

# Risiko Diabetes Tipe 2 pada Pekerja dengan Waktu Kerja Panjang = Risk of Type 2 Diabetes in Workers with Long Working Hours

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## Abstrak

**Latar Belakang:** Diabetes Melitus tipe 2 diketahui sebagai ancaman serius bagi kesehatan masyarakat karena dampaknya yang sangat luas bagi kehidupan masyarakat dan perekonomian. Data dari International Diabetes Federation (IDF) menunjukkan prevalensi diabetes di Indonesia tahun 2021 mencapai 19,5 juta. Sejumlah review menunjukkan bekerja dengan waktu kerja yang panjang (long working hours) memiliki efek yang buruk bagi kesehatan, khususnya gangguan metabolismik.

**Tujuan:** Mendapatkan bukti apakah waktu kerja yang panjang merupakan faktor risiko yang meningkatkan kejadian diabetes melitus pada pekerja non sedentary.

**Metode:** Penelusuran literatur dilakukan melalui PubMed, Scopus, dan Proquest. Seleksi pertama dilakukan dengan menelusuri artikel sesuai kata kunci. Dari Pubmed didapatkan 61 artikel, dari Proquest 242 artikel, dan melalui Scopus didapatkan 437 artikel. Berikutnya dilakukan skrining berdasarkan judul dan abstrak, kriteria inklusi dan eksklusi, kemudian dilakukan dengan melihat teks penuh dan didapatkan 3 artikel yang relevan dan paling sesuai mendekati PICO dan menjawab pertanyaan klinis.

**Hasil:** Setelah dilakukan penelusuran dari tiga artikel, yang paling relevan dan cukup valid diperoleh hanya satu artikel. Berdasarkan penelitian Bannai, et al dengan studi cohort di Jepang didapatkan HR 2.28; 95% CI, 1.13–4.82 untuk pekerja non-clerical dan shift dengan number needed to harm (NNH) 12. Namun, penelitian ini tidak menunjukkan hubungan sebab akibat yang jelas. Penelitian lainnya dari Kuwahara, et al, untuk jenis kategori pekerjaan field work didapatkan nilai OR 1.02 (95% CI 0.55-1.92), sedangkan penelitian Baek, et al menunjukkan pekerja blue collar memiliki kemungkinan terjadi prediabetes lebih tinggi jika waktu kerja lebih banyak dengan aOR=1.54 (95% CI 1.15 to 2.06). Dua penelitian ini tidak cukup valid dijadikan dasar karena merupakan studi cross sectional.

**Kesimpulan:** Pada pekerja non-sedentary, belum didapatkan cukup bukti yang mendukung hubungan waktu kerja panjang dengan meningkatnya risiko diabetes melitus tipe 2.

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**Background:** Type 2 Diabetes Mellitus is known as a serious threat to public health because of its very broad impact on people's lives and the economy. Data from the International Diabetes Federation (IDF) shows the prevalence of diabetes in Indonesia in 2021 has reached 19.5 million. A number of reviews show that working long hours (long working hours) has a negative effect on health, especially metabolic disorders.  
**Objective:** Determine whether long working hour is a risk factor that increases the incidence of diabetes mellitus in non-sedentary workers.

**Method:** Literature search was conducted through PubMed, Scopus, and Proquest. The first selection is made by searching for articles according to keywords. From Pubmed, 61 articles were obtained, from Proquest 242 articles, and through Scopus, 437 articles were obtained. Next, screening was carried out based on title and abstract, inclusion, and exclusion criteria, then carried out by looking at the full text and obtained 3 articles that were relevant and most suitable to approach PICO and answer clinical questions.

**Result:** After searching the three articles, the most relevant and valid enough was obtained only one article.

Based on research by Bannai, et al with cohort study in Japan, HR was found to be 2.28; 95% CI, 1.13–4.82 for non-clerical and shift workers with number needed to harm (NNH) 12. However, this study did not show a clear causal relationship. Another study from Kuwahara, et al, for the type of field work category obtained an OR value of 1.02 (95% CI 0.55-1.92 ), while the study by Baek, et al showed that blue collar workers had a higher likelihood of developing prediabetes if they worked longer hours with an aOR = 1.54 (95% CI 1.15 to 2.06). These two studies were not sufficiently valid because they were cross-sectional studies.

Conclusion: In non-sedentary workers, there is not enough evidence to support the relationship between long working hours and an increased risk of type 2 diabetes mellitus.