

ABSTRAK

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Latar Belakang: Puasa Ramadan mempengaruhi pola makan dan tidur atlet, yang berpotensi mempengaruhi metabolisme, kesehatan, dan performa atletik. Kondisi puasa juga menurunkan kadar kortisol, yang mempengaruhi komposisi tubuh dan tingkat cairan. Penurunan kapasitas aerobik selama Ramadan dikaitkan dengan penurunan metabolisme tubuh, dehidrasi, dan waktu istirahat yang berkurang. Namun demikian, temuan dari banyak penelitian tidak menghasilkan hasil yang definitif.

Tujuan: Penelitian ini bertujuan untuk mengetahui perbedaan kadar hormon kortisol dan kadar VO_2Max saat puasa dan tidak puasa Ramadan pada atlet.

Metode: Penelitian ini merupakan studi *Pre-Experimental*. Pengambilan data dilakukan dalam dua kondisi yaitu, waktu puasa (hari ke-14 berpuasa) dan waktu tidak puasa (hari ke-11 setelah Ramadan). Subjek merupakan atlet muda berusia 10-18 tahun yang bersedia menandatangani *informed consent*, serta mengikuti seluruh rangkaian penelitian hingga akhir.

Hasil: Hasil menunjukkan adanya perbedaan signifikan pada kadar VO_2Max ($p=0,000$) sedangkan, kadar hormon kortisol tidak terjadi perbedaan signifikan ($p=0,122$). Berdasarkan uji multivariat didapatkan bahwa, intensitas latihan menjadi determinan utama yang mempengaruhi kadar VO_2Max .

Kesimpulan: Puasa Ramadan memberikan peningkatan yang positif terhadap kadar VO_2Max dan intensitas latihan menjadi faktor yang paling berpengaruh.

Kata kunci: *puasa ramadan, puasa, hormon kortisol, VO_2Max , ramadan*

ABSTRACT

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Background: Ramadan fasting affects athletes' eating and sleeping patterns, potentially affecting metabolism, health, and athletic performance. Fasting conditions also lower cortisol levels, affecting body composition and fluid levels. The decrease in aerobic capacity during Ramadan is associated with reduced body metabolism, dehydration, and decreased rest time. Nonetheless, the findings from many investigations do not yield definitive results.

Objective: This study aimed to determine the differences in cortisol hormone levels and VO₂Max levels during fasting and non-fasting periods of Ramadan in athletes.

Methods: This research was a Pre-Experimental study. Data collection was conducted under two conditions: fasting time (the 14th day of fasting) and non-fasting time (the 11th day after Ramadan). The subjects were young athletes aged 10-18 years who were willing to sign the informed consent and participate in the entire research process until the end.

Results: The results show a significant difference in VO₂Max levels ($p=0.000$), while cortisol hormone levels do not show a significant difference ($p=0.122$). Based on multivariate tests, it is found that Ramadan fasting increases VO₂Max levels by 8.922 ml/kg-min, and training intensity is the main determinant affecting VO₂Max levels.

Conclusion: Ramadan fasting has a positive effect on VO₂Max levels, and training intensity is the most influential factor.

Keywords: *ramadan fasting, fasting, cortisol hormone, VO₂Max, ramadan*