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Letter to the Editor

Letter to the Editor – Coconut oil consumption improves fat-free mass, plasma HDL-cholesterol and insulin sensitivity in healthy men with normal BMI compared to peanut oil

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Saturated fatty acids
Polyunsaturated fatty acids
Medium chain triglycerides

Dear Editor,

The cross-over study by Korrapati et al. [1] detailed the potential cardioprotective effect of coconut oil, and I would like to thank the authors for their insight. Whilst the sample size was small, it was well-designed to investigate its primary end-points. This study is particularly topical as, despite removal of the maximum dietary fat intake restriction from guidelines, a major resistance against saturated fats remains.

The rise in high density lipoprotein cholesterol (HDL-c) with coconut oil consumption is certainly a compelling finding. Results from a recent and larger-scale randomised trial by Khaw et al. [2] corroborate this, but, interestingly, a similar HDL-c elevation was not seen with butter intake, which is also largely composed of saturated fatty acids (SFAs). Indeed, accruing evidence suggests that the saturated versus unsaturated distinction of fats is likely an oversimplification. Korrapati et al. should, therefore, be commended on their focus on the biological properties of coconut oil, particularly the medium chain triglyceride (MCT) dominated fatty acid profile, which may confer atheroprotective effects. Of note, a recent UK/Danish cohort study [3] elicited that chain length is a major determinant of SFA-associated myocardial infarction risk, with no delineable, or even an inverse, relationship existing with short-to-medium chain SFA consumption.

I note that the detrimental impacts of peanut oil consumption were comparatively overlooked in the analysis; it would have been interesting to explore the authors' interpretation of this data. The unfavourable lipid profile, with elevation of low-density lipoprotein cholesterol (LDL-c), is an especially salient finding given the long-standing recommendations to substitute polyunsaturated fatty acids (PUFAs) in place of SFAs [4]. It is difficult to discern from the methodology whether the additional 35 g of coconut/peanut oil daily was provided in a cold formulation, or whether it was heated for meal preparation. With a significantly greater PUFA content than coconut oil, peanut oil is more susceptible to lipid peroxidation during cooking; numerous studies have demonstrated a deranged metabolic profile, including elevated inflammatory markers and LDL-c, with hot vegetable oil intake [5], and, thus, clarification on this issue would be greatly appreciated. Furthermore, whilst Korrapati et al. outline the 15-fold greater concentration of linoleic acid in peanut oil versus coconut oil, I wonder if this could have been further developed. Linoleic acid represents the most abundant omega-6 fatty acid, and whilst no consensus has been reached regarding its contribution to cardiovascular disease, omega-3/omega-6 imbalance is becoming an increasingly contentious issue. Perhaps this identifies an arena for future related work.

Any comments from the authors are greatly welcomed.

Conflict of interest

None.

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