Study of Effect of Meditation on BMI

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Research Article

Abstract: **Background and Objective:** Meditation is described as condition of inner tranquility and attaining of higher state of consciousness. The present study was undertaken to find out the effect of meditation on BMI. **Material and method:** The study was conducted on 74 subjects in the age group of 45 to 55years of either sex. BMI was recorded before and after two months training of meditation**. Results:** BMI was decreased and was statistically highly significant. **Conclusion:** Meditation practice found to reduced the BMI.

Keywords: Meditation, BMI.

Introduction

Meditation may be described as condition of inner tranquillity and attaining of a higher state of consciousness. The promoters of meditation claim that it is easy to learn and that produces great relaxation, heighted awareness and more efficient performance.(1) In the recent years, the non communicable disease like obesity, hyper tension, diabetes mellitus, cardiovascular heart disease, type A personality and psyches are spreading like an epidemic in the developing countries like India. Meditation is not only medically effective but also cost effective in significantly reducing the health care expenditure.(2) Modification of our present way of lifestyle with a low fat vegetarian diet and Meditation practices, dramatically reduce fall by these non-communicable disease and reduce overall mortality in persons before 65 years of age.(3) In meditation method consist of breathing exercise and mental concentration help the individual to attain control over the autonomic nervous system resulting in optimization of homeostatic functions of the body and improving mental health.(4) The present study was undertaken to find out the effect of meditation in reducing severity of risk factor in CHD.CHD is directly related with body mass index.(5)

Material and Methods

The study was conducted on 74 subjects in the age of 45-55yrs, either sex were included in the study, after obtaining the ethical clearance from ethical committee of MGM College, Kamothi, Navi Mumbai. The informed consent is taken from the subject for the study.

Method

A normal healthy voluntaries subject was enrolled in the study. Subjects with any addiction, hypertension and disease like diabetes mellitus, left ventricular failure were excluded from the study. Detailed systemic examination was done before the study. Body mass index was calculated by using the formula weight in kg divided by square of height in meter and measured in Kg/m^{2}(6) BMI was recorded before and after the meditation to see the effects.

Method of Meditation

Meditation will be performed in peaceful place, asking the subjects to sit their silently in a comfortable position with closed eyes and take some deep breath. Ask them to focus their entire attention on the breathing and follow it as it travels inside your body and comes out. Follow the breath in its entire route, inhalation and exhalation at least for 15-20 minutes initially for 10 days and increasing time periods up to 1hr daily afterwards till the end of the camp. Method will be taught to the participation and evaluated during the camps by an expert teacher of meditation. All the subjects practiced these Meditations for 40 to 60 minutes on each day for two months. Subjects were told to practice each Meditation for minimum 30 minutes on each day early in the morning at their home before coming to the training center each day.

Result

Table 1: Comparison of Body Mass Index before and after Meditation in males and female

Parameter	Before Meditation mean±SD	After Meditation mean±SD	't'	'p'	Significance
$BMI(kg/m^{2})$in female (N= 41)	24.79 ± 0.69	23.87 ± 0.83	12.18	< 0.001	Highly significant
$BMI(kg/m^{2})$in male (N= 33)	24.63 ± 0.6	23.74 ± 0.83	21.7	< 0.001	Highly significant
$BMI(kg/m^{2})$in Combined (N= 74)	24.72 ± 0.65	23.87 ± 0.83	18	< 0.001	Highly significant

Discussion

The mean B.M.I in females, before Meditation breathing practices was 24.87+0.69 and Meditation breathing practices the mean B.M.I was 23.87+0.83. In combined, before Meditation it was 24.72+0.65 and after Meditation it was 23.81+0.83. The average fall in B.M.I was 0.92, 0.89 and 0.91(kg/m^2) in females, in males and as combined respectively. This indicates decrease in B.M.I after Meditation and it was found to be statistically significant ($p<0.001$).The decrease in B.M.I is due to decrease in body weight. The deep slow focused breathing may strengthen the respiratory muscles, increase their compliance, increase the oxygen in take and its diffusion into the lungs, and ultimately lead to an increase in the ventilation perfusion ratio. There is also increase in peripheral blood flow. Increase in the oxygen uptake may also increase metabolism, which also affect the activity of hepatic lipase and lipoprotein lipase at the cellular level. This could affect metabolism of lipoprotein and lead to an increased uptake of fat. This results in decrease in body weight.[6] The present results are in agreement with following studies-Burnald RJ.*et al* (1992)[7] at California, after 3 weeks of Meditation practices recorded mean change of B.M.I of $1kg/m^2$ ($p<0.01$) and decrease in body weight by 5%, which is statistically significant ($p<0.001$). Schwartz RS. *et al* (1991)[8] at Washington, after 6 months of Meditation practices, observed similar decrease (mean change =_ 2.5kg; $p<0.001$).Ornish D. *et al* (1990)[9] at California where 1 year of Meditation practices significantly decreased mean body weight by 10.1 kg ($p<0.0001$).[10]Mahajan A.S et.al (1990)[11] at New Delhi demonstrated that after 14 weeks follow up after Meditation intervention significantly reduced the mean body weight by 10.1 kg. Lance JK. *et al* (1995)[12] at Houston found that at end of 5 years follow up after Meditation intervention decreases body weight 8kg.($p<0.001$).Anderson RE *et al* (1997)[13] reported that at the end of 1 yr follow –up after yogic life style intervention decreases body weight significantly ie mean change in body weight by 7.9kg; $p<0.001$.

Summary and Conclusion

The Meditation practices were found to be effective in reduction of body mass index of study subjects.

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