THE TRANSCENDENTAL MEDITATION PROGRAM
AND NORMALIZATION OF WEIGHT

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Overweight people lost weight after starting the Transcendental Meditation technique, and underweight people gained weight. Both changes point to a normalization of body functioning. — EDITORS

An effective technique for promoting weight change in the direction of normal weight is both lacking and needed. To explore the possibility that the Transcendental Meditation program might fulfill that need, 76 college students who practiced the Transcendental Meditation technique were asked to complete a retrospective questionnaire concerning their present weight and their weight when they began the practice. They reported a small overall weight loss over the mean of 31 months they had been meditating. This change was significantly different \( p = .0005 \) from the expected pattern of continued weight increase with age for individuals of comparable sex, height, and age in the general population. Subjects who were over desirable weight before learning the Transcendental Meditation technique showed substantial weight losses, and subjects who were underweight before learning Transcendental Meditation followed the general population pattern of slight weight increase with age. A second study of an independent sample of 76 older meditators replicated these results. These desirable weight changes are interpreted in terms of the global effects of the Transcendental Meditation program, which appears to offer a new hope for dealing with the difficult problem of undesirable weight change.

INTRODUCTION

A common theme in the research on the problems of overweight and underweight is the lack of a successful technology for promoting desired weight changes in individuals. Based on an extensive review of the literature, Stunkard and McLanen-Hume conclude, "Most obese persons will not enter treatment; of those who do, most will not lose weight; of those who lose weight, most will regain it" (32). An effective technique for normalizing weight is clearly needed.

A promising new approach to this problem is suggested by a number of recent studies demonstrating a wide range of physiological and psychological benefits resulting from the regular practice of the Transcendental Meditation (TM) technique. This is a mental technique practiced twice daily for periods of 15–20 minutes that produces deep relaxation. It is easily learned, and instruction is widely available through the International Meditation Society.

Several studies have indicated that during TM there is a substantial reduction of oxygen consumption, cardiac output, and blood lactate and a marked increase in skin resistance, while EEG recordings indicate a unique pattern of slow alpha-wave activity in frontal and occipital areas as well as synchrony between the hemispheres of the brain (3, 4, 37). This physiological pattern appears to be unique and is clearly different from ordinary states of waking, dreaming, sleeping, rest with eyes closed, or hypnotic trance.

Significant positive changes resulting from the practice of Transcendental Meditation have been demonstrated on a variety of personality tests (11, 12, 21, 27), physiological indices of anxiety (22), and measures of reaction time (28) and perceptual-motor coordination (7). Short- and long-term memory appears to be superior in meditators (1). Clinical reports show beneficial effects on bronchial asthma (13, 14) and relief from insomnia (18). A rigorously designed study has recently replicated earlier findings of significant decreases in blood pressure among hypertensive patients (5). Furthermore, in retrospective studies meditators reported a substantially lower incidence of allergies and infectious diseases with regular meditation than before beginning the practice (23).

Many of the characteristics that have been shown to improve through the regular practice of the TM technique are also associated with obesity. In general, hypertension correlates with overweight (6, 15, 29). Many obese individuals suffer from severe psychological problems. Obsessive concern with self-image, passivity, expec-
tation of rejection, and progressive withdrawal are common problems among those overweight since childhood (19); among the obese generally, significantly more pathological responses have been found on measures of immaturity, suspiciousness, and rigidity (31, 33). Most of these traits have been studied in those who practice TM and are found to be atypical of meditators.

Some obesity studies have indicated that the various psychological abnormalities are not common to all overweight populations and suggest that there may be some deeper underlying cause which tends to make obesity self-perpetuating and extremely difficult to treat by present methods (25; 34, pp. 8–9).

In many subjects the onset of obesity is associated with some particular stress period (9). Obesity has been produced experimentally among animal populations by both physiologic and psychic trauma (2, 8, 9, 16). In this light it is noteworthy that the proponents of TM explicitly claim that the practice increases the ability to withstand stressful stimuli and that this claim has been supported by an interesting experiment conducted by Orme-Johnson (22).

It is known that there is little or no biological need to gain weight once growth in height has ceased (17). Indeed, the best health prognosis (in terms of mortality and morbidity data) is found in individuals in their early 20s of average or less than average weight. Nevertheless, numerous studies indicate that weight increases in most people well beyond the age of 25 (10, 20, 30, 35).

