

## Hubungan Asupan Protein Nabati dan Profil Lipid pada Penyandang Diabetes Melitus Tipe 2 di Semarang

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### ABSTRAK

**Latar Belakang:** Dislipidemia merupakan komplikasi DMT2 dengan prevalensi tertinggi di Asia dan berkontribusi terhadap risiko penyakit kardiovaskular. Jenis asam amino, serat, dan lemak, serta nilai indeks glikemik yang terkandung dalam sumber protein nabati dapat memberikan manfaat terhadap dislipidemia pada diabetes melitus. Hubungan asupan protein nabati dan profil lipid pada penyandang DMT2 di Indonesia belum banyak dilakukan.

**Tujuan:** Menganalisis hubungan asupan protein nabati dengan profil lipid pada penyandang Diabetes Melitus Tipe 2 di Kota Semarang.

**Metode:** Penelitian *cross-sectional* dilakukan terhadap 61 subjek penyandang DMT2 yang berpartisipasi dalam Prolanis dan dipilih secara *consecutive sampling*. Kadar serum trigliserida, kolesterol total, HDL, dan LDL dianalisis menggunakan *Indiko Clinical Chemistry Analyzer*. Pengambilan data umum dan riwayat konsumsi obat dilakukan melalui wawancara. Pengambilan data asupan makan dilakukan dengan metode SQ-FFQ. Analisis data dilakukan menggunakan uji korelasi *Spearman's Rank*.

**Hasil:** Rerata asupan protein nabati subjek yaitu 26,6 g/hari yang berkontribusi sebesar 57,07% terhadap total asupan protein. Sumber asupan protein nabati didominasi oleh beras putih dan produk kedelai, yakni tahu dan tempe. Pengukuran profil lipid ditemukan sejumlah 57,4% subjek memiliki kadar trigliserida tinggi, 39,3% subjek memiliki kadar kolesterol total pada batas tinggi, 47,5% subjek memiliki kadar HDL rendah, serta 42,6% subjek memiliki kadar LDL pada batas tinggi. Hasil uji bivariat menunjukkan bahwa tidak terdapat hubungan antara asupan protein nabati dengan kadar trigliserida, kolesterol total, kolesterol HDL, dan kolesterol LDL.

**Simpulan:** Asupan protein nabati tidak berhubungan dengan profil lipid penyandang DMT2.

**Kata Kunci:** Asupan protein nabati, profil lipid, diabetes melitus tipe 2

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## Association of Plant Protein Intake and Lipid Profile among People with Type 2 Diabetes Mellitus in Semarang

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### ABSTRACT

**Background:** Dyslipidemia is a complication of type 2 diabetes mellitus with the highest prevalence in Asia and may contribute to cardiovascular disease risk. The type of amino acid and the other nutrients contained in plant protein, such as soluble fiber, unsaturated fatty acids, low glycemic index, and low saturated fatty acids may provide benefits to diabetic dyslipidemia. Association of plant protein intake and lipid profile among Indonesian people with type 2 diabetes mellitus is widely unknown.

**Objective:** To analyze the association of plant protein intake and lipid profile among people with type 2 diabetes mellitus.

**Methods:** A cross-sectional study was conducted among 61 subjects with T2DM who participated in The Chronic Disease Management Program (Prolanis) and selected by consecutive sampling. Triglyceride, total cholesterol, HDL, and LDL serum levels were analyzed by Indiko Clinical Chemistry Analyzer. Personal data and drug consumption history were obtained by an interview. Food intake was conducted with SQ-FFQ method. Spearman's Rank correlation test was used to analyze the data.

**Results:** The mean value of plant protein intake was 26,6 g/day which contribute 57,07% to the total protein intake. Sources of plant protein intake dominated by white rice and soy products, namely tahu and tempe. Lipid profile measurements found that 57,4% subjects had high triglyceride levels, 39,3% subjects had total cholesterol levels at borderline high, 47,5% subjects had low HDL levels, and 42,6% subjects had LDL levels at borderline high. Bivariate analysis showed that there is no association between plant protein intake and triglyceride, total cholesterol, HDL, and LDL levels.

**Conclusion:** There is no association between plant protein intake and lipid profile among type 2 diabetes mellitus patients.

**Keywords:** Plant protein intake, lipid profile, type 2 diabetes mellitus

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