

00333 Effects of Mediterranean Diet on Non-alcoholic Fatty Liver Disease – A Systematic Review

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Aims: To determine whether Mediterranean diet (MedDiet) improves non-alcoholic fatty liver disease (NAFLD)

Methodology: RCTs comparing the effects of MedDiet with control diet on adults (≥ 18 years) with NAFLD were included. The search was conducted up to March 2018, in PUBMED, CINAHL, EMBASE and Cochrane library databases. Additionally, we hand-searched all reference lists of retrieved articles. Three reviewers independently selected trials and assessed study quality using Cochrane risk of bias tool. Outcome measures included hepatic steatosis, insulin sensitivity (IS), lipid profile, liver function tests (LFTs) and anthropometrics.

Result: Four RCTs which met the criteria were selected; sample size ranging from 12 to 98 and study duration from 6 weeks to 6 months. All studies showed MedDiet reduced hepatic steatosis significantly. IS improved significantly compared to controls in all 3 studies reporting IS. Lipid profile outcomes were inconsistent. Two studies showed significant reduction in both TG and total-cholesterol levels. Only one study reported increase in HDL and none showed LDL improvement. Majority of studies failed to show LFT improvement. Two studies carried high risk of bias, as the intervention groups were also instructed to follow a hypocaloric diet beyond MedDiet and to increase their physical activity level, resulting in 6-7% weight loss compared with no weight changes in controls. Hence, it was possible that the hepatic steatosis improvement may be due to the effect from weight reduction rather than MedDiet alone. Only one small pilot study (n=12) with very low risk of bias demonstrated reduction of liver fat and increased IS without weight changes.

Conclusion: MedDiet appears to reduce hepatic steatosis and improve insulin sensitivity. In view of the various levels of bias, well-designed larger RCTs are warranted to confirm the effects, and whether this dietary approach is adaptable and sustainable for Asians without the favourable MedDiet culture requires further evaluation.