

# Pengaruh suplementasi serat psyllium husk dan diet rendah kalori seimbang terhadap kadar APO B penyandang obes I = Effect of supplementation psyllium husk and low calorie balanced diet on APO B level in obese I

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## Abstrak

### <b>ABSTRAK</b><br>

Penelitian dengan rancangan uji klinis paralel acak tersamar ganda ini bertujuan mengetahui perubahan kadar apo B pada penyandang obes I setelah suplementasi serat psyllium husk (PH) 8,4 g/hari dan diet rendah kalori seimbang (DRKS) 1200 kkal/hari selama 4 minggu. Berdasarkan kriteria penelitian, didapat 31 orang subyek yang dibagi menjadi dua kelompok, 15 orang kelompok perlakuan (KP) dan 16 orang kelompok kontrol (KK). Subyek KP mendapat PH 8.4 g/hari dan DRKS, sedangkan KK mendapat plasebo dan DRKS. Data yang diperoleh meliputi sebaran dan karakteristik subyek, asupan energi, makronutrien, serat, dan air, serta kadar apo B awal dan akhir penelitian. Analisis data menggunakan uji t tak berpasangan dan Mann-Whitney, batas kemaknaan 5%. Sejumlah 28 subyek dapat mengikuti penelitian hingga selesai (KP dan KK masing-masing 14). Tidak dilaporkan efek samping berbahaya selama perlakuan. Sebagian besar subyek perempuan, median usia subyek KP dan KK berturut-turut 35,0 (3045) tahun dan 34,50 (3048) tahun, IMT  $28,0 \pm 1,1$  kg/m<sup>2</sup> dan  $27,2 \pm 1,4$  kg/m<sup>2</sup>. Jumlah asupan energi total subyek KP  $1130,9 \pm 221,9$  kkal/hari lebih tinggi signifikan ( $p = 0,02$ ) daripada KK  $1024,3 \pm 269,9$  kkal/hari. Karbohidrat sederhana pada KP (35,6 (8,369,9)) g/hari lebih tinggi signifikan dibandingkan KK (13,8 (3,455,5)) g/hari. Asupan serat subyek belum mencukupi anjuran (20–35 g/hari), yaitu KP  $17,2 \pm 2,8$  g/hari dan KK  $8,6 (5,215,2)$  g/hari walaupun dengan suplementasi PH. Asupan protein, lemak total, dan kolesterol dalam rentang yang dianjurkan, tetapi tidak pada asupan asam lemak tak jenuh tunggal dan jamak. Penurunan kadar apo B pada KK ( $-6,1 \pm 8,9$  mg/dL) lebih besar tidak signifikan ( $p = 0,13$ ) dibandingkan pada KP ( $-1,3 \pm 7,3$  mg/dL). Dari penelitian ini disimpulkan suplementasi PH 8,4 g/hari dan DRKS 1200 kkal/hari selama 4 minggu tidak lebih baik dalam menurunkan kadar apo B dibandingkan plasebo dan DRKS 1200 kkal/hari penyandang obes I.

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### <b>ABSTRACT</b><br>

This double blind randomized clinical trial aims to investigate the change of apo B level in obese I after given supplementation psyllium husk (PH) 8.4 g/day and low-calorie balanced diet (LCBD) for 4-weeks. By study criteria, 31 subjects were randomly allocated to one of two groups; 15 subjects for treatment (T) group and

16 subjects for placebo (P) group. The T subjects received psyllium husk (PH) 8.4 g/day and LCBD 1200 kcal/day and the P subjects received placebo and LCBD 1200 kcal/day. Data collected in this study consist of subject distribution and characteristic, intake of energy, macronutrient, fiber, water and apo B level that assessed before and after treatment. Level of statistical analyses significance was 5%, independent t-test and Mann-Whitney. A total 28 subjects (14 subjects in each group) had completed the intervention. There were no serious adverse events were reported along the intervention. Mean of age in T and P groups respectively was 35.0 (30.045.0) years and 34.5 (30.048.0) years, and BMI was  $28.0 \pm 1.1$  kg/m<sup>2</sup> and  $27.2 \pm 1.4$  kg/m<sup>2</sup>. The energy intake in T group  $1130.9 \pm 221.9$  kcal/day was significantly higher ( $p = 0.02$ ) than P group  $1024.3 \pm 269.9$  kcal/day. Simple carbohydrate intake in T group (35.6 (8.369.9) g/day) was significantly higher ( $p < 0.000$ ) than in P group (13.8 (3.455.5) g/day). Intake of dietary fiber in T group was  $17.2 \pm 2.8$  g/day had significantly higher than P group 8.6 (5.215.2) g/day, even adding PH supplementation cannot meet the recommendation of fiber intake (20-35 g/day). Intake protein and fat in both groups was meet recommendation, differ for intake of mono and polyunsaturated fatty acids. Decreasing of apo B level in P group was  $-6.1 \pm 8.9$  mg/dL that statistically insignificant difference ( $p = 0.13$ ) with T group  $-1.3 \pm 7.3$  mg/dL. As a conclusion in this study shows, that PH supplementation 8.4 g/day and LCBD 1200 kcal/day in obese I for 4 weeks wasn't proven to decrease the apo B level.