

Pengaruh pemberian air minum terhadap kelelahan kerja akibat terpajan tekanan panas pada pekerja laki-laki industri manufaktur alat berat = Effect of drinking water due to work fatigue pressure heat exposure worker man in industrial manufacturing equipment industry

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Abstrak

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Latar Belakang. Pekerja yang terkena paparan panas selama bekerja dapat menyebabkan kelelahan jika asupan cairan tidak cukup. Pekerja laki-laki di bagian fabrikasi dan persiapan bahan terpapar panas dalam bekerja sehingga berisiko mengalami kelelahan. Memastikan bahwa pekerja dalam lingkungan panas cukup terhidrasi dengan baik adalah salah satu cara yang paling efektif untuk melindungi kesehatan dan keselamatan kerja, serta meningkatkan produktivitas. Penelitian ini bertujuan mengkaji pengaruh konsumsi minimal 2 liter air minum dalam 8 jam terhadap penurunan kelelahan kerja akibat terpapar tekanan panas.

Metode Penelitian. Desain penelitian one group before and after design, dengan intervensi pemberian air minum minimal 2 liter dalam 8 jam kerja pada pekerja. Subjek berjumlah 34 orang. Subyek mempunyai kriteria inklusi masa kerja 1 tahun dan tidak mempunyai riwayat penyakit diabetes, paru, ginjal, darah dan jantung. Kriteria eksklusinya adalah tidak dalam kondisi sakit 1 bulan terakhir. Pengumpulan data dilakukan dengan wawancara menggunakan kuesioner, pengamatan intervensi, dan kelelahan diukur menggunakan alat reaction timer.

Hasil. Hasil pengukuran tekanan panas rata-rata pada bagian fabrikasi dan persiapan bahan yaitu 32,9OC ISBB, RH 61,8%. Rerata kecepatan waktu reaksi sebelum bekerja adalah 253,6 mili detik sedangkan rerata kecepatan waktu reaksi setelah bekerja adalah 235.3 mili detik. Hal ini menunjukkan adanya penurunan. Dari hasil analisis perbedaan kecepatan reaksi sebelum dan sesudah intervensi menggunakan Wilcoxon test, didapat hasil signifikan ($0,011 < 0,005$). Untuk mengetahui penurunan kelelahan akibat intervensi dianalisis dengan Rank Pearson test, didapat hasil signifikan dengan kekuatan korelasi sedang ($p=0,000$, $r= -0,616$).

Kesimpulan. Hipotesis terbukti bahwa pemberian air minum minimal 2 liter dalam 8 jam memberikan efek positif terhadap penurunan kelelahan kerja pada pekerja laki-laki di PT.P. Perusahaan perlu menyediakan air minum dalam kuantitas cukup dan pekerja disarankan minum air mineral lebih dari 2 liter dalam 8 jam untuk mengganti cairan yang hilang karena lingkungan panas.

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ABSTRACT

Background. Workers who are exposed to heat exposure during work can cause fatigue if fluid intake is not sufficient. Male workers at the fabrication and preparation of materials exposed to heat in the work so that risk of fatigue. Ensuring that workers in hot environments pretty well hydrated is one of the most effective ways to protect the health and safety, and increase productivity. This study aimed to assess the effect of

consumption of drinking at least 2 liters of water in 8 hours to decrease fatigue caused by exposure to heat stress.

Research Methods. The study design one group before and after design, with intervention giving at least 2 liters of drinking water within 8 hours of work on workers exposed to heat stress. Subject totaling 34 people. Subject inclusion criteria have tenure 1 year and had no history of diabetes, lung, kidney, blood and heart. Eksklusinya criteria is not in a state hospital last month 1. Data was collected through interviews using questionnaires, observations of the intervention, and fatigue were measured using a reaction timer.

Results. The results of measurements of the average heat stress on the fabrication and preparation of materials WBGT is 32.9 OC, 61.8% RH. The mean speed of reaction time before the work is 253,6 milli seconds while the average speed of the reaction time after work is 235,3 milliseconds. This indicates a decrease. From the analysis of the reaction speed difference before and after the intervention using the Wilcoxon test, the result was significant ($0.011 < 0.005$). To determine the reduction in fatigue due to the intervention were analyzed with Pearson Rank test, the results obtained with the strength of the correlation was significant ($p = 0.000$, $r = -0.595$).

Conclusion. Hypothesis proved that the administration of at least 2 liters of drinking water within 8 hours giving a positive effect on the reduction in fatigue work on male workers in PT.P. Companies need to provide drinking water in sufficient quantity and workers are advised to drink mineral water more than 2 liters in 8 hours to replace fluids lost due to environmental heat.

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