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Fruit and its effect, compared to nuts, on hepatic fat content (HFC) and cardiovascular risk factors: A randomized clinical trial

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Background: Fruit is regarded as a sound source of nutrients. However, the high content of sugars such as fructose might be a concern.

Objectives: To study effects of an increased fruit intake compared with similar amount of extra calories from nuts in humans.

Methods: Thirty (30) healthy non-obese participants were divided into two groups and given extra fruit and nuts (+7 kcal/kg body weight/day), respectively between meals for two months. HFC was the primary outcome and estimated by MRI, while basal metabolic rate (BMR) analyzed with indirect calorimetry and cardiovascular risk markers were secondary outcome.

Results: There was no change of HFC in either group. Weight gain was numerically similar in both groups, although only statistically significant in the nut group (Fruit: From 22.15±1.61 to 22.30±1.7 kg/m², p=0.24 and Nuts: From 22.54±2.26 to 22.73±2.28 kg/m², p=0.045). Only the nut group had increased BMR (p=0.028) and a reported net increase of calories from 2519±721 to 2763±595 kcal/day, p=0.035 according to 3-day food registrations. Fructose intake reported in the fruit group was nearly increased threefold from 9.1±6.0 to 25.6±9.6 grams/day, p<0.0001 and nuts from 12.4±5.7 to 6.5±5.3 grams/day, p=0.007.

Conclusions: BMR increased in the nut group only. This was not linked with differences in weight gain between groups, which could potentially be explained by the lack of reported net caloric increase in the fruit group. In healthy and non-obese individuals a profoundly increased fruit intake seems safe regarding HFC and a cardiovascular risk perspective.

Biography

Edvin L Strom is currently pursuing his PhD at Linköping University, Faculty of Medicine and Health Sciences. He has worked as a Research Assistant prior to his admittance in Doctoral studies.

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