

# Peranan ultraviolet B sinar matahari terhadap status vitamin D dan tekanan darah pada wanita usia subur./ Betty Yosephin, Ali Khomsan, Dodik Briawan, Rimbawan Rimbawan

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## Abstrak

Sinar ultraviolet B adalah sumber utama vitamin D, tetapi wanita usia subur

yang bekerja di dalam ruangan mempunyai vitamin D yang rendah

meskipun Indonesia negara tropis. Tujuan penelitian ini untuk mengevaluasi peranan paparan sinar matahari pada wanita usia subur terhadap status

vitamin D dan tekanan darah. Desain penelitian yang digunakan adalah

eksperimen tanpa kelompok kontrol pada 21 wanita sehat. Penelitian ini

membandingkan status vitamin D dan tekanan darah sebelum dan setelah

mendapat paparan sinar matahari pada wajah dan lengan tiga kali seminggu selama 12 minggu. Analisis data menggunakan uji t-berpasangan.

Paparan sinar matahari dapat meningkatkan vitamin D. Serum 25(OH)D

meningkat 15,9% dari 15,7 ng/dL menjadi 18,2 ng/dL. Paparan sinar matahari menurunkan tekanan darah sistolik (nilai  $p = 0,004$ ) dan diastolik (nilai  $p = 0,011$ ). Ultraviolet B dari sinar matahari 30 menit tiga kali seminggu

selama 12 minggu dapat memperbaiki status vitamin D dan tekanan darah.

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Ultraviolet B sunlight exposure is a primary source of vitamin D, but women

of childbearing age who worked in room every day had low serum vitamin

D despite Indonesia is a tropical country. The objective of this study was to

evaluate the role of sun exposure in women of childbearing age on vitamin

D status, and blood pressure. An intervention before-after study without

group control was conducted on 21 healthy women. This study compared vitamin D status, and blood pressure before and after receiving ultraviolet B (UVB) from sun exposure on the face and both arms three times a week for 12 weeks. Anthropometric parameter and blood pressure were measured, were determined at baseline and after 12 weeks of sun exposure.

The effect of sun exposure can improve vitamin D. Serum 25 (OH)D increase 15.9% from 15.7 ng/dL to 18.2 ng/dL. Sun exposure significantly reduced systolic blood pressure ( $p$  value = 0.004), and diastolic blood pressure. Ultraviolet B Sinar Matahari terhadap Status

#### Vitamin D dan Tekanan Darah pada Wanita Usia Subur

The Role of Ultraviolet B from Sun Exposure on Vitamin D Status and Blood Pressure in Women of Childbearing Age

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sure ( $p$  value = 0.011). Ultraviolet B from sun exposure for 30 minutes, 3 times a week for 12 weeks improves the vitamin D status, and blood pressure.