

Hubungan antara tingkat aktivitas fisik dengan asupan energi dan makronutrien pada remaja berusia 15 - 18 tahun = Relationship between physical activity level with energy and macronutrient intake in adolescent aged 15-18 years old

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Abstrak

Asupan makanan berlebih dan rendahnya aktivitas fisik adalah dua faktor risiko obesitas pada remaja. Kurangnya pemahaman akan hubungan antarfaktor risiko ini membuat obesitas remaja sulit ditangani dan cenderung berlanjut ke usia dewasa. Studi ini bertujuan untuk mengetahui hubungan antara tingkat aktivitas fisik (physical activity level/PAL) dengan asupan energi dan makronutrien. Penelitian dilakukan di salah satu fakultas kedokteran di Jakarta dalam periode Juni 2011-Juni 2013, dengan metode total sampling pada populasi mahasiswa berusia 15-18 tahun. Data asupan energi dan makronutrien dari sampel yang terdiri atas laki-laki (n=30) dan perempuan (n=43), dinilai menggunakan Food-Frequency Questionnaire semikuantitatif, sedangkan PAL dengan Bouchard three-days physical activity record. Dengan uji one-way anova, terdapat hubungan antara PAL dengan asupan energi dan lemak (p=0,025 dan 0,019), sedangkan asupan karbohidrat dan protein sebaliknya. Dengan analisis post-hoc LSD, perbedaan bermakna terdapat pada PAL sedang dan tinggi (asupan energi p=0,007; lemak p=0,005), sedangkan rata-rata asupan energi dan makronutrien tetap tinggi pada PAL rendah. Disimpulkan bahwa peningkatan keluaran energi total akan meningkatkan asupan energi, sedangkan PAL rendah tidak akan mengubah kebutuhan energi individual.

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Excessive nutrient intake and low physical activity are two obesity risk factors in adolescent. Lack of understanding in relationship amongst these risk factors has made adolescent obesity become health problems and tends to progress into adulthood. This study aimed to investigate the relationship between physical activity level (PAL) with energy and macronutrient intake. Study was held in one of medical school in Jakarta from June 2011-June 2013, with total sampling on medical students aged 15-18. Energy and macronutrient intake from boys (n=30) and girls (n=43) were assessed using semiquantitative Food-Frequency Questionnaire, while PALs were assessed using Bouchard-three days physical activity record. One-way anova analysis showed significant relationship of PAL toward energy and fat intake (p=0,025 and 0,019), and none of carbohydrate and protein intake. The post-hoc LSD analysis revealed the significant mean difference were found in subjects classified as high and moderate PAL (for energy intake p=0,007; fat intake p=0,005). Meanwhile, energy and all macronutrients intake were found to be persistently high in subject with low PAL. In conclusion, increase in total energy expenditure will subsequently induce increase in energy intake, but low PAL did not change the individual energy requirement.