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Recent Research (2014-2019) on the Transcendental Meditation® Technique

Four Stories
Knowledge (Basic Research) —> Organizing Power (Applied Research)

Story # 1: TM Improves Gene Expression —> Health and Longevity

Story #2: TM Increases Brain Integration —> Improves Academic Outcomes

Story #3: TM Most Effective Stress Reduction Technique —> Universal Stress Reduction

Story #4: TM Is From Authentic Vedic Knowledge —> Improved National Consciousness
Story #1: TM Improves Gene Expression —> Health and Longevity

New Basic Research
- TM improves gene expression in a manner that could be expected to reduce inflammation, improve the response to stress, protect from cardiovascular disease, and protect from cancer.
- TM increases telomere length, which is associated with increased longevity.

New Applications
- TM prevents enlargement of heart in hypertensive patients.
- TM enhances cardiac rehabilitation.
- TM decreases risk of atherosclerosis.
- TM improves immune function.
- TM increases vitality in HIV patients.
- Chapter on Stress, TM and Hypertension published in major medical text book.
DNA: Improved Gene Expression (Basic Research) through the Transcendental Meditation Technique

Red = Genes that were increased in expression
Blue = Genes that were decreased in expression

TM affects global gene expression in a manner that could be expected to reduce inflammation, improve the response to stress, protect from cardiovascular disease, and protect from cancer.

Transcendental Meditation and Health Education: Effects on Telomerase Gene Expression

Funded by National Institutes of Health

<table>
<thead>
<tr>
<th>Change in Mean Score</th>
<th>TM (Before)</th>
<th>TM (After)</th>
<th>Health Ed (Before)</th>
<th>Health Ed (After)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.5</td>
<td>4.5</td>
<td>3</td>
<td>6</td>
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</table>

- *p*=.055
- *P*<.01

Prevention of Left Ventricular Hypertrophy: A Randomized Controlled Trial of Transcendental Meditation and Health Education

Change in Left Ventricle Mass Index (±Standard Error of Mean) after 6-months of Transcendental Meditation or Health Education

Enhanced Cardiac Rehabilitation through TM

Reduced Risk of Atherosclerosis through the *Transcendental Meditation* Technique

TM, along with a heart-healthy Ayurvedic diet, exercise, and herbal food supplements, significantly decreases blockage to the carotid artery (carotid-IMT), a correlate of atherosclerosis in the heart and brain.

Stronger Immune System through the *Transcendental Meditation* Technique

TM increases white blood cells that defend the body from infection and cancer.

Increased Vitality in HIV Patients through the *Transcendental Meditation* Technique

The *TM* technique improves general health as well as quality of life and health issues specific to HIV.

New Chapter on Stress, Transcendental Meditation and Hypertension
Recent Research (2014-2019) on the Transcendental Meditation® Technique

**Story #1: TM Improves Gene Expression —> Health and Longevity**

**Conclusion #1.** The many documented benefits of TM for improving health and reducing biological aging may be explained on the level of DNA.

TM appears to improve the way the DNA expresses itself such that it promotes better health and longevity.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #2: TM Increases Brain Integration -> Improved Academic Outcomes

New Basic Research
• Brain Imaging study (fMRI) confirms TM is a state of restful alertness.
• Study of EEG Microstates describes the mechanics of how TM normalizes stresses in the body to create normal brain functioning—> enlightenment.
• Studies on the Brain Integration Scale of cosmic consciousness find it is associated with success in many fields.
• Longitudinal study in college students shows that TM increases scores on the Brain Integration Scale.
• The same longitudinal study in college students shows that TM decreases sleepiness.
• Longitudinal study on administrators and staff shows that TM increases scores on the Brain Integration Scale.
• Paper on cosmic consciousness is presented at a major scientific conference in New York.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #2: TM Increases Brain Integration -> Improved Academic Outcomes

New Applications
• TM improves school outcomes.
• TM reduces the number of high school dropouts.
• TM increases the percentage graduating.
• TM Increases the percentage accepted to college and post-secondary education.
fMRI Study of Restful Alertness: 
The Pattern of Brain Blood Flow During TM

Increased activity in frontal executive cortex: Alertness, inner awareness

Decreased activity in the brain stem: Restfulness-decreased respiration, heart rate, etc.

