetic patients with fasting hyperglycemia. Several therapies targeted toward lowering PPG excursions are now available and have been shown to improve glycemic control as measured by HbA 1c . However, many questions remain unanswered regarding the definition of PPG and, perhaps most importantly, whether postprandial hyperglycemia has a unique role in the pathogenesis of diabetic complications and should be a specific target of therapy

1. Postprandial blood glucose (PPBG) is the increase in blood sugar levels after a meal.
2. PPBG is influenced by factors such as carbohydrate content, glycemic index, and individual insulin sensitivity.
3. High PPBG is associated with an increased risk of developing type 2 diabetes and cardiovascular diseases.
4. Lifestyle modifications, including dietary changes and physical activity, can help manage postprandial blood glucose levels.
5. Pharmacological interventions, such as the use of metformin, acarbose, or alpha-glucosidase inhibitors, may also be considered for managing PPBG in some cases.

Key Takeaways:

1. Postprandial blood glucose is a crucial factor in determining overall health and risk of developing chronic diseases.
2. Lifestyle modifications are essential in managing PPBG levels, with dietary changes and physical activity being key components.
3. Pharmacological interventions may be necessary for some individuals to manage their postprandial blood glucose effectively.