

## Korelasi asupan beta karoten dengan kadar beta karoten dan malondialdehida air susu ibu matur pada ibu laktasi eksklusif sehat = Correlation between beta carotene intake with matur breast milks beta carotene and malondialdehyde levels in healthy exclusively lactating mother

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### Abstrak

Beta karoten memiliki kapasitas antioksidan. Malondialdehida (MDA), produk dari peroksidasi poly unsaturated fatty acid (PUFA), merupakan penanda stres oksidatif. Keseimbangan oksidan dan antioksidan dalam ASI membantu mencegah terjadinya radikal bebas pada bayi. Penelitian ini bertujuan untuk menganalisis hubungan antara asupan beta karoten dengan kadar beta karoten ASI dan mengetahui ada tidaknya hubungan antara asupan beta karoten dengan kadar MDA ASI. Delapan puluh ibu usia 20–40 tahun yang menyusui secara eksklusif dan memiliki bayi usia 1–6 bulan yang datang ke Puskesmas Kecamatan Cilincing dan Grogol Petamburan pada bulan Februari–April 2019 dan bersedia menandatangani lembar persetujuan penelitian menjadi subjek penelitian. ASInya di periksa di laboratorium. Korelasi positif lemah ditemukan antara indeks masa tubuh (IMT) dan kadar MDA ASI ( $r = 0,285$ ,  $p = 0,010$ ) serta asupan beta karoten dan kadar MDA ASI ( $r = -0,469$  dengan  $p < 0,001$ ). Korelasi negatif sedang ditemukan pada durasi menyusui dalam minggu dengan kadar MDA ASI, asupan beta karoten memiliki korelasi positif lemah dengan kadar MDA ASI ( $r = 0,247$ ,  $p = 0,027$ ). Aktivitas fisik memiliki hubungan dengan kadar beta karoten ASI ( $p = 0,012$ ). Dengan demikian, IMT, durasi menyusui, asupan beta karoten berpengaruh terhadap kadar MDA ASI.

Beta carotene has antioxidant capacity. Malondialdehyde (MDA), a poly unsaturated fatty acid (PUFA) peroxidation product, is the marker of oxidative stress. The balance of oxidant and antioxidant in breastmilk helps prevent the free radical formation in babies. The purpose of this study is to analyze the correlation of beta carotene intake with the breast milk (BM) beta carotene level and to determine the relationship between beta carotene intake with the MDA level in BM. Eighty 20–40 years old exclusively breastfeeding mothers who came to Cilincing and Grogol Petamburan Public Health Centre in February–April 2019 and had 1–6 months old babies were enrolled in this cross-sectional study. The BM were assessed the laboratory. Weak positive correlation was found between body mass index (BMI) and BM MDA level ( $r = 0.285$ ,  $p = 0.010$ ) as well as beta carotene intake and BM MDA level ( $r = 0.247$ ,  $p = 0.027$ ). Medium negative correlation was found between breastfeeding duration in weeks with the BM MDA level ( $r = -0.469$ ,  $p < 0.001$ ). Physical activity has a relationship with BM beta carotene level ( $p = 0.012$ ). Therefore, BMI, breastfeeding duration, beta carotene intake has a correlation with BM MDA level.