**EEG Microstates: The “Atoms” of Thought and Emotions**

*Microstate class topographies.* Equipotential area maps are shown. Head seen from above, nose up, left ear left. The isopotential contour maps show the areas of opposite polarity in black and white. Here is some of what is known about them.

Class A: relates to visualization.
Class B: relates to verbalization.
Class C: relates to interoceptive and autonomic processes.
Class D: relates to reality testing.

EEG Microstates: Comparison of Transcending and Undirected Mentation During the Transcendental Meditation Technique

What Science Tells Us About Transcending and Undirected Mentation (i.e., the rise of thoughts during the practice of TM)

<table>
<thead>
<tr>
<th>Undirected Mentation</th>
<th>Transcending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faster breathing</td>
<td>Slower breathing</td>
</tr>
<tr>
<td>Decreased EEG coherence</td>
<td>Increased EEG coherence</td>
</tr>
<tr>
<td>Increased arousal (sympathetic nervous system activity)</td>
<td>Decreased arousal (sympathetic nervous system activity)</td>
</tr>
<tr>
<td>More microstate A - visualization, thoughts</td>
<td>Less microstate A - less visualization, mental quiescence</td>
</tr>
<tr>
<td>No difference in microstate B</td>
<td>No difference in microstate B</td>
</tr>
<tr>
<td>More microstate C, thoughts from internal processes</td>
<td>Less microstate C</td>
</tr>
<tr>
<td>Less microstate D, undirected thought</td>
<td>More microstate D, executive awareness of thoughts</td>
</tr>
</tbody>
</table>

References
In the Transcendental Meditation process, the mind automatically transcends to finer levels of thought, settling the body into a unique state of restful alertness, characterized by a marked reduction of arousal and global integration of brain functioning. In this state of restful alertness, the body’s intrinsic self-repair feedback loops detect and repair imbalances, creating physiological activity that creates undirected mentation (thoughts). When the physical activity of stress normalization lightens up, the person becomes aware that he or she was off on thoughts and comes back to begin the transcending process again for another round of detecting and repairing stress in the system, “pumping” stresses out of the system.
Increased Brain Integration for Success through the Transcendental Meditation Technique

The TM and TM-Sidhi programs increase brain integration, which is the hallmark of creativity and success in many professions.

Increased Brain Integration in College Students: A Randomized Controlled Trial of the Transcendental Meditation technique

A 10-week randomized controlled trial of 38 college students found that those in the TM group increased on the Brain Integration Scale by 59%. Controls who waited until after the experiment to learn TM decreased by 38%, probably because posttest was during the highly stressful exam week.

Decreased Sleepiness in College Students: A Randomized Controlled Trial of the Transcendental Meditation technique

A 10-week randomized controlled study of 38 college students found that those in the TM group increased on the Brain Integration Scale by 59%. Controls decreased over the same period 38%, probably because posttest was during the highly stressful exam week.

Reduced Stress Reactivity in College Students: A Randomized Controlled Trial of the Transcendental Meditation technique

The same 10-week randomized controlled trial of college students that found TM increases brain integration also found that it reduces stress reactivity. The TM group decreased by 21% compared to an increase of 55% by controls, a 76% difference.

Increased Brain Integration in Administrators and Staff: A Randomized Controlled Study

Brain Integration Scale

Control  TM

p< .044

Development of Cosmic Consciousness through the *Transcendental Meditation* Technique

<table>
<thead>
<tr>
<th></th>
<th>Transcendental Consciousness</th>
<th>Cosmic Consciousness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjective</strong></td>
<td>Transcending time, space, and body sense</td>
<td>Inner self-awareness coexisting with waking, sleeping, and dreaming, greater emotional stability, 24-hour bliss, more effective activity</td>
</tr>
<tr>
<td><strong>Objective</strong></td>
<td>Slowing of the breath, heightened $\alpha_1$ (8–10 Hz) frontal EEG coherence</td>
<td>Coexistence of $\alpha_1$ EEG coherence (inner awareness) with delta EEG of deep sleep</td>
</tr>
</tbody>
</table>

Improved Academic Performance

TM practice decreased high school dropout rate by 86%, from 20.5% in non-meditators to only 2.9% in meditators.