The present study examined the changes in weight of people who practice TM and how these changes correspond to the well-documented tendency for individuals to gain weight over time. Because TM seems to be effective in reducing problems associated with obesity, it was hypothesized that the regular practice of TM might help individuals maintain a healthy weight as they grow older.

METHODS

STUDY I—The initial study of weight change was conducted with 101 students attending first-year courses at Maharishi International University at Santa Barbara, California. Six females and 19 males were not included in the final data analysis because they were too young when beginning TM to be classified according to a desirable weight category. The final group studied therefore consisted of 76 subjects (19 females and 57 males). Their mean age was 23 years (range 18 to 41). All had been meditating regularly for 4–81 months, with a mean of 31 months.

All subjects completed a brief questionnaire requesting their height, weight, age, and other pertinent information at the time of filling out the questionnaire and at the time of beginning the practice of TM. Each individual was also asked to classify himself in a particular body-frame size according to the criteria given by the U.S. Public Health Service (34). An independent survey has indicated that self-estimates of weight are quite accurate when compared to scale weight (r = .98) (31), although this finding has not been confirmed for retrospective reports.

The questionnaire was administered to all students as they met in their classrooms. They were instructed to complete all the items as honestly and accurately as possible and were assured of the confidentiality of their responses.

STUDY II—Because the subjects in Study I were students at Maharishi International University, where the theory and practice of the Transcendental Meditation technique are incorporated into the curriculum, they may have expected greater changes than would the TM population as a whole. For this reason the same questionnaire used in Study I was administered to 79 meditators attending a nonacademic weekend in residence for rest and relaxation held at Maharishi International University at Santa Barbara. Although this group was also not precisely typical of all meditators, attendance at these weekends in residence is a widespread practice among meditators. It is reasonable to consider these subjects to be at most only slightly more enthusiastic about TM than a truly random sample would be and to be representative on most other important variables.

Of those responding to questionnaires in Study II, two females were excluded because they were too young and one male because he was too tall to be classified as to a desirable weight category. The resulting sample of 76 meditators (only coincidentally the same n as in Study I) included 36 females and 40 males. The mean age of the subjects was 30 (range 18 to 63), and they had been meditating regularly for two weeks to 58 months, with a mean of 18 months. The procedure was the same as for Study I.

RESULTS

For each subject the expected and actual weight changes over the period of time since the subject began Transcendental Meditation were calculated (table 1). To estimate the expected weight change for each subject, the average weight for persons of the subject’s sex, age, and height at the time the subject started TM, and again at the time of the study, was determined from Davenport’s Graded Average Weight Table (10). The actual change in weight since beginning TM was calculated from the information supplied by the subject. The mean difference between expected and actual weight change was then computed in each study for the group as a whole (fig. 1).
and for subgroups according to sex to determine whether the pre-TM weight was above, below, or within the desirable weight range according to the 1960 Metropolitan Life Insurance Desirable Weight Table (17) (figs. 2, 3, and 4).

For the normative group (from Davenport’s tables), weight increased with age, as was already known. However, for TM subjects in both studies there was an average decrease in weight with age. For the Maharishi International University students (Study I) the mean weight change was -0.434 lbs. For the group of meditators from the general public (Study II), who were of an older average age, the weight change was much larger, -3.168 lbs. For each study as a whole the difference between the weight change for the norms and for the meditators was highly significant (Study I, \( p = .0005 \); Study II, \( p = .0001 \)). The effect was greater for males than females in both groups, but was significant for all groups except the female students (Study I).

Subjects in the subgroups of under, over, or within desirable weight range showed a consistent tendency to approach or maintain a desirable weight. Those already within the desirable weight range did not follow the normative group's tendency to gain one pound a year (Study I, \( p = .011 \); Study II, \( p = .0011 \)). The students tended to remain within one pound of their original weight. The generally older nonstudent group from the general population of meditators remained within the desirable weight range but showed an average weight loss of three pounds. Subjects who were over their desirable weight when beginning TM reported the greatest weight change. The overweight subjects in Study II, who were an average of 19.50 lbs overweight before beginning TM, decreased an average of 5.35 lbs, a 27 percent improvement. As were the students in Study I, the meditators in Study II were significantly different from the normative group in their pattern of weight change over this period (\( p = .0015 \)). Females in Study II showed the greatest decrease of any subgroup, nine pounds.

