# HUBUNGAN KONSUMSI ASAM LEMAK TRANS DENGAN PROFIL LIPID PADA PASIEN RAWAT JALAN RS. Dr. HASAN SADIKIN BANDUNG

**Artikel Penelitian**

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SEMARANG
2007**

# Association Between Consumption of Trans Fatty Acid and Lipid Profile in Outpatients of Dr. Hasan Sadikin Hospital Bandung

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## ABSTRACTS

**Backgrounds:** High consumption of trans fatty acid is associated with the increase of risk of coronary heart disease. Trans fatty acid may have an effect on plasma lipoprotein, that is it increases LDL cholesterol, triglyceride, Lp lipoprotein (a), and it may decrease HDL cholesterol level. The purpose of this study is to find out the association between trans fatty acid consumption and lipid profile in outpatients of Dr. Hasan Sadikin Hospital Bandung.

**Methods**: This is an explanatory study with *cross sectional* approach in clinical nutrition. Samples were collected using *consecutive sampling* at Outpatient Polyclinic for male and female of Dr. Hasan Sadikin Hospital Bandung. The collection of data is in the form of primary data that include name, age, sex, level of education, type of job, body weight, body height, history of obesity in the family, physical activity habit, smoking habit, coffee-drinking habit and data of fat consumption, cholesterol, trans fatty acid, saturated fatty acid and unsaturated fatty acid that were obtained using Semi Quantitative Food Frequency Questionnaire. Secondary data, that is total cholesterol concentration, LDL, HDL and triglyceride were obtained from patient-status book. Univariate and bivariate data analyses were used to find out the association between trans fatty acid consumption and lipid profile.

**Results**: Most of the samples are females (67.3%) and the average age of the samples is $54.17 \pm 9.9$ years, 22.9% of the female samples have entered menopausal age. The average body mass index (BMI) of the samples is $24.6 \pm 3.9$ kg/m$^2$. The mean daily fat intake of the samples is $33.6 \pm 11.4$ grams/day, cholesterol is $138.1 \pm 74.5$ grams/day, TFA intake is $0,8 \pm 0,5$ grams/day, SFA intake is $14.0 \pm 4.1$ grams/day, MUFA intake is $0.6 \pm 0.8$ grams/day and PUFA intake is $11.2 \pm 5.3$ grams/day. The mean total cholesterol level of the samples is $231.6 \pm 53.2$ mg/dl, HDL is $46.8 \pm 11.1$ mg/dl, LDL is $153.5 \pm 40.1$ mg/dl and triglyceride is $180.5 \pm 70.2$mg/dl. The result of correlation tests between trans fatty acid consumption and lipid profile is the following: total cholesterol ($r = 0,062$; $p = 0,661$), HDL cholesterol ($r = -0.083$; $p = 0.560$), LDL cholesterol ($r = 0.255$; $p = 0.068$) and triglyceride ($r = 0.101$; $p = 0.475$).

**Conclusion**: The consumption of trans fatty acid and lipid level profile (total cholesterol, HDL, LDL and triglyceride) show weak and insignificant association.

*Keywords: trans fatty acid consumption, total cholesterol level, HDL, LDL and triglyceride.*

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# Hubungan Konsumsi Asam Lemak Trans dengan Profil Lipid pada Pasien Rawat Jalan Rs. Dr. Hasan Sadikin Bandung

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## ABSTRAK

**Latar Belakang** : Konsumsi asam lemak trans yang tinggi berhubungan dengan meningkatnya risiko penyakit jantung koroner. Asam lemak trans dapat memberikan efek terhadap lipoprotein plasma yaitu meningkatkan kolesterol *LDL*, trigliserida, lipoprotein Lp (a), serta dapat menurunkan kadar kolesterol *HDL*. Penelitian ini bertujuan untuk mengetahui hubungan konsumsi asam lemak trans dengan profil lipid pada pasien rawat jalan Rumah Sakit Hasan Sadikin Bandung.

**Metode** : Penelitian jenis *eksplanatory* dengan pendekatan *cross sectional* dalam bidang gizi klinik. Sampel diambil secara *consecutive sampling* di Poliklinik Rawat Jalan Pria dan Wanita RS. Dr. Hasan Sadikin Bandung. Pengumpulan data berupa data primer meliputi nama, usia, jenis kelamin, tingkat pendidikan, jenis pekerjaan, berat badan, tinggi badan, riwayat kegemukan pada keluarga, kebiasaan berolahraga, kebiasaan merokok, kebiasaan minum kopi serta data konsumsi lemak, kolesterol, asam lemak trans, asam lemak jenuh dan tak jenuh diperoleh dengan menggunakan *Semi Quantitative Food Frequency Questionaire*. Data sekunder yaitu kadar kolesterol total, *LDL*, *HDL* dan trigliserida yang diperoleh dari buku status pasien. Analisis data secara univariat dan bivariat digunakan untuk mengetahui hubungan konsumsi asam lemak trans dengan profil lipid.

**Hasil** : Sebagian besar sampel adalah perempuan (67.3%) dengan rata-rata usia sampel 54.17 ± 9.9 tahun, 22.9% sampel perempuan telah memesuki usia menopause. IMT rata-rata sampel 24.6 ± 3.9 Kg/m$^2$. Rerata asupan lemak sampel perhari adalah 33.6 ± 11.4 gr/hari, kolesterol 138.1 ± 74.5 gr/hari, asupan TFA 0.8 ± 0.5 gr/hari, asupan SFA 14.0 ± 4.1 gr/hari, asupan MUFA 0.6 ± 0.8 gr/hari dan asupan PUFA 11.2 ± 5.3 gr/hari. Rerata kadar kolesterol total sampel 231.6 ± 53.2 mg/dl, *HDL* 46.8 ± 11.1 mg/dl, *LDL* 153.5 ± 40.1 mg/dl dan trigliserida sebesar 180.5 ± 70.2 mg/dl. Hasil uji korelasi antara konsumsi asam lemak trans dengan sebagai berikut : kolesterol total (r = 0.062; p = 0.661), kolesterol *HDL* (r = -0.083; p = 0.560), kolesterol *LDL* (0.255; p = 0.068) dan trigliserida (r = 0.101; p = 0.475).

**Kesimpulan** : Konsumsi asam lemak trans dengan kadar profil lipid (kolesterol total, *HDL*, *LDL* dan trigliserida) menunjukan hubungan yang lemah dan tidak bermakna.

**Kata Kunci** : konsumsi asam lemak trans, kadar kolesterol total. *HDL*, *LDL* dan trigliserida.

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