Summary of Scientific Research on the Transcendental Meditation and TM-Sidhi Programs

For students practicing the Transcendental Meditation technique

Developing intelligence and brain functioning; health, well-being, and energy; happiness and confidence; and a more peaceful society

Selected from more than 600 research studies
The basic potential of life is huge beyond any sensory perception, huge beyond any mind, huge beyond any intellect. The full potential of life is in the field of one’s own Transcendental Consciousness. Ignorance about this field makes one remain limited to small, small doings. That will never satisfy anyone. The most complete satisfaction in life comes from knowing and living one’s unbounded potential. This knowledge is needed, and education should provide it.” —Maharishi
Summary of Scientific Research on the Transcendental Meditation and TM-Sidhi programs

For students practicing the Transcendental Meditation technique

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OVERVIEW OF THIS BOOKLET

All over the world people experience that regular practice of the Transcendental Meditation technique, as taught by Maharishi Mahesh Yogi, brings many benefits to their lives.

Students experience that they learn more easily, do better academically, feel more relaxed and confident, and feel happier within themselves and with their friends.

Teachers see their students improving in their subjects, becoming more creative and alert in class, kinder to other students, and less easily upset. Parents notice their sons and daughters becoming more positive, more calm and helpful, and more focused on their schoolwork.

School principals report a more settled, harmonious school atmosphere, with fewer disruptions, and students less absent from school.

For the past 40 years, scientists have been researching the benefits of the regular practice of the Transcendental Meditation technique, and its advanced practice, the Transcendental Meditation Sidhi Program, for individuals and society. More than 600 scientific research studies, conducted at over 250 universities and research institutes in 33 countries, validate the wide-ranging benefits of this technology of consciousness. These studies have been gathered from the scientific journals into seven volumes of over 5,000 pages.

The research shows improvements in mental abilities, brain development, health and health habits, personality, and relationships. It also shows an important benefit that helps make our communities, country, and world more peaceful and harmonious: When the Transcendental Meditation and TM-Sidhi programs are practiced by large groups of individuals together they create a strong and measurable influence of positivity in their environment; and if the groups are large enough, in the nation and world.
How does this one technology of consciousness produce such a wide range of benefits? We can understand it by the phrase “Water the root to enjoy the fruit.”

To make sure that all parts of the tree grow and thrive—the trunk, branches, leaves, blossoms, and fruit—the root of the tree has to be watered. Through the one act of watering the root, the whole tree is nourished.

Similarly, we nourish the field of our full creative potential, the basis of all aspects of our life, through the Transcendental Meditation program. We nourish this basic field simply by directly experiencing it; by experiencing it, we enliven it more and more, so that our full potential is increasingly expressed and lived in daily life.

Through this simple practice we “wake up” the field of our full creativity, intelligence, and inner happiness; and automatically start to live more of our own potential greatness.

Part I of this booklet discusses (1) what the Transcendental Meditation technique is, and how the body and mind develop when we practice it; (2) how the advanced TM-Sidhi program develops the habit of thinking and acting from the field of our full potential; and (3) how group practice of both these techniques benefits the environment.

Part II of this booklet lists and illustrates scientific research findings on these programs, showing benefits for many areas of life, with a special section describing research on students practicing the technique.

At the end of the booklet is the list of the scientific journals where the findings described in this booklet have been published.

Note: The groups of students in the photographs all practice the Transcendental Meditation technique.
1. The Transcendental Meditation Program

- **What is the Transcendental Meditation technique?**

The Transcendental Meditation technique is a simple, natural, effortless program, practiced twice a day, to systematically unfold one’s great inner potential.

Through this technique our mind naturally settles down to experience quieter and quieter levels, until we go beyond—transcend—our thoughts, and experience the basis of thought, the most silent, peaceful, expanded state of our awareness. This is the field of our total creative potential—our essential self—called Transcendental Consciousness.
The Transcendental Meditation program, introduced by Maharishi over 50 years ago, has been learned by over five million people worldwide of all cultures, religions, and educational backgrounds. Students learn the technique starting at the age of 10 years old. More than 200,000 students in over 700 schools worldwide are practicing this technique as part of their school routine (see inside back cover).

- The Transcendental Meditation technique produces a unique state of mind and body—deep rest with inner wakefulness.

During the practice, as the mind settles down, the body becomes deeply relaxed; stress that has built up during the day or during our life naturally begins to dissolve with this unique quality of rest. People experience quiet and calm when they meditate. As a result, when they come out into activity, they feel refreshed and clear-minded.

