

## **Additive postprandial blood glucose–attenuating and satiety-enhancing effect of cinnamon and acetic acid**

**Projekt: 398**

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### **Background:**

Cinnamon and vinegar or acetic acid were reported to reduce the postprandial blood glucose response. We hypothesized that the combination of these substances might result in an additive effect.

### **Methods:**

We determined the two hour postprandial blood glucose and satiety response to a milk rice meal supplemented with either cinnamon or acetic acid on their own or in combination. Subjects (n=27) consumed the meal on four occasions as either pure (control trial), with 4 g cinnamon, 28 mmol acetic acid, or the combination of cinnamon + acetic acid. Blood glucose and satiety were assessed before eating and 15, 30, 45, 60, 90 and 120 min postprandially.

### **Results:**

At 15 min, the combination of cinnamon + acetic acid resulted in a significantly reduced blood glucose concentration compared to the control meal (p=0.021). The incremental area under the blood glucose response curve (IAUC) over 120 min did, however, not differ between the trials (p=0.539). The satiety score of the cinnamon + acetic acid trial was significantly higher than in the control trial at 15 (p=0.024) and 30 min (p=0.024) but the IAUC of the satiety response did not differ (p=0.116) between the trials.

### **Conclusion:**

The significant effect of the combination of cinnamon and acetic acid on blood glucose and satiety immediately after meal intake indicated an additive effect of the two substances. Whether larger doses of cinnamon and acetic acid may result in a more substantial additive effect on blood glucose or satiety remains to be investigated.

Mettler S, Schwarz I and Colombani PC. Additive postprandial blood glucose-attenuating and satiety-enhancing effect of cinnamon and acetic acid. *Nutr Res* 29: 723-727, 2009