Scientific research on the Transcendental Meditation program

Highlights of 600 scientific studies validating benefits in all areas of life
A meta-analysis (used for drawing objective conclusions from large bodies of research) found that the Transcendental Meditation technique produced a significant decrease in basal skin conductance compared to eyes-closed rest, indicating profound relaxation. Deep rest and relaxation were also indicated by greater decreases in respiration rates and plasma lactate levels compared to ordinary rest. These physiological changes occur spontaneously as the mind effortlessly settles to the state of restful alertness, Transcendental Consciousness.

University students who learned the Transcendental Meditation technique, in contrast to students randomly assigned to a delayed-start group, showed significant improvement over a 10-week period on a Brain Integration Scale comprising several EEG measures during task performance. Components of the Brain Integration Scale on which improvement was measured included increased broadband frontal EEG coherence and more efficient preparatory brain responses to stimuli. Students learning the Transcendental Meditation technique also showed decreased sleepiness and faster habituation to stressful stimuli in comparison to controls.

**Increased Integration of Brain Functioning**

Through the Transcendental Meditation Technique

![Graph showing increased brain function](image)

**Conclusion**

During the practice of the Transcendental Meditation technique, the body gains a unique state of deep rest that dissolves accumulated stress and fatigue. At the same time, brain functioning becomes more orderly. As a result, the body becomes healthier and more integrated, leading to greater success in dynamic activity.
### Optimization of Brain Functioning

**THROUGH THE TRANSCENDENTAL MEDITATION TECHNIQUE**

![Diagram showing the relationship between EEG Coherence, Moral Reasoning, IQ, Decreased Neuroticism, Concept Learning, H-reflex, Creativity, and Grade Point Average.]

Higher levels of EEG coherence measured during the practice of the Transcendental Meditation technique are significantly correlated with increased fluency of verbal creativity; increased efficiency in learning new concepts; more principled moral reasoning, higher verbal IQ, and decreased neuroticism; higher academic achievement; clearer experiences of Transcendental Consciousness; and increased neurological efficiency, as measured by faster recovery of the paired H-reflex.

References: The chart above refers to data from the following four studies:

### Holistic Improvement in Intellectual Performance

**THROUGH THE TRANSCENDENTAL MEDITATION TECHNIQUE**

![Graph showing the effect size of creativity, practical intelligence, field independence, mental efficiency, and fluid intelligence.]

Three randomized controlled studies among secondary school and vocational school students found that, in contrast to controls, those who learned the Transcendental Meditation technique showed significant improvement in five measures of intellectual functioning; they also showed decreased anxiety.


### Additional Findings in the Area of Mental Potential

- **Enhanced Creativity**

- **Increased Field Independence—Broader Comprehension and Improved Ability to Focus Attention**

- **Increased Efficiency of Perception and Memory**

- **Improved Left Hemispheric Functioning—Improved Verbal and Analytical Thinking**

- **Improved Right Hemispheric Functioning—Improved Synthetic and Holistic Thinking**

- **Accelerated Cognitive Development in Children**

- **Increased Liveliness**

- **Increased Cognitive Flexibility in the Elderly**

### Conclusion

During the practice of the Transcendental Meditation and TM-Sidhi programs, the mind experiences Transcendental Consciousness—the state of unbounded awareness, the basis of creativity and intelligence. This experience stimulates a more coherent style of brain functioning and results in more comprehensive, focused, creative, and intelligent thinking.
Improved Postgraduate Academic Performance
THROUGH THE TRANSCENDENTAL MEDITATION TECHNIQUE

Statistical meta-analysis of all available studies (42 independent outcomes) indicated that the effect of the Transcendental Meditation program on increasing self-actualization is much greater than concentration, contemplation, or other techniques. Self-actualization refers to realizing more of one’s inner potential, expressed in every area of life: integration and stability of personality, self-regard, emotional maturity, capacity for warm interpersonal relationships, and adaptive response to challenges.


CONCLUSION

By providing the experience of Transcendental Consciousness, the unified field of natural law, the Transcendental Meditation and TM-Sidhi programs unfold the latent genius of every student. As one’s mind becomes alert and comprehensive, increasingly thought and action are nourishing and progressive for oneself and others, and one makes fewer and fewer mistakes in life—spontaneously one lives more in harmony with natural law.
This meta-analysis was conducted on all published studies on stress reduction and blood pressure among hypertensive patients which met the criteria of well-designed randomized control trials with multiple studies for each treatment category. Only the Transcendental Meditation program was found to have a statistically significant impact of reducing high blood pressure among hypertensive subjects. A second meta-analysis conducted independently replicated the finding of significantly reduced blood pressure, both systolic and diastolic, through the Transcendental Meditation program.