Increased Percentage Graduating through the *Transcendental Meditation* Technique

Practice of the TM technique increased the percentage of high school students graduating, especially those with low grade point averages.

Increased Acceptance to College and Post-Secondary School through the *Transcendental Meditation* Technique

The percent of students practicing the TM technique accepted to college or post-secondary school was 59.3% compared to only 33.3% for non-meditator controls.

Recent Research (2014-2019) on the
Transcendental Meditation® Technique

Story #2: TM Increases Brain Integration -> Improved Academic Outcomes

Conclusion #2. The brain integration associated with Cosmic Consciousness has been identified, and it has been shown to be the style of brain integration that is the hallmark of the most successful people in different fields. Randomized controlled studies demonstrate that TM increases the brain integration of enlightenment, which has enormous practical benefits.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique —> Stress Reduction in Many Different Populations

New Basic Research
- Reduced major stress-hormone cortisol during waking, indicative of reduced stress.

New Applications
- Increased social-emotional competencies in sixth-grade students.
- Decreased anxiety and increased resilience in ninth-grade students.
- Increased resilience with more regular TM practice in ninth graders.
- High level of satisfaction with TM in ninth-grade students.
- Reduced teacher burnout.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique
—> Stress Reduction in Many Different Populations

More New Applications

- Decreased perceived stress and improved emotional intelligence in school administrators and staff.
- Increased self-actualization in school administrators and staff.
- Decreased mood disturbances in family caregivers.
- Decreased burnout, secondary trauma, and increased resilience in nurses.
- Reduced physician burnout.
- Decreased perceived stress and increased self-efficacy in women in Uganda.
- Increased physical and mental health in women in Uganda.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique —> Stress Reduction in Many Different Populations

More New Applications

- Effective treatment for alcohol use disorder.
- Decreased stress, craving for alcohol, and heavy drinking.
- Decreased stress in freshmen military cadets.
- Decreased depression in freshmen military cadets.
- Increased constructive thinking (greater resilience, behavioral and emotional coping) in freshmen military cadets.
- Increased situational awareness: Decreased hypervigilance, greater attentiveness to relevant stimuli, and decreased attentional processing of irrelevant stimuli.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique
—> Stress Reduction in Many Different Populations

More New Applications

- Decreased PTSD symptoms and depression in veterans published in major medical journal, The Lancet Psychiatry.
- More rapid reduction in PTSD symptoms in veterans through TM than Prolonged Exposure Therapy of Health Education.
- More rapid reduction in depression in veterans through TM than Prolonged Exposure Therapy or Health Education
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique —> Stress Reduction in Many Different Populations

More New Applications
- Greater reduction in PTSD symptoms than Adopted Mantra Meditation or Patient-Centered Care.
- Decrease in PTSD symptoms in veterans to below clinical levels in one month.
- Greater and more rapid reduction in PTSD symptoms with twice-a-day TM compared to once-a-day TM.
- Clinically significant decreases in PTSD symptoms in South-African college students in 15 days and to non-symptomatic levels on 105 days.
- Clinically significant decreases in depression in South-African college students in 15 days with continued reductions in 105 days.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique —> Stress Reduction in Many Different Populations

More New Applications
- Decreased PTSD symptoms in Congolese war refugees to non-symptomatic levels in one month.
- Clinically significant decreases in PTSD symptoms in Congolese war refugees in 10 days and to non-symptomatic levels in one month.
- Reduced use of psychotropic medication in military personnel with PTSD and anxiety disorders.
- Decreased severity of PTSD and anxiety along with decreased use of psychotropic medication in military personnel.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique —> Stress Reduction in Many Different Populations

More New Applications
- Decreased PTSD in female prison Inmates.
- Decreased Trauma symptoms in male prison inmates.
- Decreased PTSD in male prison inmates.
- Decreased stress levels after the earthquake-tsunami disaster of 2011 in Japan.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique —> Stress Reduction in Many Different Populations

More New Applications
• Meta-analysis: Greater anxiety reduction with TM® than mindfulness.
• Meta-analysis: Greater decrease in negative emotions through TM than mindfulness or other meditations.
• Meta-Analysis: Greater decrease in trait anxiety through TM than mindfulness or other meditations.
• Meta-Analysis: Greater decrease in neuroticism through TM than mindfulness or other meditations.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Story #3: TM Is the Most Effective Stress Reduction Technique —> Stress Reduction in Many Different Populations

More New Applications
• Meta-Analysis: Greater increase in self-realization through TM than mindfulness or other meditations.
• Meta-Analysis: Comparisons of TM, mindfulness, and other meditations on psychological variables
• Meta-Analysis: Comparison of mindfulness, other meditations, and TM on index of six variables.
A randomized controlled study of 27 college students found that four weeks of TM practice significantly reduced the level of the major stress hormone cortisol when waking up from a night’s sleep compared to controls, indicating reduced stress.

