



Effect of Cooking on the Bioavailability of Quercetin from Apple Skin

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Description

Apples are a beloved fruit, renowned not only for their delightful taste but also for their numerous health benefits. Among the many compounds found in apples, quercetin stands out as a powerful antioxidant with potential health-promoting properties. Quercetin is a flavonoid known for its anti-inflammatory and antioxidant effects, which may contribute to various health benefits, including reduced risk of chronic diseases.

However, it's important to note that the levels of quercetin in apples can vary, and the way apples are prepared and cooked can affect the amount of quercetin retained in the final dish. In this article, we will explore quercetin extraction from apples and discuss how cooking methods impact nutrient loss.

Quercetin in apples

Quercetin is primarily found in the skin of apples, making it an essential component of the fruit's nutritional profile. It is responsible for the apple's characteristic color and plays a crucial role in its antioxidant activity. Studies have suggested that quercetin may have various health benefits, including reducing inflammation, improving heart health, and supporting the immune system.

Quercetin extraction from apples

To maximize quercetin extraction from apples, it's essential to consider the following factors:

Apple variety: Different apple varieties contain varying levels of quercetin. Red and purple-skinned apples tend to have higher quercetin content than green varieties.

Apple ripeness: Quercetin levels can change as apples ripen. Generally, it's believed that quercetin content is

highest when apples are fully ripe.

Skin vs. Flesh: As mentioned earlier, quercetin is primarily found in the skin. Therefore, leaving the skin on while preparing apples is crucial to retain this beneficial compound.

Preparation Techniques: The way of apples are cut and prepared can also influence quercetin retention. Minimizing the surface area exposed to oxygen (e.g., slicing apples just before use) can help preserve quercetin.

Cooking methods and nutrient loss

Cooking apples can alter their nutritional composition, and quercetin is no exception. The choice of cooking method can significantly impact the retention of this beneficial compound.

Baking and roasting: Baking or roasting apples can help preserve quercetin content, as it is less susceptible to high temperatures compared to other cooking methods. When baked, apples soften and retain their skin, ensuring that the quercetin-rich peel is consumed.

Boiling: Boiling apples may lead to significant quercetin loss, as the compound can leach into the cooking water. To minimize nutrient loss, consider using the cooking water in recipes or as a base for soups or sauces.

Microwaving: Microwaving apples is a quick and convenient way to cook them. While some nutrient loss may occur, it is generally considered a better option than boiling, as it preserves more of the quercetin content.

Steaming: Steaming apples is another excellent choice for preserving quercetin. It gently cooks the fruit without direct contact with water, reducing nutrient loss.

Apples are a rich source of quercetin, a potent antioxidant with potential health benefits. To maximize quer-

quercetin extraction and minimize nutrient loss during cooking, it's important to choose the right apple variety, retain the skin, and select appropriate cooking methods such as baking, roasting, microwaving, or steaming.

By following these guidelines, you can enjoy the de-

licious taste of cooked apples while ensuring that you reap the nutritional benefits of quercetin. Incorporating quercetin-rich apples into your diet can be a tasty and health-conscious choice, contributing to your overall well-being.