

## **Orange juice as part of a reduced-calorie diet results in weight loss and ameliorates obesity-related biomarkers**

Some diet commentators link orange juice consumption with weight gain as a consequence of its sugar content but this has never been proven in high quality intervention trials. Neither is this view reflected in the epidemiological evidence which tends to show no association between drinking 100% orange juice and risk of overweight or obesity.

Now, a Brazilian randomised controlled trial has investigated this in 78 obese dieters. Participants were allocated to follow a 12-week low calorie diet with or without 500ml of 100% orange juice per day. Note that this amount is above the 150-200ml recommended as a portion in European countries. Food intakes were recorded and analysed six times over this period.

The results showed similar weight and fat loss in the dieters. There were significant improvements in insulin sensitivity (HOMA-IR), lipid profile and anti-inflammatory status in both groups as a consequence of successful weight loss. However, there were significantly greater improvements in these markers when orange juice was consumed. For example, in the orange juice group, insulin levels decreased by 18%, CRP reduced by 33%, and the ratio of total to LDL cholesterol declined by 24%.

Regarding changes in dietary intakes, the orange juice group had a significant increase in vitamin C and folate by 163% and 62%, respectively, compared with the control group. Orange juice consumption improved folate intake to around 95% of the recommended daily requirements. For vitamin C, there was a 500% increase in consumption, exceeding the recommended daily requirement although well within the tolerable upper intake level (i.e. generally recognised safe intake).

The researchers concluded that, when drunk as part of a reduced-calorie diet, orange juice did not inhibit weight loss but significantly improved insulin sensitivity, lipid profile and inflammatory status relative to the non-orange juice condition. Therefore, consuming 100% orange juice could offer wider health benefits to patients who are dieting to manage their weight.

*For more information, see:*

Ribeiro C et al. (2017) Orange juice allied to a reduced-calorie diet results in weight loss and ameliorates obesity-related biomarkers: A randomized controlled trial. *Nutrition* 38: 13–19. Available at: [http://linkinghub.elsevier.com/retrieve/pii/S0899-9007\(17\)30004-7](http://linkinghub.elsevier.com/retrieve/pii/S0899-9007(17)30004-7)