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Nutritional Uses of Stevia

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Stevia (*Stevia rebaudiana*), commonly known for its natural sweetness, is a plant native to South America. The leaves of stevia contain various compounds known as steviol glycosides, including stevioside and rebaudioside A, which are responsible for its intense sweetness. Beyond its use as a sugar substitute, stevia also has nutritional and therapeutic benefits.

Nutritional Uses of Stevia

Stevia is primarily recognized for its ability to provide a sweet taste without adding significant calories or sugars, making it a popular alternative to artificial sweeteners and sugar. Here's how it can be used in terms of nutrition:

1. Low-Calorie Sweetener:

- Stevia is virtually calorie-free, which makes it an ideal choice for people looking to reduce their caloric intake or manage their weight. It can be used to sweeten foods and beverages without contributing to the calorie load.

- Unlike sugar, which contributes to weight gain and obesity when consumed in excess, stevia does not affect blood sugar levels significantly and does not contribute to the formation of body fat.

2. Blood Sugar Control:

- Stevia does not raise blood sugar levels, making it an excellent alternative for individuals with diabetes or those looking to manage their blood sugar levels. Studies have shown that stevia may help reduce blood glucose and improve insulin sensitivity when consumed in moderation.

- This is important for diabetics who need to avoid spikes in their blood sugar levels from sweeteners that contain sugar.

3. Antioxidant Properties:

- Stevia contains compounds with antioxidant properties, such as flavonoids, phenolic acids, and other phytochemicals. These antioxidants help protect the body against oxidative stress, which is linked to the development of chronic diseases like cancer, heart disease, and diabetes.

- The antioxidants in stevia may support overall health by neutralizing free radicals in the body, potentially preventing damage to cells and tissues.

4. Dental Health:

- Unlike sugar, which can contribute to tooth decay and cavities, stevia has been shown to have antibacterial properties that may help prevent the growth of harmful bacteria in the mouth. Some studies suggest that stevia may help in preventing plaque formation and reducing the risk of dental cavities.

5. Digestive Health:

- Stevia has been shown to have mild digestive benefits. It has been used traditionally as a remedy for bloating, indigestion, and stomach cramps. Some compounds in stevia may

support healthy gut function by acting as mild digestive aids, promoting regular bowel movements and reducing gastrointestinal discomfort.

Therapeutic Uses of Stevia

In addition to its nutritional properties, stevia has a number of therapeutic benefits that make it valuable in traditional medicine and modern health practices.

1. Antidiabetic Effects:

- **Blood Sugar Regulation:** As mentioned, stevia does not raise blood sugar levels and may help to reduce high blood sugar in individuals with diabetes. Some studies suggest that stevioside, one of the primary active compounds in stevia, can help reduce blood sugar levels and improve insulin function.

- **Insulin Sensitivity:** Stevia may increase insulin sensitivity, which is important for managing type 2 diabetes and preventing the progression of insulin resistance.

2. Hypertension (Blood Pressure Control):

- **Reduction in Blood Pressure:** Some research has shown that stevia can have a mild hypotensive (blood pressure-lowering) effect. This could be beneficial for people suffering from high blood pressure (hypertension). Stevia may act as a vasodilator, helping to relax the blood vessels, which can lead to a reduction in blood pressure.

- In a clinical study, stevia extract was found to significantly reduce blood pressure in people with mild to moderate hypertension, possibly due to its ability to increase sodium excretion and reduce blood vessel constriction.

3. Anti-inflammatory and Antioxidant Effects:

- Stevia has shown promise in its ability to reduce inflammation and oxidative stress. This is important for reducing the risk of chronic diseases such as cardiovascular disease, cancer, and neurodegenerative diseases. Its anti-inflammatory properties may be due to its polyphenolic compounds that help reduce the activity of pro-inflammatory cytokines.

- The antioxidants in stevia also play a role in preventing cell damage and promoting longevity.

4. Weight Management:

- Because of its ability to provide sweetness without calories, stevia is commonly used in weight management diets. It allows individuals to enjoy sweet foods and beverages without the risk of weight gain or increasing body fat. Additionally, the compounds in stevia may help reduce hunger cravings and promote satiety, further assisting with weight control.

5. Antimicrobial Properties:

- Stevia has shown antimicrobial activity, particularly against bacteria and fungi. This makes it a potential remedy for certain types of infections and an aid in wound healing. Some studies have shown that stevia extracts inhibit the growth of bacteria like *Staphylococcus aureus* and *Escherichia coli*, which are common causes of infections.

6. Liver and Kidney Health:

- Research indicates that stevia may have protective effects on liver and kidney health. It may help reduce liver damage caused by toxins and support overall detoxification in the body. Additionally, it may assist in improving kidney function by reducing inflammation and oxidative stress in renal tissues.

7. Potential Anti-Cancer Effects:

- Some preliminary studies suggest that stevia may possess anti-cancer properties due to its antioxidant, anti-inflammatory, and immune-boosting effects. While the evidence is not yet conclusive, stevia may help reduce the growth of cancer cells in certain types of cancer, particularly due to its stevioside content. More research is needed to confirm these effects in humans.

How to Use Stevia

Stevia can be used in a variety of ways in the diet and for therapeutic purposes:

- 1. As a Sweetener:** Stevia is often used as a substitute for sugar in beverages like tea, coffee, and smoothies. It can also be used in baked goods and desserts. Since stevia is much sweeter than sugar, only a small amount is needed.
- 2. Supplements:** Stevia is available in supplement form, including liquid extracts, powders, and capsules. These are often used for blood sugar control or weight management.
- 3. Topical Use:** Stevia extracts are sometimes used in topical applications for wound healing or as part of anti-inflammatory creams.
- 4. Tea:** Stevia leaves or stevia powder can be added to hot water to make an herbal tea, offering both sweetness and health benefits.

Conclusion

Stevia is much more than just a sugar substitute. It offers nutritional benefits like being a low-calorie sweetener that can help control blood sugar levels, support dental health, and provide antioxidants. Therapeutically, it has been shown to support diabetes management, hypertension, inflammation reduction, and weight control, among other health benefits. While stevia is generally regarded as safe, like any supplement or herb, it's important to consume it in moderation and consult a healthcare provider, especially for those with underlying health conditions like diabetes or low blood pressure.