

# Korelasi antara rasio asupan lemak omega-6, omega3 dengan kadar asam lemak omega 3 membran eritrosit ibu hamil dengan usia gestasi hingga 20 minggu = Ratio of omega 6 omega 3 fatty acids intake and omega 3 fatty acids level in erythrocyte membrane of pregnant women in indonesia

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## Abstrak

Asam lemak omega-3 merupakan komponen penting pada pembentukan sel saraf, retina dan membran sel. Penelitian terakhir menunjukkan bahwa asam lemak omega-3 berkaitan dengan pertumbuhan janin. Ibu hamil dengan asupan asam lemak omega-3 yang tidak tercukupi memiliki risiko lebih tinggi untuk melahirkan bayi berat lahir rendah (BBLR). Di Indonesia, angka BBLR masih tergolong tinggi. Oleh karena itu, kecukupan asam lemak omega-3 sangat penting untuk diperhatikan pada ibu hamil sejak awal kandungan.

Penelitian ini bertujuan untuk mengetahui kecukupan asam lemak omega-3 ibu hamil di Indonesia. Desain penelitian yang digunakan adalah studi potong lintang. Subjek penelitian merupakan ibu hamil sehat dengan usia gestasi hingga 20 minggu. Kecukupan dinilai melalui pendataan asupan asam lemak omega-3, omega-6 beserta rasionya dan pemeriksaan kadar asam lemak omega-3 membran eritrosit. Data penelitian kemudian dianalisis dengan uji korelasi Spearman.

Hasil penelitian menunjukkan bahwa asupan asam lemak omega-3 total subjek penelitian masih kurang akibat rendahnya rerata asupan ALA subjek, meskipun rerata asupan EPA dan DHA nya telah terpenuhi. Asupan asam lemak omega-6 total subjek telah terpenuhi, begitu pula dengan asupan Lanya, tetapi asupan AA subjek masih belum terpenuhi. Rasio asupan asam lemak omega-6/omega-3 sebagian besar subjek masih kurang baik. Dari uji korelasi ditemukan adanya korelasi positif bermakna antara asupan EPA dengan kadar DHA ( $r=0,34$ ) dan kadar EPA+DHA ( $r=0,38$ ), asupan DHA dengan kadar DHA ( $r=0,31$ ), asupan EPA+DHA dengan kadar DHA ( $r=0,34$ ) dan kadar EPA+DHA ( $r=0,35$ ). Rasio asupan asam lemak omega-6/omega-3 ditemukan memiliki korelasi negatif bermakna dengan kadar EPA ( $r= -0,34$ ).

Berdasarkan hasil penelitian tersebut dapat disimpulkan bahwa asam lemak omega-3 ibu hamil belum tercukupi sehingga diperlukan edukasi dan screening kecukupan asupan asam lemak omega-3 bagi ibu hamil sejak awal kandungan.

Omega-3 fatty acids are important components of neural, retinal and cell membranes. Latest findings show that omega-3 fatty acids play a role in fetal growth. Pregnant women with low intakes of omega-3 fatty acids were found to have higher risk of low birth weight (LBW). In Indonesia, LBW prevalence is still high. Thus omega-3 fatty acids sufficiency is of great importance starting early in pregnancy.

The aim of this study is to determine omega-3 fatty acids status of pregnant women in Indonesia. The design of the study is cross-sectional. Subjects are healthy pregnant women with gestational age up to 20 weeks pregnancy. Omega-3 fatty acids status obtained from interview on intakes of omega-3 fatty acids and level of omega-3 fatty acids in erythrocyte membrane. The data's then analyzed using Spearman correlation test. The study results show that total omega-3 fatty acids intakes are insufficient, due to low ALA intake, even though EPA and DHA intakes are sufficient. Intakes of total omega-6 fatty acids and LA are sufficient but

AA intake is very low. The ratio of omega-6/omega-3 fatty acids intake is found to be higher than expected. Spearman correlation test shows significant positive correlations between intake of EPA and DHA level ( $r=0.34$ ), intake of EPA and EPA+DHA level ( $r=0.38$ ), intake of DHA and its level ( $r=0.31$ ), intake of EPA+DHA and DHA level ( $r=0.35$ ), intake of EPA+DHA and its level ( $r=0.34$ ). Ratio of omega-6/omega-3 fatty acids intake is found to be significantly correlated with EPA level ( $r=0.34$ ).

In conclusion, omega-3 fatty acids intake of pregnant women in Indonesia is still insufficient. Therefore, education to increase omega-3 fatty acids intake during pregnancy and screening of omega-3 fatty acids intake need to be performed early in pregnancy.