

Breathe easy: A natural fruit compound may help asthma

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A preliminary study by New Zealand company Plant & Food Research shows that natural chemicals from blackcurrants may help breathing in some types of asthma.

Researchers found a compound from a New Zealand blackcurrant may reduce lung inflammation with a multi-action assault in allergy-induced asthma. The compound was found in laboratory experiments to enhance the natural defence mechanisms in lung tissue by both suppressing inflammation-causing reactions and minimising inflammation.

The findings are published in the journal *Molecular Nutrition and [Food Research](#)*.

Fruit consumption has been shown to reduce symptoms in allergy-induced asthma yet this research is the first to give insights into the mechanism by which this may occur. The researchers identified that the component, epigallocatechin, reduced inflammation in lung tissue. Epigallocatechin is a known antioxidant and a major component of proanthocyanidins found in blackcurrants.

In the Plant & Food Research study, led by Dr Roger Hurst, cells from [lung tissue](#) were used to test the effects on the immune system of a proanthocyanidin rich extract, from blackcurrant cultivars grown in New Zealand.

When the lungs are exposed to allergens, the body's natural response is to

attack the perceived foreign body which in some individuals results in long-term inflammation. Selective compounds found in fruit and vegetables may work together with the body's own natural defence mechanism to suppress long-term lung inflammation.

This study shows that epigallocatechin, from blackcurrants, works in conjunction with other natural immune responses that occur at the same time to reduce inflammation. These actions are distinct from the inflammation-reducing activity of another group of compounds, anthocyanins, which are also rich in blackcurrants. Anthocyanins are known for their antioxidant properties and, interestingly, have been shown by Dr Hurst's research group to also influence inflammatory mechanisms and complement the body's own natural immune responses. The research shows some compounds in fruit thought to promote health with their antioxidant activity are keeping us well by other means.

"To find natural compounds that potentially reduce lung inflammation and complement the body's own immune response is an exciting breakthrough," says Dr Hurst. "Should we discover more about how this works we may eventually develop foods containing these compounds that could provide more natural alternatives to assist conventional drug treatments for [asthma](#) and even other allergic re-actions."

The study is part of Plant & Food Research's Food Innovation science platform that focuses on discovering the natural goodness in fruit, vegetables, grains and seafood and using this knowledge to develop fresh whole foods, ingredients and food concepts. Dr Kieran Elborough GM Science Food Innovation says research is improving the understanding of food and its makeup, how it benefits us and the development of new value technologies, ingredients and products.

"Maintaining wellness in a natural way is a growing consumer trend that food companies recognise," says Dr Elborough. "New Zealand is well

known for its quality fresh produce and I am quietly confident our understanding of natural compounds in fruit, vegetables, grains and seafood has good potential for food and beverage companies."

Provided by New Zealand Institute for Plant and Food Research

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