

PENGARUH *CONTINUOUS TRAINING* TERHADAP KADAR *TUMOR NECROSIS FACTOR ALFA* PADA WANITA DENGAN OBESITAS

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ABSTRAK

Latar Belakang :TNF- α adalah salah satu sitokin yang pertama kali diidentifikasi dan terlibat dalam respon inflamasi sistemik. Obesitas dikaitkan dengan kondisi inflamasi kronis tingkat rendah dengan infiltrasi progresif sel-sel imun pada jaringan adiposa. *Continuous training* (CT) merupakan salah satu jenis latihan fisik yang diduga dapat menurunkan TNF- α . **Tujuan** : Penelitian ini bertujuan untuk mengetahui pengaruh *continuous training* terhadap kadar TNF- α pada wanita obesitas di Banyumas. **Metode** : Penelitian ini menggunakan metode kuasi eksperimental dengan desain *pretest* dan *post test* tanpa kontrol. Sebanyak 14 subyek dipilih dengan metode *purposive sampling*. Subyek menjalani tahapan penelitian berupa pengukuran kadar TNF- α sebelum dan sesudah CT. Subyek mengikuti intervensi CT selama 12 minggu dengan 3 sesi setiap minggunya. Pengukuran kadar TNF- α dilakukan dengan ELISA dari sampel darah. Analisa data menggunakan *Wilcoxon Signed Rank Test*. **Hasil** : *Wilcoxon Signed Rank Test* menunjukkan hasil terdapat pengaruh yang bermakna kadar TNF- α sebelum dan sesudah intervensi *continuous training* ($p=0,001$). Kadar TNF- α sebelum intervensi *continuous training* didapatkan rerata $4,15 \pm 1,13$ pg/ml, sedangkan hasil pengukuran sesudah intervensi *continuous training* didapatkan rerata $3,32 \pm 0,69$ pg/ml. Kadar TNF- α sebelum dan sesudah intervensi *continuous training* terdapat penurunan 0,83 pg/ml. **Kesimpulan** : Terdapat pengaruh *continuous training* (CT) terhadap kadar TNF- α sebelum dan sesudah intervensi pada wanita obesitas di Banyumas.

Kata Kunci : TNF- α , *Continuous Training*, Wanita obesitas

THE EFFECT OF CONTINUOUS TRAINING TO TUMOR NECROSIS FACTOR ALPHA ON OBESE WOMEN

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ABSTRACT

Background. *TNF- α markers is one of the cytokin that is first identified in systemic inflammatory response. Obesity is associated with low grade chronic inflammatory conditions by progressive infiltration of immune cells on adipose tissue. Continuous training (CT) is one type of physical exercise that can decrease TNF- α markers.*
Objective : *This study aims to find out the effect of continuous training on TNF- α in obese women in Banyumas.*
Method : *This study used a quasi-experimental method with a pretest and post test design without control. 14 subjects were selected by purposive sampling method. Subjects underwent the research stage in the form of measuring TNF- α markers before and after PT. The subjects followed the CT intervention for 12 weeks with 3 sessions each week. The measurement of TNF- α markers is done by the ELISA from blood sample. Data analysis using Wilcoxon Signed Rank Test.*
Results : *Wilcoxon Signed Rank Test showed that there was a significant effect on TNF- α before and after continuous training intervention ($p=0,001$). TNF- α levels before continuous training interventions were obtained an average of $4,15 \pm 1,13$ pg/ml, while the results of measurements after continuous training interventions were obtained an average of $3,32 \pm 0,69$ pg/ml. TNF- α before and after continuous training intervention there was a decrease of 0.83 pg/ml.*
Conclusion : *There was an effect of continuous training (CT) on TNF- α levels before and after intervention in obese women in Banyumas.*

Keywords: *TNF- α marker, Continuous Training, Obese Women*