The subjects who were originally underweight tended to gain weight. Thus, they were the only group not differing from the normative pattern of gaining weight with age. Underweight subjects in Study I were an average of 7.50 lbs underweight before beginning TM, and the

FIG. 1. WEIGHT CHANGE SINCE STARTING TM FOR SUBJECTS IN EACH STUDY AS A WHOLE. For both Study I and Study II the weight change (in lbs) for the TM group is compared with the weight change over a similar period of time for a corresponding normative group (norm) matched for sex, age, and height. The data are for males and females combined.

### TABLE 1

**MEAN WEIGHT CHANGE SINCE BEGINNING TM**

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>STUDY I (MU STUDENTS)</th>
<th>STUDY II (OTHER MEDITATORS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>TM Group (lbs)</td>
</tr>
<tr>
<td>Overall</td>
<td>76</td>
<td>-0.434</td>
</tr>
<tr>
<td>All males</td>
<td>57</td>
<td>-0.646</td>
</tr>
<tr>
<td>All females</td>
<td>19</td>
<td>0.210</td>
</tr>
<tr>
<td>Within desirable weight range</td>
<td>41</td>
<td>0.512</td>
</tr>
<tr>
<td>Males</td>
<td>32</td>
<td>-0.015</td>
</tr>
<tr>
<td>Females</td>
<td>9</td>
<td>2.388</td>
</tr>
<tr>
<td>Over desirable weight range</td>
<td>17</td>
<td>-6.852</td>
</tr>
<tr>
<td>Males</td>
<td>10</td>
<td>-7.750</td>
</tr>
<tr>
<td>Females</td>
<td>7</td>
<td>-5.571</td>
</tr>
<tr>
<td>Under desirable weight range</td>
<td>18</td>
<td>3.472</td>
</tr>
<tr>
<td>Males</td>
<td>15</td>
<td>2.733</td>
</tr>
<tr>
<td>Females</td>
<td>3</td>
<td>7.166</td>
</tr>
</tbody>
</table>

*NS = not significant.
average gain was 3.47 lbs, a 46 percent improvement. The normative group gain was slightly greater, 3.83 lbs. In Study II the average amount underweight was 8.45 lbs, and the average gain was 1.82 lbs, a 22 percent improvement. The normative weight gain was 1.36 lbs. Underweight females in Study I reported the greatest gain of any subgroup, 7.17 lbs.

DISCUSSION

The regular practice of the Transcendental Meditation technique seems to have a substantial influence in ameliorating the typical pattern of undesirable weight change with age. In two independent samples of subjects practicing TM, those who were within the desirable weight range before beginning meditation reported significantly less gain in weight over the time they had been meditating than is typical for individuals of the same sex, age, and height. Originally overweight individuals evidenced a substantial weight loss (in comparison to the expectation of increasing weight obtained from the actuarial table). At the same time, it is important to note that the originally underweight individuals maintained approximately the same weight or gained slightly over time, as is typical of comparable individuals in the general population. This last finding is significant in that it supports the claim that TM is not simply a means to reduce weight, but that its benefits are of a more general nature, creating a situation in which the individual becomes generally more mentally and physically fit.

Indeed, a main theme in the literature on over- and underweight has been the lack of an effective technology to treat what are considered to be underlying psychological, physiological, and sociological problems of a global nature that seem to perpetuate obesity and underweight. Preliminary research with TM on the similarly complex problem of hypertension and the numerous findings of improvement on various psychological and physiological indices suggest that TM may be acting in this global way to produce the results found in the present study.

Another more specific explanation for the influence of TM on weight is suggested by Schachter's (26) demonstration that obese individuals tend to eat according to external cues (such as meal hour or availability of attractive food), whereas normal individuals eat according to internal indications of the physiological need for food. TM has been shown to substantially improve performance on psychological measures of "internal locus of control" (12) and "field independence" (24). It would seem that the possibility that TM functions to improve perception of internal cues of hunger would be a fruitful area for further research.

Of course the present research must only be taken as preliminary. It relies on self-report of both current and remembered weight, and it lacks an immediately equivalent control group. Also, the second sample, although drawn from the general meditating population, cannot be
compared with the weight change over a similar period of time for a corresponding normative group (norm) matched for sex, age, and height. The data are for males and females combined.

FIG. 4. WEIGHT CHANGE

Study considered to be truly representative of the meditating population because these subjects were interested enough in TM to attend a special weekend course. In order to alleviate these problems, the present investigators have already initiated a large-scale, longitudinal study on obesity.

In spite of these various methodological difficulties, the present findings are hardly ambiguous. Highly significant results in two independent samples of meditators clearly suggest that the Transcendental Meditation program may offer an important solution to the very difficult problem of overweight.

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