

**EMBARGOED until 1pm (NZT) Thursday 24 January 2013**

## **Otago study suggests many apples a day keep the blues at bay**

Eating more fruit and vegetables may make young people calmer, happier and more energetic in their daily life, new research from the University of Otago suggests.

Department of Psychology researcher Dr Tamlin Conner, and Dr Caroline Horwath and Bonnie White from Otago's Department of Human Nutrition, investigated the relationship between day-to-day emotions and food consumption.

The study is published in the *British Journal of Health Psychology* today.

A total of 281 young adults (with a mean age of 20 years) completed an internet-based daily food diary for 21 consecutive days. Prior to this, participants completed a questionnaire giving details of their age, gender, ethnicity, weight and height. Those with a history of an eating disorder were excluded.

On each of the 21 days participants logged into their diary each evening and rated how they felt using nine positive and nine negative adjectives. They were also asked five questions about what they had eaten that day. Specifically, participants were asked to report the number of servings eaten of fruit (excluding fruit juice and dried fruit), vegetables (excluding juices), and several categories of unhealthy foods like biscuits/cookies, potato crisps, and cakes/muffins.

The results showed a strong day-to-day relationship between more positive mood and higher fruit and vegetable consumption, but not other foods.

“On days when people ate more fruits and vegetables, they reported feeling calmer, happier and more energetic than they normally did,” says Dr Conner.

To understand which comes first – feeling positive or eating healthier foods – Dr Conner and her team ran additional analyses and found that eating fruits and vegetables predicted improvements in positive mood the next day, suggesting that healthy foods may improve mood. These findings held regardless of the BMI of individuals.

“After further analysis we demonstrated that young people would need to consume approximately seven to eight total servings of fruits and vegetables per day to notice a meaningful positive change. One serving of fruit or vegetables is approximately the size that could fit in your palm, or half a cup. My co-author Bonnie White suggests

that this can be done by making half your plate at each meal vegetables and snacking on whole fruit like apples,” says Dr Conner.

She adds that while this research shows a promising connection between healthy foods and healthy moods, further research is necessary and the authors recommend the development of randomised control trials evaluating the influence of high fruit and vegetable intake on mood and wellbeing.

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