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 Meta-Analysis
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Clinical and cost benefits of medical nutrition therapy by registered dietitian nutritionists for management of dyslipidemia: A systematic review and meta-analysis

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Abstract

Background: Faced with increasing health care costs, it is incumbent to discern whether managing dyslipidemia with medical nutrition therapy (MNT) by a registered dietitian nutritionist (RDN) is clinically and cost effective.

Objective: To systematically examine evidence on the clinical effectiveness and cost benefit of MNT by an RDN for the treatment of dyslipidemia.

Methods: English and full-text research articles published between January 2003 and October 2014 were identified using PubMed, MEDLINE, and the Worldcat.org site to identify literature specific to clinical and cost effectiveness of MNT for dyslipidemia. Studies were required to have at least one outcome measure of dyslipidemia: total cholesterol (Total C), low-density lipoprotein cholesterol, triglycerides, high-density lipoprotein cholesterol, and/or metabolic syndrome.

Results: This systematic review identified 34 primary studies with 5704 subjects. Multiple individual face-to-face MNT sessions by an RDN over 3 to 21 months led to significant improvements in lipid profile, body mass index, glycemic status, and blood pressure. Results were summarized as mean differences with 95% confidence intervals when meta-analysis was possible. In a pooled analysis, MNT interventions lowered low-density lipoprotein cholesterol, total C, triglycerides, fasting blood glucose, hemoglobin A1c, and body mass index compared to a control group. Cost effectiveness and economic savings of MNT for dyslipidemia showed improved quality-adjusted life years and cost savings from reduced medication use.

Conclusion: Evidence from this systematic review and meta-analysis demonstrates that multiple MNT sessions by an RDN are clinically effective and cost beneficial in patients with dyslipidemia and cardiometabolic risk factors.

Keywords: Blood pressure reduction; Cardiometabolic risk factors; Clinical effectiveness; Cost savings; Dyslipidemia management; Medical nutrition therapy; Metabolic syndrome; Registered dietitian nutritionists; Weight reduction.

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