

PENGARUH KONSUMSI SARI KURMA (DATES SYRUP) TERHADAP KADAR MALONDIALDEHYDE (MDA) PLASMA, KADAR SUPEROXIDE DISMUTASE (SOD) PLASMA, DAN GLUTATHIONE PEROXIDASE (GPX) PLASMA SELAMA LATIHAN AEROBIK INTENSITAS SEDANG BAGI PEMULA

INTISARI

Latar Belakang: Peningkatan kebutuhan energi selama latihan fisik aerobik akan meningkatkan kebutuhan oksigen, sehingga menyebabkan peningkatan produksi radikal bebas. Antioksidan endogen dapat mengatasi peningkatan radikal bebas secara alami. Pembentukan antioksidan yang tidak sebanding dengan terbentuknya radikal bebas akan menyebabkan terjadinya stres oksidatif. Antioksidan dari luar diperlukan apabila antioksidan endogen tidak cukup.

Tujuan: Penelitian ini bertujuan mengkaji perbedaan kadar MDA plasma, SOD plasma, GPx plasma antara kelompok yang mengkonsumsi sari kurma dan kelompok yang tidak mengkonsumsi sari kurma selama latihan aerobik intensitas sedang bagi pemula.

Metode: Desain penelitian ini merupakan penelitian *experimental, non-randomized pre-post test control group design*. Subyek penelitian adalah santri pondok pesantren Imam Bukhari Surakarta dibagi dua kelompok yaitu kelompok sari kurma dan kelompok air mineral. Kedua kelompok diberikan perlakuan latihan aerobik intensitas sedang. Sampel darah diambil saat sebelum latihan aerobik, setelah latihan aerobik ke-1, ke-7, dan ke-14, kemudian diperiksa kadar MDA plasma, SOD plasma, dan GPx plasma. Analisis data dilakukan dengan *independent t-test*.

Hasil: Analisis *t-test* kadar MDA plasma, SOD plasma, dan GPx plasma menunjukkan tidak ada perbedaan antara kelompok sari kurma dan kelompok air mineral dengan nilai $p > 0,05$.

Simpulan: Kadar MDA plasma, kadar SOD plasma, dan kadar GPx plasma kelompok yang mengkonsumsi sari kurma tidak berbeda bermakna dibandingkan dengan kelompok yang tidak mengkonsumsi sari kurma selama latihan aerobik intensitas sedang bagi pemula.

Kata Kunci: latihan aerobik, pemula, sari kurma, MDA plasma, SOD plasma, GPx plasma.

**THE EFFECTS OF CONSUMING DATES SYRUP TOWARDS
PLASMA MALONDIALDEHYDE (MDA) LEVEL, PLASMA
SUPEROXIDE DISMUTASE (SOD) LEVEL, AND PLASMA
GLUTATHIONE PEROXIDASE (GPX) LEVEL DURING AEROBIC
EXERCISE OF MEDIUM INTENSITY FOR UNTRAINED MEN**

ABSTRACT

Background: The increase of energy need during physical exercise of aerobics will increase the need of oxygen, and therefore it can cause free radicals increase. Endogenous antioxidants can overcome the increase of free radicals naturally. The antioxidants formation which is not comparable with the occurrence of free radicals will cause the occurrence of oxidative stress. Antioxidants from the outside are required when the endogenous antioxidants are not enough.

Objective: This research aims to study the difference of plasma MDA, plasma SOD, and plasma GPx levels between the group that consumes dates syrup and the group that does not consume dates syrup during aerobic exercise of medium intensity for untrained men.

Method: This research design is experimental research, non-randomized pre-post test control group design. The subjects of the research were students of Imam Bukhari Surakarta Islamic Boarding School divided into two groups namely the group of dates syrup and the group of fresh water. Both group were given treatment of aerobic exercise with medium intensity. Blood samples taken before the aerobic exercise, after the 1st, 7th, and 14th aerobic exercise, and then were checked its plasma MDA, plasma SOD, and plasma GPx levels. Data analysis was done with independent t-test.

Result: Analysis of plasma MDA, plasma SOD, and plasma GPx levels t-test showed that there was no difference between the group of dates syrup and the group of fresh water with the p value >0.05 .

Conclusion: Plasma MDA, plasma SOD, and plasma GPx levels of the group consuming dates syrup was not much different compared to the group not consuming dates syrup during aerobic exercise with medium intensity for untrained men.

Keywords: aerobic exercise, untrained men, dates syrup, plasma MDA, plasma SOD, plasma GPx