Increased Social-Emotional Competencies in Sixth-Grade Students: A Matched Controlled Study

Decreased Anxiety and Increased Resilience in Ninth-Grade Students through the Transcendental Meditation Technique

Increased Resilience with More Regular TM Practice in Ninth Graders

High Level of Satisfaction with TM Program in Ninth-Grade Students
(N = 112)

Reduced Teacher Burnout through the *Transcendental Meditation* Technique

**Mean Change**

- **Depression**: Reduced through the Transcendental Meditation Technique
  - **p < .01**

- **Perceived Stress**: Reduced through the Transcendental Meditation Technique
  - **p < .001**

- **Overall Teacher Burnout**: Reduced through the Transcendental Meditation Technique
  - **p < .02**

**TM decreases depression, stress, and burnout in teachers.**

Decreased Perceived Stress and Improved Emotional Intelligence in School Administrators and Staff: A Randomized Controlled Study

**Perceived Stress**

- Control: -6.00
- Transcendental Meditation: 0

**Emotional Intelligence**

- Control: -3.00
- Transcendental Meditation: 6.00

Increased Self-Actualization in School Administrators and Staff: A Randomized Controlled Study

Decreased Mood Disturbances in Family Caregivers through the *Transcendental Meditation* technique

Two months of regular practice of the Transcendental Meditation technique reduced caregivers’ anxiety by 31%, depression by 31%, anger by 36%, confusion by 19%, and fatigue by 29%.

Decreased Burnout, Secondary Trauma, and Increased Resilience in Nurses

Reduced Physician Burnout through the Transcendental Meditation Technique

TM decreases depression, stress, and burnout in physicians

Decreased Perceived Stress and Increased Self-Efficacy in Women in Uganda

A Controlled Trial

Increased Physical and Mental Health in Women in Uganda

A Controlled Trial

Summary: Reduced Stress for Different Populations

Research published in peer-reviewed journals finds that TM reduces stress in all populations studied.
Effective Treatment for Alcohol Use Disorder:
Decreased Return to Drinking and Elimination of Heavy Drinking

Twice-a-day TM reduces return to drinking and eliminates heavy drinking in patients being treated for alcohol use disorder.

Twice-a-Day TM

Reduced Days of Alcohol Use

Fewer Days of Heavy Drinking

Decreased Frequency of Craving

Reduced Craving for Alcohol

Reduced Stress

p = .003

p = .03

p = .05

p = .01

p = .02

Freshmen (Rook) Cadets at Norwich University
**Decreased Stress in Freshmen Military Cadets**

**Study 1**

- **Stress Inventory**
  - Baseline
  - 2 Months
  - 6 Months

- **TM** and **Control**

- \( p^* < .04 \)

**Study 2**

- **Stress Inventory**
  - Baseline
  - 2 Months
  - 6 Months

- **TM** and **Control**

- \( p^* < .001 \)

Decreased Depression in Freshmen Military Cadets

**Study 1**
- Beck Depression Inventory
- Baseline, 2 Months, 6 Months
- TM vs Control
- \( P^* < .008 .001 \)

**Study 2**
- Beck Depression Inventory
- Baseline, 2 Months, 6 Months
- TM vs Control
- \( P^* < .008 .001 \)

Increased Constructive Thinking (Resilience, Behavioral and Emotional Coping) in Freshmen Military Cadets

**Study 1**

Stress Inventory

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>2 Months</th>
<th>6 Months</th>
</tr>
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<tbody>
<tr>
<td>TM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
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</table>


**Study 2**

Stress Inventory

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>2 Months</th>
<th>6 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

$*P < .01$
Increased Situational Awareness: Decreased Hypervigilance, Greater Attentiveness to Relevant Stimuli, and Decreased Attentional Processing of Irrelevant Stimuli

