

## Effect of Standing Exercise on Sleep Quality among the Healthy Subject

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## Abstract

**Introduction:** Foot is a vital organ of the body that supports the weight of the body. They are usually tired or tired and ache after a long work in heavy weight positions such as standing and walking. Foot training is important to improve the strength of the feet. However, standing exercise is clinicians and researchers in sports medicine to assess properties of the calf muscle-tendon unit use the calf-raise test. The test generally involves repetitive concentric- eccentric muscle action of the plantar-flexors in unipedal stance and is quantified by the number of raises performed (Beasley WC., 1961, Florence JM et al., 1992, Lunsford Bret al., 1995). To examine the effect of standing exercise on sleep quality among the healthy subject.

**Methods:** After the subjects underwent screening procedures using interview and physical examination by Thai Traditional Medicine, they were asked to give informed consent study. The subjects were receiving a 4-week course of the standing exercise consisted of 3 times per week and 4 minutes per session, in total, each subject received 12 sessions. The brief details of the testing procedure were as follows: two steps, Step 1. (1) Hold the back of a chair or wall for support. (2) Keeping your back straight, rise up on your toes, slowly lifting your heels off the ground. (3) Slowly lower back down. Step2, (1) Hold onto a rail or wall for support. (2) Maintain both legs with your knees straight and keep. (3) keep your both heels on the bottom you can keep your heels on the ground and lower your heels gradually until you feel a pull in the back of your legs. (4) Afterward the above testing, the subjects were given a “rest” day. (5) Evaluated after extensive research. The data collection instrument consisted of demographic data about the subject, The Pittsburgh Sleep Quality Index (PSQI). The data were analyzed by computer software.

**Results:** Most of the standing exercise group before and after exercise, score at 6-10 were 15 and 15 respectively. The Global PSQI score was not improved. A global PSQI score of the standing exercise group was significantly different at p-value < 0.05 the average is decreased ( $5.72 \pm 2.30$ ) when compared to the pre-exercise ( $6.93 \pm 2.59$ )

**Conclusions:** This study showed a significant change in Standing Exercise after treatment compared with pre-treatment score. The standing exercise was significantly different at p-value < 0.05 the average is decreased ( $5.72 \pm 2.30$ ) when compared to the pre-exercise ( $6.93 \pm 2.59$ ). The result of this research had shown that standing exercise was improved sleep quality in the healthy subjects, and enhance sleep quality in healthy people who are poor sleepers.

**Keywords:** Standing exercise, Calf raises, PSQI, Sleep quality