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[Home](#) > [Vol 96, No 1](#) > [Turakitwanakan](#)

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Effects of Mindfulness Meditation on Serum Cortisol of Medical Students

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Abstract

Background: Mindfulness meditation is a method to relax the mind that decreases stress, which otherwise would increase serum cortisol. So, mindfulness meditation should decrease serum cortisol.

Objective: To study the effect of mindfulness meditation on mental health by using Thai GHQ28 questionnaire and study the effect of mindfulness meditation on stress by using serum cortisol.

Material and Method: Volunteer subjects were 30 second year medical students, aged 19.1 + 0.55 year olds (range 18-20) from Srinakharinwirot University. They were screened by Thai GHQ28 and blood was drawn to measure cortisol at 8:00 am before and after a four-day mindfulness meditation programme. The comparison of Thai GHQ28 scores and serum cortisol levels before and after meditation were analysed by paired t-test.

Results: The subjects were 66.77% female and 33.33% male. The average score of Thai GHQ28 before and after the mindfulness meditation was 1.50 (SD 2.53) and 0.77 (SD 2.08) respectively. The average serum cortisol levels before mindfulness meditation was 381.93 nmol/L (SD 97.74) becoming significantly lower after mindfulness meditation 306.38 nmol/L (SD 90.95). The difference was statistically significant in cortisol level, but not statistically significant in Thai GHQ28.

Conclusion: Mindfulness meditation lowers the cortisol levels in the blood suggesting that it can lower stress and may decrease the risk of diseases that arise from stress such as psychiatric disorder, peptic ulcer and migraine. Then, mindfulness meditation should be used in combination with standard treatment.

Keywords: Mindfulness meditation, Thai GHQ28, Cortisol

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