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Impact of omega-3 supplementation on children and adolescents patients with cystic fibrosis: A systematic review and meta-analysis of randomized-controlled trials.

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Study design (if review, criteria of inclusion for studies)

Randomised and quasi-randomised controlled trials

List of included studies (4)

Eubanks 2002; Homnick 2004; Marchand 2000

Participants

People with CF of any age, irrespective of pancreatic insufficiency or sufficiency and of any disease severity

Interventions

Appetite stimulants or any agent used as an appetite stimulant vs placebo, control or no treatment

Outcome measures

Primary outcomes: change in body weight (kg), change in body composition (lean body mass, fat mass, BMI), change in pulmonary function (FEV1)

Main results

Four trials included (70 participants) comparing appetite stimulants (cyproheptadine hydrochloride and megestrol acetate) to placebo; the numbers of adults or children within each trial were not always reported. We assessed the certainty of evidence as low due to the small number of participants, incomplete or selective outcome reporting, and unclear risk of selection bias. Regarding our primary outcomes, a metaâ€•analysis of two trials (42 participants) showed that appetite stimulants may produce a larger increase in weight (kg) at three months (mean difference (MD) 1.25 kg, 95% confidence interval (CI) 0.45 to 2.05), and one trial (17 participants) showed a similar result at six months (MD 3.80 kg, 95% CI 1.27 to 6.33) (both lowâ€•certainty evidence). Results also showed that weight z score may increase with appetite stimulants compared to placebo at three months (MD 0.61, 95% CI 0.29 to 0.93; 3 studies; 40 participants; P

Authors' conclusions

At six months in adults and children, appetite stimulants improved only two of the outcomes of this review: weight (or weight z score) and subjectively reported appetite. Insufficient reporting of side effects prevented a full determination of their impact. Whilst the data may suggest the potential use of appetite stimulants in treating anorexia in adults and children with cystic fibrosis, this is based upon lowâ€•certainty evidence from a small number of trials, therefore firm conclusions cannot be drawn. Clinicians need to be aware of the potential adverse effects of appetite stimulants and actively monitor any individuals prescribed these medications accordingly. Research is required to determine meaningful surrogate measures for appetite and to define what constitutes quality weight gain. Future trials of appetite stimulants should use a validated measure of symptoms including a diseaseâ€•specific instrument for measuring poor appetite. This review highlights the need for multicentred, adequately powered, and wellâ€•designed trials to evaluate agents to safely increase appetite in people with cystic fibrosis and to establish the optimal mode of treatment.

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See also

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Keywords

Appetite Stimulants; pharmacological_intervention;