The Effects of TM on Military Cadets: Summary

- **Greater Emotional Evenness** (Decreased Stress, Decreased Depression, Decreased Hypervigilance)

- **Increased Constructive Thinking** (Improved Emotional Coping, Improved Behavioral Coping, Increased Resilience)

- **Increased Situational Awareness** (Increased Attentiveness to Relevant Stimuli, Decreased Attentional Processing of Irrelevant Stimuli)

Reduced PTSD in Veterans

Published in The Lancet Psychiatry

Reduction in PTSD Symptoms and Depression: Comparison of Transcendental Meditation, Prolonged Exposure and Health Education

Between-Group Comparisons Adjusted by ANCOVA:
- TM vs. HE (p values < .001)
- PE vs. HE (p values < .05)
- TM vs. PE (p values < .001, non-inferiority comparisons)

More Clinically Meaningful Improvements through TM

Percentages with Clinically Meaningful Improvement:
Transcendental Meditation, Prolonged Exposure and Health Education

<table>
<thead>
<tr>
<th>Metric</th>
<th>Transcendental Meditation</th>
<th>Prolonged Exposure</th>
<th>Health Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPS Interview PTSD</td>
<td>70</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>PCL-M Self-Report PTSD</td>
<td>60</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>PHQ-9 Depression</td>
<td>60</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

Significant Results:
- TM vs. HE for CAPS, PCL-M, PHQ-9 (all p values < .001)
- PE vs. HE for PCL-M (p < .03); CAPS (p = .30, ns); PHQ (p = .12, ns)
- TM vs. PE (non-inferiority analysis not compatible with data)

More Clinically Meaningful Improvements through TM

More Rapid Reduction in PTSD Symptoms in Veterans through TM

![Graph showing the comparison between Health Education, Prolonged Exposure Therapy, and Transcendental Meditation in reducing PTSD symptoms over weeks.]

Note: PCL-M mean change scores from baseline for weeks 4, 6, 8, 10, and 13 (3-month posttest): TM: -9.23, -13.34, -14.43, -15.40, -13.44, respectively; PE: -2.08, -4.38, -8.89, -11.74, -10.28; and HE: -5.34, -6.66, -5.78, -7.10, -3.90. Attendance at interim posttest visits was 84%, 75%, 64% and 45% at the 4-week, 6-week, 8-week and 10-week interim visits, respectively with 81% completing the final 3-month posttest (TM: 78%, PE: 84% and HE: 85%). TM = Transcendental Meditation. PE = Prolonged Exposure. HE = PTSD Health Education

More Rapid Reduction in Depression in Veterans through TM

Conducted at the Department of Veterans Affairs San Diego Healthcare System

- Health Education
- Prolonged Exposure Therapy
- Transcendental Meditation

**Note:** PCL-M mean change scores from baseline for weeks 4, 6, 8, 10 and 13 (3-month posttest): TM: -9.23, -13.34, -14.43, -15.40, -13.44, respectively; PE: -2.08, -4.38, -8.89, -11.74, -10.28; and HE: 5.34, -6.66, -5.78, -7.10, -3.90. Attendance at interim posttest visits was 84%, 75%, 64% and 45% at the 4-week, 6-week, 8-week and 10-week interim visits, respectively with 81% completing the final 3-month posttest (TM: 78%, PE: 84% and HE: 85%). TM=Transcendental Meditation. PE=Prolonged Exposure. HE=PTSD Health Education

Decreased PTSD Symptoms in Veterans, Saginaw Michigan VA Randomized Controlled Trial

Effect Size (Hedge's g, ± SE)
-1.4
-1.05
-0.7
-0.35
0

- Effect Size (Hedge's g, ± SE)
-1.4
-1.05
-0.7
-0.35
0

• Adopted Mantra Meditation
• Patient-Centered Therapy

*p < .001, Test of group with differences collapsed across time.

