CHANGES IN PHYSIOLOGICAL AND BIOENERGETICAL MARKERS ASSOCIATED WITH STATIONARY MEDITATION


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INTRODUCTION

Common meditation practices can be classified as those carried out in a stationary position (e.g., standing or sitting Qigong meditation) and those involving body movement (e.g., Tai Chi). The aim of this study is to investigate changes in various physiological and bioenergetic markers associated with stationary meditation, and compare them with some of those associated with moving meditation.

METHODOLOGICAL

Subjects

This study, approved by UCI IRB protocol HS#2002-2604, included subjects who are UCI Irvine students and staff between the age of 18-35, and expert Tai Chi practitioners between the age of 50-60. They are healthy and free of any medications by self-report.

Instrumentation

Cutaneous blood flow was measured with a laser Doppler flowmetry instrument from Moor (Figure 1). Biophoton (ultra-weak photon) emission was measured with a single photon counting system constructed in the laboratory (Figure 2). Electroencephalography recording was made with a Geodesic Sensor Net. Heart rate variability was computed with fast Fourier transformation software from electrocardiograms recorded with a Holter monitor from Pre-Ideal Co.

RESULTS

Effect of Meditation on Peripheral Blood Flow

Figure 5. Blood flow was monitored by laser Doppler flowmetry continuously before, during and after subjects practiced 20 minutes of meditation in the sitting position. Values shown are averages computed from recordings from each of the three stages.

Effect of Meditation on UPE Rate

Figure 6. Biophoton emission (UPE) rate was measured on subjects before and after 20 minutes of sitting meditation.

CONCLUSION

The results of the different parts of this study indicate that while stationary meditation is effective in inducing a relaxed mental state, it differs from the moving meditation of Tai Chi because it leads to a lowered metabolic and bioenergetic state.

This work is supported by the Joseph and Sou-Lin Lee Endowment for Chinese Medicine Research.