BODY COMPOSITION, FLUIDS INTAKE, AND HYDRATION STATUS IN BODYBUILDER ATHLETE

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ABSTRAK

Latar Belakang: Atlet binaraga seringkali melakukan strategi khusus untuk meningkatkan ukuran dan massa otot dengan menurunkan jumlah cairan (*pumping up atau cutting*). Mengurangi asupan cairan hingga mencapai dehidrasi justru akan memberikan pengaruh negatif terhadap performa olahraga.

Tujuan: Mengetahui hubungan komposisi tubuh (massa lemak, massa otot, *total body water*, asupan cairan dan status hidrasi pada pegiat latihan beban.

Metode: Desain penelitian *cross-sectional* dengan melibatkan 49 subjek anggota *gym* di Kota Semarang. Komponen tubuh (massa otot dan persen lemak) dan berat badan diukur menggunakan *Bio Impedace Analyzer* (BIA), sedangkan tinggi badan subjek diukur menggunakan *microtoise*. Data asupan cairan menggunakan metode recall 1x24 jam. Data Berat Jenis Urin (BJU) diambil sebelum latihan dan diperiksa di laboratorium untuk mengetahui status hidrasi. Analisis data bivariat menggunakan uji *Pearson* dan uji *Spearman*.

Hasil: Terdapat hubungan signifikan massa lemak dengan persen *total body water* (p=<0,001; r -0,884). Massa lemak, massa otot, dan asupan cairan tidak berhubungan dengan berat jenis urin. Massa otot dan asupan cairan juga tidak berhubungan dengan persen *total body water*.

Simpulan: Massa lemak berhubungan dengan persen *total body water*. Semakin tinggi massa lemak maka semakin rendah persen *total body water*.

Kata kunci: Asupan Cairan, Lemak Tubuh, Massa Otot, Status Hidrasi

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ABSTRACT

Background: Bodybuilding athletes often use specific strategies to increase muscle size and mass by reducing the amount of fluid (pumping up or cutting), and reducing fluid intake until dehydration harms the athlete's performance.
Objective: Determine the relationship between body composition and fluid intake with hydration status in body builder athletes.
Methods: A cross-sectional study design with 49 subjects of gym members in Semarang city. Body weight and body composition such as muscle mass and fat mass were measured using a Bioelectrical Impedance Analyzer (BIA). The height was measured using a microtoise with an accuracy of 0,1 cm. Fluid intake was obtained through recall 1x24 hours. Urine Specific Gravity data was obtained before exercise and examined in the laboratory to determine the hydration status. The bivariate data were analyzed by Pearson and Spearman test.
Results: There was a significant correlation between percent body fat and percent total body water (*p* 0.000, r -0.884). There was no significant correlation between percent body fat, muscle mass, and fluid intake with urine-specific gravity. Muscle mass and fluid intake are also not associated with the percent of total body water.
Conclusion: Fat mass is related to the percent of total body water. The higher the fat mass, the lower the percentage of total body water.

Keywords: Fluid Intake, Body Fat, Muscle Mass, Hydration Status

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