

Cyclamate in diabetes: Examining the sweetener's role and safety

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Description

Diabetes, a chronic condition characterized by elevated blood sugar levels, often necessitates dietary modifications to manage the disease effectively. Artificial sweeteners, including cyclamate, have become popular alternatives to sugar for individuals with diabetes. This article aims to explore the use of cyclamate in diabetes, its impact on blood sugar levels, and considerations regarding safety. Saccharin and cyclamate consumption appeared to elevate oxidative stress in both healthy individuals and type 2 diabetics, influencing biochemical parameters linked to metabolic processes in a time and dose-dependent manner. Cyclamate is a sodium or calcium salt of cyclamic acid that is used as an artificial sweetener. Approximately thirty times sweeter than sucrose, sodium cyclamate is a white, odourless powder. It is frequently combined with other artificial non-caloric sweeteners, including acesulfame K, aspartame, and saccharin.

Cyclamate is a non-nutritive sweetener that gained attention for its intense sweetness without the caloric content of sugar. As a sugar substitute, cyclamate is attractive to individuals with diabetes because it provides the sweet taste they crave without affecting blood glucose levels in the same way that sugar does.

One of the key advantages of using cyclamate in diabetes management is its minimal impact on blood sugar levels. Cyclamate does not raise blood glucose because it is not metabolized by the body. Therefore, it is considered a safe option for those seeking sweetness without compromising

glycemic control.

Cyclamate is approved for use as a sweetener in various countries, with regulatory bodies establishing Acceptable Daily Intake (ADI) levels. The ADI is the maximum amount of a substance that can be consumed daily over a person's lifetime without appreciable health risk. Authorities such as the European Food Safety Authority (EFSA) and the World Health Organization (WHO) have set ADI levels for cyclamate, ensuring its safety when consumed within established limits.

While cyclamate has been deemed safe by many regulatory bodies, controversies surrounding its safety, particularly its potential link to bladder cancer in laboratory rats, led to its ban in the United States in 1969. However, subsequent research and evaluations have questioned the relevance of these findings to human health, and many countries around the world continue to permit the use of cyclamate in food and beverages.

As with any artificial sweetener, individual responses may vary. Some people may prefer cyclamate over other sweeteners, while others may have personal preferences or sensitivities. It is crucial for individuals with diabetes to be aware of their overall dietary choices and maintain moderation in the consumption of sweeteners, including cyclamate.

Consultation with healthcare professionals is advisable for personalized guidance, especially for those with specific health concerns or conditions. Additionally, staying informed about regulatory guidelines and any updates regarding



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the safety of cyclamate is essential for individuals incorporating it into their diabetes management plan.

Cyclamate, as a sugar substitute, offers individuals with diabetes a sweet option without causing spikes in blood sugar levels. While controversies surrounding its safety persist, regulatory

bodies worldwide have established ADI levels, allowing for its use within specified limits. As part of an overall diabetes management plan, individuals are encouraged to make informed choices, considering their unique health needs and consulting healthcare professionals when necessary.