Decreased PTSD Symptoms In Veterans After 30 Days and 90 Days Through the Transcendental Meditation Technique

Greater Reduction in PTSD Symptoms with More Regular TM Practice

**Figure 2.** Dose-Response Effect: PCL-5 Averages of Full-Dose and Half-Dose Groups.

Decreased PTSD Symptoms in South-African College Students

Decreased Depression in South-African College Students

Decreased PTSD Symptoms in Congolese War Refugees through the Transcendental Meditation Technique

The TM technique reduced PTSD symptoms in war refugees.
Rapid Reduction in PTSD Symptoms in Congolese War Refugees through the *Transcendental Meditation* Technique

TM reduces PTSD symptoms within 10 days, and after 30 days they decline to non-symptomatic levels.

Reduced Use of Psychotropic Medication in Military Personnel with PTSD and Anxiety Disorders

Through the Transcendental Meditation technique

Decreased Severity of PTSD and Anxiety along with Decreased Use of Psychotropic Medication

*Through the Transcendental Meditation technique*

Decreased Trauma Symptoms in Male Prison Inmates

Randomized Controlled Trial

Decreased PTSD in Female Prison Inmates

Randomized Controlled Trial

Decreased PTSD in Male Prison Inmates

*Randomized Controlled Trial*

**Trauma Symptom Checklist**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Controls</th>
<th>Transcendental Meditation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissociation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep Problems</td>
<td></td>
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</tr>
</tbody>
</table>

TM Decreased Stress Levels After the Earthquake–Tsunami Disaster in Japan.

The chart shows stress levels decreased from before and to after learning TM in two cities affected by the 2011 Japanese earthquake-tsunami disaster (Sendai and Ishinomaki). TM also decreased stress in people living in Tokyo, which was not affected by the earthquake-tsunami. No change in controls subjects who did not learn TM.

Meta-Analysis: Greater Anxiety Reduction with TM® than Mindfulness

Meta-Analysis: Greater Decrease in Negative Emotions Through TM Than Mindfulness or Other Meditations

Meta-Analysis: Greater Decrease in Trait Anxiety Through TM Than Mindfulness or Other Meditations

Meta-Analysis: Greater Decrease in Neuroticism Through TM Than Mindfulness or Other Meditations

Meta-Analysis: Greater Increase in Self-Realization Through TM Than Mindfulness or Other Meditations

Effect Size (d, standard deviations)

- 0.00
- 0.23
- 0.45
- 0.68
- 0.90

Self-Realization

- Self-Realization
- TM
- Mindfulness
- Other Med

Large Effect

Meta-analysis:
- 18 studies
- 772 subjects

Meta-Analysis: Comparisons of TM, Mindfulness, and Other Meditations on Psychological Variables

Meta-Analysis: Comparison of Mindfulness, Other Meditations, and TM on Index of Six Variables (Trait Anxiety, Negative Emotions, Neuroticism, Self-Realization, Perception, Self-Concept)

** Comparison of TM with the other two types of meditation.

Recent Research (2014-2019) on the Transcendental Meditation® Technique
Four Stories

Story #3: TM Is the Most Effective Stress Reduction Technique —> Universal Stress Reduction

Conclusion #3. TM has repeatedly been demonstrated by meta-analyses to be the most effective means of stress reduction. It has been shown to be highly effective in many populations for reducing PTSD, anxiety, depression, and use of psychotropic drugs and alcohol.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Four Stories

Story #4: Authentic Vedic Knowledge —> Improved National Consciousness

New Knowledge

- New Translation and commentary of Vedic Text “Yogic Flying According to Yoga Vasishtha”, documenting the authenticity of Maharishi’s programs for higher states of consciousness and the use of group Yogic Flying to create an ideal society.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Four Stories

Story #4: Authentic Vedic Knowledge —> Improved National Consciousness

New Applications
The Invincible America Assembly of group 1,725 Yogic Flyers improved the US quality of life as indicated by:

• Decreased U.S. homicide rate;
• Decreased U.S. urban violent crime rate;
• Decreased U.S. murder rate;
• Decreased U.S. motor vehicle fatality rate;
• Decreased U.S. fatality rate due to other types of accidents;
• Decreased U.S. infant mortality rate; and
• Decreased U.S. rate of drug-related deaths.
Recent Research (2014-2019) on the Transcendental Meditation® Technique

Four Stories

Story #4: Authentic Maharishi Vedic Knowledge —> Improved National Consciousness

New Applications

• Increased the competitive advantage of Norway and New Zealand compared to other nations when they gained 1% of their population practicing the Transcendental Meditation technique.
• Group practice of TM and TM-Sidhi program at Maharishi Vedic University (MVU) in Cambodia reduced socio-political violence in the country.
• In a new area of research, a study found that a building built according the principles of Maharishi Vedic architecture (Vastu), increased both verbal and spatial creativity in people working in the building.

