

PERBEDAAN EFEK FISILOGIS SEBELUM DAN SESUDAH BEKERJA DI LINGKUNGAN KERJA PANAS PADA PEKERJA KONSTRUKSI DI PT XYZ TAHUN 2024

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Abstrak

Sekitar 87,6% kematian di industri konstruksi disebabkan oleh panas. Paparan panas dapat menimbulkan adanya perubahan fisiologis pada tubuh. Penelitian ini menggunakan desain *cross-sectional*. Tujuan penelitian ini adalah menganalisis perbedaan rerata efek fisiologis sebelum dan sesudah bekerja di lingkungan kerja panas pada pekerja konstruksi di PT XYZ tahun 2024. Seluruh 93 pekerja konstruksi berpartisipasi dalam penelitian ini. Variabel yang diteliti diukur menggunakan *sphygmomanometer* dan *thermometer infrared* sebelum dan sesudah bekerja di lingkungan kerja panas yang melebihi NAB $>27,5^{\circ}\text{C}$. Data dianalisis menggunakan *Paired T-Test* dan *Wilcoxon's Test*. Rerata tekanan darah sebelum bekerja 119,47/79,96 mmHg dan sesudah bekerja 122,33/81,38 mmHg. Rerata denyut nadi sebelum bekerja 81,23 kali/menit dan sesudah bekerja 83,69 kali/menit. Rerata suhu tubuh sebelum bekerja $36,53^{\circ}\text{C}$ dan sesudah bekerja $36,67^{\circ}\text{C}$. Nilai *p* menunjukkan hasil $< 0,05$ sehingga dapat disimpulkan bahwa terdapat perbedaan yang signifikan antara efek fisiologis sebelum dan sesudah bekerja di lingkungan kerja panas. Saran yang dapat diberikan adalah pelaksanaan kontrol waktu kerja dan waktu istirahat, pemeriksaan kesehatan rutin, penyediaan air mineral yang cukup, dan memaksimalkan penggunaan APD.

Kata kunci : fisiologis, iklim kerja panas, konstruksi

PHYSIOLOGICAL DIFFERENCES BEFORE AND AFTER WORKING IN HOT WORKING ENVIRONMENTS AMONG CONSTRUCTION WORKERS AT PT XYZ IN 2024

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Abstract

About 87.6% of deaths in the construction industry are caused by heat. Exposure to heat can cause physiological changes in the body. This study used a cross-sectional design. The aim of this research is to analyze the differences in the average physiological effects before and after working in a hot work environment on construction workers at PT XYZ in 2024. All 93 construction workers participated in this research. The variables studied were measured using a sphygmomanometer and infrared thermometer before and after working in a hot work environment that exceeded NAB $>27.5^{\circ}\text{C}$. Data were analyzed using Paired T-Test and Wilcoxon's Test. The average blood pressure before work was 119.47/79.96 mmHg and after work 122.33/81.38 mmHg. The average pulse rate before working was 81.23 times/minute and after working 83.69 times/minute. The average body temperature before work was 36.53°C and after work 36.67°C . The p value shows <0.05 so it can be concluded that there is a significant difference between the physiological effects before and after working in a hot work environment. Suggestions that can be given are the implementation of control over working time and rest time, routine health checks, providing sufficient mineral water, and maximizing the use of PPE.

Keyword : physiological, wbgt, construction