Efektivitas latihan High Intensity Interval Training (HIIT) terhadap penanda stres oksidatif pada laki-laki dewasa muda dengan obesitas = Effectiveness of High Intensity Interval Training (HIIT) on oxidative stress markers in young adult males with obesity

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Abstrak

Tujuan: Kondisi obesitas berpotensi menyebabkan kondisi stres oksidatif dalam tubuh. High Intensity Interval Training (HIIT) diyakini dapat membantu memperbaiki kondisi stres oksidatif. Penelitian ini bertujuan untuk mengetahui efektivitas HIIT terhadap penanda stres oksidatif dan persentase lemak tubuh pada laki-laki dewasa muda dengan obesitas.
Metode: Penelitian ini menggunakan desain eksperimental dengan uji pre-post pada satu kelompok perlakuan. Subjek penelitian adalah laki-laki obesitas berusia antara 18-30 yahun yang tidak melakukan latihan fisik rutin selama 6 bulan terakhir. Subjek mendapat intervensi HIIT selama 12 minggu dan diperiksa kadar SOD, MDA, serta komposisi tubuh pada awal dan akhir intervensi.
Hasil: Terdapat peningkatan SOD dan penurunan MDA namun tidak memperlihatkan perubahan yang signifikan (p=0,674 dan p=0,562). Kemudian terdapat penurunan persentase lemak namun tidak signifikan (p=0,086).
Kesimpulan: Pemberian program HIIT pada subjek laki-laki dewasa muda dengan obesitas selama minimal 12 minggu dapat menurunkan rerata kadar MDA sebesar 0,27µM, meningkatkan rerata kadar SOD sebesar 8,43U/mL, dan menurunkan persentase lemak tubuh sebesar 2,26% namun perubahan tersebut tidak signifikan. Tidak ditemukan hubungan antara perubahan persentase lemak dengan perubahan kadar MDA dan SOD setelah intervensi.
.....Objective: Obesity has the potential to cause oxidative stress in the body. High Intensity Interval Training (HIIT) is believed to help improve oxidative stress conditions. This study aims to determine the effectiveness of HIIT on oxidative stress, markers and body fat percentage in young adult men with obesity.
Methods: This study used an experimental design with pre-post tests in one treatment group. The research subjects were obese men aged between 18-30 years who had not done regular physical exercise for the last 6 months. Subjects received HIIT intervention for 12 weeks and had SOD, MDA and body composition levels checked at the beginning and end of the intervention.
Results: There was an increase in SOD and a decrease in MDA but did not show significant changes (p=0.674 and p=0.562). Then there was a decrease in fat percentage but it was not significant (p=0.086).
Conclusions: Giving the HIIT program to young adult male subjects with obesity for a minimum of 12 weeks can reduce the average MDA level by 0.27µM, increase the average SOD level by 8.43U/mL, and reduce the percentage of body fat by 2.26%, but these changes not significant. No relationship was found between changes in fat percentage and changes in MDA and SOD levels after the intervention.