Pengaruh konseling diet optimasi asam lemak omega-3 menggunakan linear programming dibandingkan diet standar terhadap kadar vitamin E serum, kajian khusus pada anak dengan risiko overweight, overweight dan obes usia 12-24 bulan di Wilayah Jakarta Timur = The efffect of counseling with optimized omega 3 fatty acids using linear programming compared to standard diet on serum vitamin E

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Abstrak

Latar belakang: Obesitas pada anak dikaitkan dengan peningkatan risiko berbagai masalah kesehatan. Rekomendasi kebutuhan anak yang digunakan saat ini adalah berdasarkan pedoman gizi seimbang Departemen Kesehatan Republik Indonesia. Konseling dan optimasi diet menggunakan linear programming (LP) merupakan salah satu cara yang baik untuk pengaturan kebutuhan anak karena dapat memperhitungkan ketersediaan makanan lokal dan kebutuhan nutrisi anak. Omega-3 memiliki banyak manfaat salah satunya sebagai antiinflamasi, akan tetapi strukturnya membuatnya rentan terhadap terjadinya peroksidasi. Vitamin e merupakan antioksidan penting dalam menangkal oksidasi asam lemak.
Objektif : Penelitian ini bertujuan untuk melihat pengaruh konseling optimasi asam lemak omega-3 dibandingkan dengan konseling standar sesuai rekomendasi DepkesRI terhadap kadar vitamin E serum pada anak prone obes.
Metode : merupakan penelitian uji klinis dengan intervensi berupa edukasi nutrisi diet optimasi omega-3 pada anak usia 12-24bulan di kecamatan Pulogadung, Jakarta Timur, Indonesia. Kelompok intervensi (n=14) dibandingkan dengan kontrol (n=18). Edukasi nutrisi dengan bantuan flipchart dan menu optimasi disusun dengan LP, diberikan sekali seminggu dengan durasi 10 minggu.
Hasil : Mayoritas asupan omega-3 dan vitamin E anak masih cukup, meskipun peranan susu pertumbuhan cukup tinggi. Terdapat peningkatan asupan omega-3 dan vitamin E serta penurunan konsumsi susu formula dengan pemberian LP, meskipun tidak berbeda bermakna. Tidak terdapat perbedaan yang bermakna dalam perubahan asupan nutrisi dan kadar vitamin E serum sebelum dan sesudah intervensi antar kedua kelompok (p = 0,52). Tidak terdapat perubahan perilaku pemberian makan antar dua kelompok (p>0,05), akan tetapi perilaku pemberian makan sebelum dan sesudah intervensi memiliki perbedaan yang bermakna.
Kesimpulan : Konseling diet optimasi omega-3 dapat memenuhi dan mempertahankan kebutuhan anak, akan tetapi tidak berbeda bermakna dibandingkan konseling standar.
<hr><i>Background: Children obesity is associated with the increased risk of various health problems. Recommendations for children which are used today are based on balanced nutrition guidelines Indonesian Ministry of Health. Counseling and diet optimization using linear programming (LP) is a good way of managing a child's dietary needs due to its ability to calculate the availability of local food and the nutritional needs of each child. Omega-3 has many benefits, for example as anti-inflammatory and antiobesity, however its structure makes it vulnerable to peroxidation. Vitamin E is an important antioxidant in counteracting the oxidation of fatty acids.
Objective: This study aimed to evaluate the effect of dietary counseling on omega-3 fatty acids optimization towards the vitamin E serum level compared to standard counseling based on recommendations of

Indonesian Ministry of Health on children who are prone to obese.
Design: A clinical trial which involves a series of nutrition education sessions targeted to optimize omega-3 diet on children aged 12-24 months in the Pulogadung district, East Jakarta, Indonesia. The intervention group (n = 14) is compared to controls (n = 18). A set of optimized menu, prepared using the LP, was administered and flipcharts were used as demonstration tools during the weekly session, within the period of 10 weeks.
Results: The majority of children show sufficient level of omega-3 and vitamin E intake despite the relatively high contribution of formula milk. There is an increased of omega-3 and vitamin E intakes, in addition to slight decrease in formula milk consumption as the result of the LP program. There were no significant differences in the change of nutrient intakes and the level of vitamin E in blood serum between the two groups, both before and after the intervention (p = 0.52). There is no change in child feeding behavior between the two groups (p> 0.05), whereas the behavior before and after the intervention had a significant difference.
Conclusion: Optimized omega-3 diet counseling could maintain and fulfill children?s needs of nutrient, but there is no significant difference if compared to standard counseling.</i>