Does Difference made by All Healthy Diets Equal or does Food Processing is Different

Researchers discussed findings from a randomized controlled trial (RCT) that compared the effects of diets high in ultra-processed foods (UPF) with those of diets high in minimally processed foods (MPF) on changes in weight among adults with obesity or overweight.

While both diets led to weight loss, the MPF diet resulted in significantly greater weight reduction than the UPF diet, suggesting that the food processing level should be considered in dietary guidelines.

However, while both diets led to reductions in weight, only the MPF diet produced significant reductions in fat mass and visceral fat, with the difference between diets reaching statistical significance.

Notably, the UPF diet led to a greater reduction in LDL-cholesterol (LDL-C) compared to the MPF diet (P=0.016), highlighting a mixed metabolic result.

Study

The RCT involved 55 adults with obesity or overweight from Southeast England, who habitually consumed half or more of their energy intake from UPFs. The sample was predominantly female (91%) and 65% white, with a mean age of 43 years.

Participants were randomly assigned to follow two eight-week diets in varying order, with one based on MPFs and the other on UPFs, both aligned with UK dietary guidelines. All meals, drinks, and snacks were delivered to participants' homes. A four-week washout period separated the two diets. Diets were matched for nutrient content and designed to reflect typical UK eating patterns.

Participants could eat as much as desired, but were instructed not to consume any food or drink outside the provided diet. Key measurements included blood biomarkers, blood pressure, waist circumference, body composition, body weight, and validated appetite and craving questionnaires. Physical activity was tracked using accelerometers.

Body composition was assessed using bioelectrical impedance analysis (BIA). Data were collected at baseline, four weeks, and eight weeks. The primary outcome was the percentage change in weight from baseline between the two diets. Mixed-effects models were used for statistical analysis, adjusting for factors like diet order and night shift work.

A "diet order effect" was observed in the study, with less weight loss seen during the second diet period, regardless of diet type. This effect was notable, as weight loss was more substantial in the first period, irrespective of whether participants started with MPF or UPF.

Results

Of the 55 participants, 50 completed at least one diet phase. The MPF diet led to a greater percentage of weight loss (−2.06%) compared to the UPF diet (−1.05%), with a statistically significant difference of −1.01% favoring the MPF diet.

Secondary outcomes showed that weight, BMI, fat mass, body fat percentage, and visceral fat significantly decreased on the MPF diet, while only weight and BMI showed modest changes on the UPF diet.

It is important to note that reductions in fat mass and visceral fat were statistically significant only for the MPF diet; the UPF diet did not result in meaningful fat loss, though small reductions were observed.

Blood pressure and some blood markers, such as triglycerides and cholesterol, improved more consistently on the MPF diet. However, only triglycerides showed a statistically significant difference favoring the MPF diet, while LDL-cholesterol improved more on the UPF diet. For most other blood pressure and biomarker outcomes, the difference between diets was not statistically significant.

Appetite-related measures, including food cravings and control over eating, improved significantly only with the MPF diet.

Both diets resulted in reduced energy intake, but the MPF diet led to a greater calorie reduction. Diet adherence was high for both, though UPF was rated more favorably for flavor and ease of preparation.

Mild gastrointestinal issues were reported on both diets, but some symptoms, like constipation and fatigue, were more common during the UPF phase.

Trends in subjective appetite ratings suggested greater improvements with the MPF diet, but most of these differences were not statistically significant.

Overall, the MPF diet showed more beneficial effects on weight and health markers than the UPF diet, supporting the need to consider food processing in dietary advice.

Conclusion

This study found that both MPF and UPF diets that aligned with UK dietary guidelines led to weight loss, but the MPF diet produced significantly greater reductions in weight, fat mass, and food cravings.

Despite some improvements on the UPF diet, such as reductions in unhealthy cholesterol, it did not result in significant fat loss or as robust improvements in craving control as the MPF diet.

The results suggest that food processing matters in addition to meeting nutrient-based guidelines. Strengths of the study include its real-world, free-living design, crossover format, and provision of all meals, improving adherence.

However, the study had some limitations: a possible carryover effect between diet periods, a lack of detailed body composition scans, and exclusion of individuals with specific dietary needs. The exclusion criteria meant that individuals with dietary restrictions (such as vegan, halal, or kosher diets) were not included, and thus, the findings may not be generalizable to these groups.

The findings support updating public health guidance to consider food processing, as focusing solely on nutrients may miss key contributors to obesity. Long-term policy shifts are needed to improve the broader food environment and reduce UPF consumption.

Source:

https://www.news-medical.net/news/20250805/Are-all-healthy-diets-equal-or-does-food-processing-make-a-difference.aspx