

# Kadar Asam Lemak Omega-3 dan Omega-6 pada Ibu Hamil Trimester-1 dan hubungannya dengan Status Gizi berdasarkan Indeks Massa Tubuhnya = Serum level of omega-3 and omega-6 in first semester pregnant women and its correlation with nutritional status based on body mass index

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## Abstrak

Omega-3 dan omega-6 berperan penting dalam kehamilan, asam lemak esensial yang saling terkait ini, berperan penting dalam penentuan masa gestasi ibu, pertumbuhan perilaku serta pembentukan saraf pusat janin, sehingga perlu dijaga rasio kadarnya. Angka gizi lebih semakin meningkat di Indonesia, dan diduga berpengaruh terhadap kadar omega-3 dan omega-6. Penelitian ini bertujuan melihat hubungan kadar omega-3 dan omega-6 serum dengan status gizi berdasarkan indeks massa tubuh ibu hamil trimester satu dalam rangka menurunkan angka kurangnya keseimbangan omega-3 dan omega-6 di Indonesia. Jumlah subjek penelitian adalah 70 ibu hamil trimester satu, menggunakan desain studi potong lintang dan simple random sampling. Dari penelitian ini diperoleh 57,1% subjek mengalami gizi lebih dan 7,1% mengalami gizi kurang. Kadar ALA 173,37 (1,18-724) g/ml, EPA 9,74 (0,06-166) g/ml, DHA 15,45 (1,2-96) g/ml, total n-3 199,65 (22,7-776,51) g/ml, LA 1849,93 (119-8986) g/ml, ARA 263,48 (21-993) g/ml, total n-6 2114,24 (210-9643) g/ml dan perbandingan n-3:n-6 1:10 (1:20-1:2,7). Uji Spearman menunjukkan tidak ada korelasi bermakna antara kadar omega-3 dan omega-6 dengan indeks massa tubuh, Uji chi square antara rasio omega-3:omega-6 dengan Indeks massa tubuh tidak menunjukkan korelasi bermakna, p 0,307. Perlu perubahan asupan makanan lebih kaya omega-3 untuk mengatasi kekurangan rasio omega-3 dan omega-6 seiring mengurangi angka gizi lebih.

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Omega-3 and omega-6 are important for pregnant mother. Those essential fatty acid affect gestation time, fetal behavior and central nervous system development. Overnutrition is becoming problem in Indonesia and nutritional status seems to have role in determining omega-3 and omega-6 serum level. This research observe the association between nutritional status and the serum level of omega-3 and omega-6 with the goal to reduce omega-3 and omega-6 deficiency in Indonesia. There are 70 subject of first semester pregnant woman. This study is done using cross sectional design with simple random sampling. It is found that 57.1% have overweight and 7.1% have underweight. Serum level of ALA 173.37 (1.18-724) g/ml, EPA 9.74 (0.06-166) g/ml, DHA 15.45 (1.2-96) g/ml, total n-3 199.65 (22.7-776.51) g/ml, LA 1849.93 (119-8986) g/ml, ARA 263.48 (21-993) g/ml, total n-6 2114.24 (210-9643) g/ml and ratio of n-3:n-6 1:10 (1:20-1:2.7). Spearman correlation test shown no significant correlation between any omega-3 and omega-6 serum level with BMI. Chi square between omega-3 and omega-6 ratio does not shown significant correlation with BMI category, p 0.307. Modification of food intake with higher omega-3 is needed to reduce deficiency in omega-3 and omega-6 ratio while reducing overweight case.