This is the published version (version of record) of:

Worsley, Anthony, Nowson, Caryl, Margerison, Claire and Jorna, Michelle 2005, Diet and mood state, in Proceedings of the Nutrition Society of Australia, in conjunction with the Nutrition Society of New Zealand, HEC Press, Melbourne, Vic..

Available from Deakin Research Online:

http://hdl.handle.net/10536/DRO/DU:30014601

Reproduced with the kind permission of the copyright owner.

Copyright : ©2005, HEC Press
Diet and mood state

A Worsley, CA Nowson, C Margerison, MK Jorna
School of Exercise and Nutrition Sciences, Deakin University, Burwood, Victoria, Australia

Background - There is some limited data indicating that dietary intake may alter mood states, but most of this is anecdotal. A number of dietary factors have been associated with reduction in blood pressure, which could, in part be related to positive effects on general mood states.

Objective - To determine if urinary excretion of particular minerals is associated with different mood states and if changing to one of the test diets DASH type diet (high fruits, vegetables and low fat dairy products) (OZDASH), a low salt, high fruit/vegetable diet (LNAHK) or a high calcium diet (HC) has an effect on mood state.

Design - Subjects completed an abbreviated 37-item version of the Profile of Mood States weekly throughout a 14-week dietary study. Each person consumed two different types of diets for 4 weeks, preceded by a 2 week control diet and performed 24-hr urine collections fortnightly.

Outcomes - For the 62 subjects who completed all tasks, throughout the study, there was a significant inverse association with 24-urinary excretion of calcium and potassium with depression (r = -0.26 P <0.05, r = -0.25 P <0.05), calcium and fatigue (r = -0.29 P <0.01) and a positive association for sodium and vigour (r = 0.39 P =0.01). When assessing the change in urinary electrolytes, moving from the control diet to one of the test diets, there was a significant reduction in tension and anger with all diets (OZDASH (n=93) P <0.05, LNAHK (n=43) P <0.01 and HC (n=47) P <0.01), a reduction in fatigue on the OZDASH and HC (P <0.01), a reduction in confusion on the OZDASH and LNAHK (P <0.05) and a reduction in depression on the HC diet (P <0.05) there were no differences in the vigour scores on any diet. The HC diet had the lowest anger and depression scores and both the OZDASH and HC diet reported lower fatigue scores.

Conclusion - These findings strongly suggest that mood is related to mineral metabolism. Dietary change may affect mood state, particularly the inverse association of calcium and potassium to depression/fatigue. These findings should be treated with caution but strongly suggest further replication studies are warranted.