

New Zealand blackcurrants good for the brain

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Research has shown that New Zealand blackcurrants are good for keeping us mentally young and agile, a finding that could have potential in managing the mental decline associated with aging populations, or helping people with brain disorders such as Parkinson's disease or depression.

The research, conducted by scientists at Plant & Food Research (New Zealand) in collaboration with Northumbria University (UK), showed that compounds found in New Zealand blackcurrants increased [mental performance](#) indicators, such as accuracy, attention and mood. The study also showed that juice from a specific New Zealand blackcurrant cultivar, 'Blackadder', also reduced the activity of a family of enzymes called monoamine oxidases, which regulate serotonin and dopamine concentrations in the brain. These chemicals are known to affect mood and cognition, and are the focus for treatments of both neurodegenerative symptoms associated with Parkinson's disease and [mood disorders](#), including stress and anxiety.

Results of the research have been published online in the *Journal of Functional Foods*, a leading journal in the field.

"This study is the first to look at the effects of berry consumption on the cognitive performance of healthy young adults," says Dr. Arjan Scheepens, the Plant & Food Research scientist who led the study. "Our previous research has suggested that compounds found in certain berryfruit may act like monoamine oxidase inhibitors, similar to a class

of pharmaceuticals commonly used in the treatment of both mood disorders and neurodegenerative diseases like Parkinson's disease. This research has shown that New Zealand-grown blackcurrants not only increase mental performance, but also reduce the activity of monoamine oxidases."

"One of the key trends in the food industry is the development of ingredients and foods that have beneficial effects on human health," says professor Roger Hurst, Science Group Leader Food & Wellness at Plant & Food Research. "Understanding what, and how, foods affect mental performance could lead to the development of new foods designed for populations or situations where mental performance or [mental decline](#) is a factor, such as older people or those suffering from stress, anxiety or other mood disorders. This [research](#) shows how New Zealand blackcurrants can potentially add value, both for the food industry and for people looking for foods that naturally support their own health aspirations."

Participants in the study—36 healthy adults aged between 18 and 35 years—consumed a 250ml drink prior to conducting a set of demanding mental performance assessments. The participants consumed either a sugar and taste-matched placebo (no blackcurrant), an anthocyanin-enriched New Zealand blackcurrant extract (Delcyan™ from Just the Berries) or a cold-pressed juice from the New Zealand blackcurrant cultivar 'Blackadder', bred by Plant & Food Research. The assessments showed that after consuming the Delcyan™ and 'Blackadder' drinks, attention and mood were improved while mental fatigue was reduced. In addition, blood tests showed that the activity of the monoamine oxidase enzymes (MAO) was strongly decreased after consuming the 'Blackadder' juice, indicating the potential for compounds found in 'Blackadder' blackcurrants as a functional food ingredient to support brain health or managing the symptoms of disorders like Parkinson's disease.

Provided by New Zealand Institute for Plant and Food Research

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