A translation of seven chapters from Yoga Vasishtha, with commentary written in light of the teaching of the Transcendental Meditation technique, TM-Sidhi program, and Yogic Flying around the world by Maharishi Mahesh Yogi.
Verse 49:

The glorious Rām said:

Since ancient times the knowledge of all the higher states of consciousness has been there in every generation:

The knowledge of enlightenment in terms of the [realization of the] Constitution of the Universe in human physiology [through Yogic Flying] certainly came from that [same] eternal tradition of knowledge. With what purpose was the knowledge of Yogic Flying brought forth in the world? (Freund, P.)
Reduced U.S. Homicide Rate

- U.S. Homicides per 100 million
- \( p = 2.7 \times 10^{-16} \)
- 21.2% reduction
- 8,157 fatalities averted

Homicide Baseline and Experimental Period Trends

U.S. Homicide Rate: Predictions of Statistical Model vs. Actual Data

Correlation: 0.936
Squared correlation: $R^2 = 0.876$

Decreased Violent Crime Rate in 206 Urban Areas

$p = 2.7 \times 10^{-8}$

18.5% reduction

186,774 crimes averted

Urban Violent Crime Baseline and Experimental Period Trends

Decreased Murder Rate in 206 U.S. Urban Areas

$p = 1 \times 10^{-13}$
28.4 % reduction
4,136 fatalities averted

Urban Murder Rate and Forecast 2007-2010

Decreased U.S. Motor Vehicle Fatality Rate

$p < 3.7 \times 10^{-13}$
20.6 % reduction
19,435 fatalities averted

Decreased U.S. Fatality Rate – Other Accidents

Fatality Rates from Other Accidents

$p < 8.4 \times 10^{-6}$
13.5% reduction
16,759 fatalities averted

 Fatalities Due to Accidents Other Than Motor Vehicles Baseline and Experimental Period Trends


<table>
<thead>
<tr>
<th>Trend Slopes</th>
<th>Baseline</th>
<th>Experiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly change in ACCFR</td>
<td>0.08</td>
<td>0.04</td>
</tr>
</tbody>
</table>

b. Change in Trend

<table>
<thead>
<tr>
<th>ACCF/million population</th>
<th>Baseline</th>
<th>Experiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>p = 8.4 x 10^-6</td>
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Decreased U.S. Infant Mortality Rate

\[ p = 2.1 \times 10^{-5} \]

12.5% reduction
992 fatalities averted

Decreased U.S. Drug-Related Fatality Rate

\[ p = 3.1 \times 10^{-10} \]

30.4% reduction
26,425 fatalities averted

Summary: Effects of the Invincible America Assembly on U.S. Crime and Fatality Rates

- Decreased Homicide Rate
- Decreased Motor Vehicle Fatality Rate
- Decreased Drug-Related Death Rate
- Decreased Fatality Rate for Other Accidents
- Decreased Violent Crime Rate
- Decreased Infant Mortality Rate
Summary:
Effects of the Invincible America Assembly on the United States
Percent Change in Crime and Fatality Rates 2007-2010

Increased Competitive Advantage in Countries After they Reached 1% of the Population Practicing TM

Group Practice of the Transcendental Meditation and TM-Sidhi Reduced Socio-Political Violence in Cambodia

Increased Originality of Verbal and Figural Creative Thinking in People Working in a Maharishi Vedic Architecture (MVA) Settings

People working in a building built according the principles of Maharishi Vedic architecture (MVA) increased in both verbal and spatial creativity compared to people working in conventional architecture.

Recent Research (2014-2019) on the Transcendental Meditation® Technique

Four Stories

Story #4: Authentic Vedic Knowledge → Improved National Consciousness

**Conclusion.** Maharishi’s programs to create coherence in collective consciousness are based on the ancient Vedic tradition and have been repeatedly verified to improve quality of life in cities, nations, and the world, in prospective empirical demonstrations.

- Over 675 Studies
- Conducted at over 250 Universities and Research Institutions
- In 30 Countries
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