Scientific research shows that many changes occur in our bodies—in the blood, in breathing, in the brain—when we are experiencing this deep rest. For example, the chemical called cortisol, which increases in the bloodstream when people are under stress, is greatly reduced when people practice Transcendental Meditation (see Chart 1, next page).
Biochemistry of Deep Rest: Decreased Plasma Cortisol

DURING TRANSCENDENTAL MEDITATION

![Bar chart showing change in plasma cortisol from before to during practice](chart)

**CHART 1.** This study found that those who practice the Transcendental Meditation technique showed a significant decrease in levels of cortisol (a chemical associated with stress) in the blood during the technique, in contrast to a control group. Plasma is the liquid component of blood. (108)

**TWO POINTS ABOUT THE SCIENTIFIC CHARTS IN THIS BOOKLET**

1. The word “controls,” and “control group” in the captions of the scientific charts in this booklet refer to a group of people, similar in age and other characteristics, who did not learn the Transcendental Meditation technique, who were given the same tests and measured for the same changes as the group who learned the technique. A control group is necessary to see what effects are due specifically to the Transcendental Meditation program and not to other factors.

2. The numbers in parentheses that you see both at the end of the captions under the scientific charts (e.g., (108) above), and next to the research findings that are listed in Part II, are the reference numbers of the original research papers from which the finding is taken. The journals in which these papers are published are all listed in the reference section at the end of this booklet (starting on p. 50).
Another research study measuring the deep rest during Transcendental Meditation practice found significant changes in respiration rate (how fast or how slow one breathes) when people meditate (see Chart 2).

Respiration rate reduces significantly during the practice of the technique, showing that the body is so relaxed and quiet that it doesn’t need to take in as much air as usual. In fact, research has shown that during practice of the technique, breathing becomes so quiet, so refined, that some of the standard instruments used to measure the breath rate aren’t sensitive enough to measure it. This state of deep relaxation is very healthy for body and mind.

CHART 2. Individuals who practice the Transcendental Meditation technique showed a natural decline in respiration rate during the practice, indicating a state of deep rest, in contrast to two control groups. (One control group was resting with their eyes closed; the other group was practicing a form of relaxation training.) (34)

When people practice the Transcendental Meditation technique, they feel not only deeply relaxed, but also alert and awake inside. The combination of deep relaxation of the body together with inner wakefulness of the mind is a unique state of body and mind, a state of “restful alertness,” which can be measured objectively.
Transcendental Consciousness is the Fourth State of Consciousness.

Physiologists and neuroscientists identify this unique state of restful alertness, produced by the Transcendental Meditation technique, as a fourth state of consciousness.

We are all familiar with three states of consciousness: waking, dreaming, and sleeping. In each state of consciousness, our mind and body function in distinct ways.

During each of these states of consciousness, which we experience every 24 hours, our experience of the world is different. When we are awake we see, hear, smell, touch, taste, and think about the things in our surroundings. When we are asleep we are not aware of anything in our environment. The world seems to disappear.

When we are dreaming our world is different from waking and deep sleep; it is transformed into the fantastic and unreal—we're flying through the air, running through unknown cities, taking tests on subjects we've never studied. Every day and every night our world changes as we move from waking to sleeping to dreaming.

When we practice the Transcendental Meditation and TM-Sidhi programs, we experience a fourth state of consciousness—Transcendental Consciousness—and our experience changes again. As shown by research on the brain and on the functioning of the physiology, this state of restful alertness is unique: Our consciousness is both very quiet and highly alert at the same time. In this way Transcendental Consciousness is distinct from the other three states of consciousness; it is the fourth state of consciousness.
In the restfully alert state of Transcendental Consciousness, the mind has settled down to such a level of quiet that one is fully awake without thought, experiencing the silent, peaceful, wide awake field of awareness at the basis of thought—the field of one’s total intelligence.

- **Practicing the Transcendental Meditation technique is like pulling an arrow back on the bow**

The Transcendental Meditation technique can be compared to pulling an arrow back on the bow. When an arrow is pulled back on the bow, it is completely still, but has maximum possible potential—poised and ready to fly forward with great power, dynamism, and accuracy.

Similarly, our meditation is a preparation for our most creative and dynamic activity: When we meditate our awareness naturally takes an inward direction, toward the silent and alert field of our own total creative potential, Transcendental Consciousness.

Then, with this preparation, we increasingly come out of meditation thinking and acting with greater calm and confidence, prepared to do our best at school, at home, in sports or other activities—with a sharp mind, creative ideas, and a naturally positive attitude.

