

The effect of Ezo-ukogi (*Acanthopanax senticosus*, Harms) in improving the sleep quality of healthy volunteers

This study was presented at the Annual Meeting of the Japanese Society for Medical Use of Functional Foods, 2011

[Study Objectives]

Sleep is a physiological state that is essential for healthy living; nevertheless, the nocturnal life style in which many people live in contemporary society can result in a shorter sleep time or sleep-waking rhythm disorder. Nowadays, one in five Japanese adults has some sleeping problem. Inhibited sleep may result in adverse effects on cerebral or immunity functions, which may lead to the onset of depression or lifestyle diseases. It has also been reported that reducing stress might result in improving the quality of sleep.

We therefore conducted a study of the effect of Ezo-ukogi (*Acanthopanax senticosus*, Harms) in improving sleep quality, because it was reported that this plant showed an anti-stress effect in some experiments.

[Method of experiments]

Five men who had complaints about sleeping took 40 tablets produced from Ezo-ukogi roots made into powder with a dose of 20 tablets each after the morning meal and evening meal, for 2 weeks.

The sleep states of each subject at the start of administration and 2 weeks later were assessed by an all-night polysomnography (PSG)^{*1} test, and questionnaires using the Pittsburgh Sleep Quality Index (PSQI)^{*2} and OSA Sleep Inventory MA version^{*3}.

[Results]

The results of the PSG test show that there was some increase in deep sleep stages 3 and 4 and a significant increase in stage 4 in the subjects. Such increases were particularly significant in older subjects.

In the PSQI questionnaire, every subject had a lower score, thus their sleeping complaints had improved. The results of the OSA questionnaire show that their deviations were significantly higher on the item of initiation and maintenance of sleep, and somewhat higher in on the item of refreshing (i.e., recovering from fatigue), so their sleep quality had improved. These results suggest that 2-week ingestion of Ezo-ukogi tablets may improve the sleep quality in human with sleeping complaints.

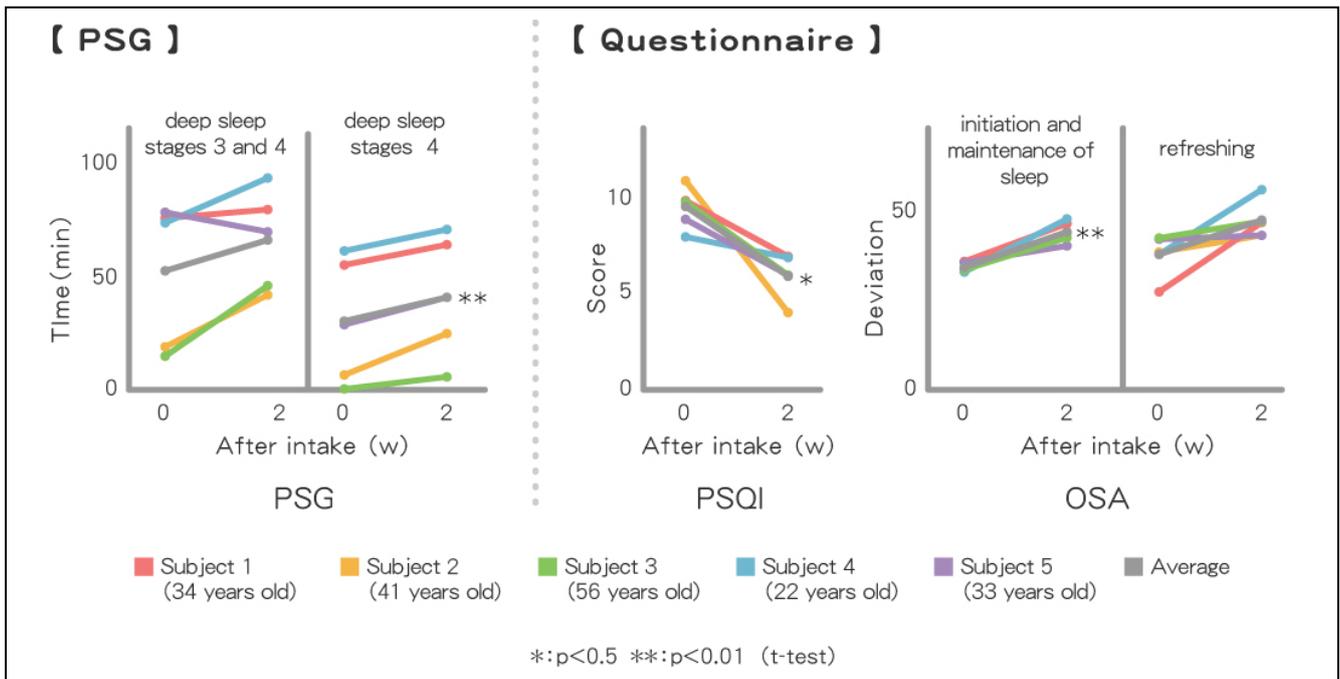


Figure. The results of the PSG test, the PSQI questionnaire, and the OSA questionnaire

[Presentation at a scientific meeting]

Name of meeting: The Annual Meeting of the Japan Society for Medical Use of Functional Foods, 2011

Title : The effect of Ezo-ukogi (*Acanthopanax senticosus*, Harms) in improving the sleep quality of healthy volunteers

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[Explanation of terms]

* 1: Polysomnography (PSG)

This is a test for assessing the sleep state on a comprehensive basis. The method quantifies the depth of sleep, fragmentary sleep or arousal responses, and sleep efficiency by measuring brain waves and eyeball movements.

Sleep is divided into four stages, 1 to 4. Sleep stages 3 and 4 are deep sleep.

* 2: Pittsburgh Sleep Quality Index (PSQI)

This is a questionnaire system in which subjects are asked about the states of sleep that they had, and such states are assessed according to the total score on 18 items. The lower the score is, the better the sleep quality is.

*** 3: OSA Sleep Inventory MA version**

This is a questionnaire system in which subjects are asked about their feeling of sleep just after they wake up on 20 items. The higher the deviation is, the better the sleep quality is.

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