This randomized controlled trial found that four months of practice of the Transcendental Meditation program led to a significant reduction in insulin resistance among individuals with stable cardiac heart disease, in contrast to controls receiving health education. Insulin resistance is one of the components of the “metabolic syndrome,” often associated with obesity, high blood pressure, and hyperlipidemia—a risk factor for cardiovascular morbidity and mortality; insulin resistance may also lead to type 2 diabetes.


This study found that those who learned the TM program showed reduced thickening of the carotid artery. This finding was in contrast to continued thickening of this artery among a control group who took a health education program on diet and exercise for alleviating cardiovascular problems. Reduced atherosclerosis in the carotid artery has been found to correlate with less disease of the arteries in the heart and brain, which leads to lower rates of heart attacks and strokes.


The results of a randomized controlled trial of subjects who had known heart disease and who participated in the TM program or a health education control group showed a 47% lower risk for death, heart attack, and stroke in the TM group over an average of five years compared to controls. All subjects continued their standard medical care during the study. Results suggest that the TM technique is a new, effective method to reduce the risk of cardiovascular disease.

Reference: Archives of Internal Medicine, in press.
A five-year study of medical care utilization statistics on 2,000 people throughout the U.S. who regularly practiced the Transcendental Meditation program found that their overall rate of hospitalization was 56% lower than the norm. The group practicing the Transcendental Meditation technique had fewer hospital admissions in all disease categories compared to the norm (see chart on p. 15). The highest rates of reduction in both hospitalization and outpatient visits occurred in the 40+ age group, which normally has a higher rate of health care utilization than younger age groups, resulting in substantial cost savings.


**Fewer Hospital Admissions for All Disease Categories**

A five-year study of medical care utilization statistics of people practicing the Transcendental Meditation program (mean N = 1,468) found an overall 56% reduction in hospitalization rate compared to the norm. In terms of the leading causes of death in the U.S., the findings include –87% for heart and cerebrovascular disease, –55% for cancer, –73% for nose, throat, and lung diseases, –63% for injuries, –87% for diseases of the nervous system, including Alzheimer’s, and –65.4% for metabolic diseases, including diabetes.


**Conclusions**

The deep rest and influence of orderliness provided by the Transcendental Meditation and TM-Sidhi programs allow the self-healing processes of the body to restore normal, balanced physiological functioning, resulting in better general health and the prevention of disease.
Reduced Psychological Stress
THROUGH THE TRANSCENDENTAL MEDITATION TECHNIQUE

A statistical meta-analysis conducted at Stanford University of all available studies (146 independent outcomes) indicated that the effect of the Transcendental Meditation program on reducing trait anxiety was much greater than that of concentration or contemplation or other techniques. Analysis showed that these positive results could not be attributed to subject expectation, experimenter bias, or quality of research design.


Reduced Drug and Alcohol Use
THROUGH THE TRANSCENDENTAL MEDITATION TECHNIQUE

A comparison of the results of several statistical meta-analyses indicated that the Transcendental Meditation program produced significantly larger reductions in tobacco, alcohol, and non-prescribed drug use than standard substance abuse treatments and standard prevention programs. Whereas the effects of conventional programs typically fall off rapidly within three months, effects of the Transcendental Meditation program increase over time. The effects of the Transcendental Meditation program are spontaneous, based on fundamental and naturally occurring improvements in the individuals’ psychophysiological functioning.


### Additional Findings in the Area of Psychological Health and Behavior

- **Increased Capacity for Warm Interpersonal Relationships**
- **Decreased Depression**
- **Increased Tolerance**
- **More Positive Self-Concept**
- **Orientation Towards Positive Values**
- **Improved Perceptions of Others**
- **Increased Sociability**
- **Healthier Family Life**
- **Greater Marital Satisfaction and Adjustment**
- **Improvements in Post-Traumatic Adjustment Problems**

### Conclusion

Through the Transcendental Meditation technique, individuals gain inner strength, physiological balance, contentment, and awareness; reduce stress, enabling them to give more attention, appreciation, and love to family and friends; and continually grow in effectiveness in professional and personal life.
In a study conducted by researchers at the National Institute of Industrial Health of the Japanese Ministry of Labor and the St. Marianna Medical Institute, 447 industrial workers of Sumitomo Heavy Industries were taught the Transcendental Meditation technique and compared with 321 workers who did not learn the practice. The Transcendental Meditation technique group showed significantly decreased physical complaints, decreased impulsiveness, decreased emotional instability, decreased neurotic tendencies, decreased anxiety, and also decreased insomnia.

The Center for Leadership Performance offers courses for individuals and organizations in the Transcendental Meditation program.

CENTER FOR LEADERSHIP PERFORMANCE
Robert Farley
Managing Director
800-421-3250
rfarley@tmbusiness.org
www.tmbusiness.org