As we use more and more of our creativity and intelligence, we notice we are able to make better choices, enjoy our family and friends more, get along with others more easily, and feel more accepting of other people, even people who are very different from us. We are increasingly able to set big goals and achieve them, and to act in a way that is not only good for ourselves, but also good for everyone around us.
• Developing total brain functioning through the experience of Transcendental Consciousness

Our brains are made of 100 billion brain cells. All of these brain cells are like tiny batteries—they hold and conduct electric charge in order to transmit signals throughout the brain and nervous system. This transmission of electrical signals causes electrical waves on the surface of the brain cells, which are like ripples on the surface of a pond. These waves of electrical activity are called “brain waves.”

*In each of the four different states of consciousness, the brain waves are distinct.* These distinct patterns are measured by a machine called the electroencephalograph—“EEG” for short.

The sleep, dream, and waking states of consciousness, and Transcendental Consciousness each have distinct types of brain wave activity. In Transcendental Consciousness brain wave activity is more coherent and integrated than during waking, dreaming, or sleeping; and this coherence is found extending throughout the whole brain (*Chart 3*, p. 14).

• Transcendental Consciousness activates more of the brain.

During our usual daily activity, the different experiences we have activate specific areas of our brain, but they don’t activate the whole brain at once. For example, when we are looking at a photograph, the areas of the brain responsible for vision are activated (occipital lobe). When we are playing sports the areas of the brain that govern motor functioning are activated.

When we are studying different subjects—mathematics or art or literature—very specific areas of the brain are activated.

*Until now education has had no reliable method for activating the functioning of the total brain.*

Research on people practicing the Transcendental Meditation technique shows that the expe-
The advantage of more coherent, integrated brain functioning is that mind and body interact more efficiently and powerfully, as shown by the many benefits associated with high EEG coherence (Charts 4 and 5).

The more one practices the technique, the more integrated and coherent brain functioning becomes. For example, research has found that university students who learned the Transcendental Meditation technique continued to improve on a “Brain Integration Scale” when they were measured during reaction-time tests, in contrast to students who were
assigned to wait before starting the technique (Chart 4).

**CHART 4.** University students who learned the Transcendental Meditation technique showed significant improvement over a 10-week period on a Brain Integration Scale, in comparison to a control group of students. This scale measures the quality of brain functioning while the students are performing a task, including the level of brain coherence (orderliness) and the efficiency of the brain’s responses. Brain functioning is measured using the electroencephalogram (EEG), which records the electrical activity of the brain, measured by electrodes placed on the scalp. (111)

As we use more of more of the brain’s potential in daily life, we think more intelligently and creatively. We start to feel more “at home” with all the subjects we study and master them more easily; we understand people and ideas better; we more quickly grasp an entire situation and make wiser judgments.

Scientific research has verified that higher levels of brain wave coherence—more integrated brain functioning—as indicated by EEG measurements, are associated with such benefits for mind, body, and behavior (Chart 5, next page).
Integration of Brain Functioning
THROUGH TRANSCENDENTAL MEDITATION

Creativity
r = .71

Concept Learning
r = .50

Neurological Efficiency
r = .60

Transcendental Consciousness
r = .43

Academic Performance
r = .31

EEG Coherence
R = .63

Moral Reasoning, IQ, Emotional Stability

CHART 5. High levels of EEG coherence (high integration of brain functioning) measured during practice of the Transcendental Meditation technique are correlated with (found together with) higher creativity, greater efficiency in learning, higher levels of moral reasoning, higher verbal intelligence (IQ), greater emotional stability, higher academic achievement, clearer experiences of Transcendental Consciousness, and more efficient functioning of the nervous system. (32) (19)

2. Transcendental Consciousness as the Unified Field of All the Laws of Nature

For generations scientists have probed into the functioning of the universe in order to understand the laws of nature responsible for the orderly functioning of the universe—from the growth of a plant, to the cycles of the seasons, to the movement of the planets.

In their search for a complete understanding of the laws of nature, scientists uncovered fundamental “building blocks” of the universe, including atoms and molecules. They also recognized that life is organized in layers, and that the inner, unseen layers of life are more powerful than the outer obvious ones.

Over the last 50 years physicists have discovered increasingly powerful
laws of nature that explain the universe and how it functions. They have found that all the activity in the universe emerges from just four fundamental forces—gravity, electromagnetism, and two forces within the nucleus of the atom.

As this exploration continued, it led to a mathematical understanding of one unified field, the most powerful level of nature’s functioning, from which all the laws of nature arise (Chart 6, left side).

**CHART 6.** Modern physics has described all activity in the universe as emerging from four fundamental forces of nature, and that these forces have their basis in one single unified field. Theoretical physicists who are also familiar with the science of consciousness propose that the unified field, described mathematically in unified field theories, can be experienced as Transcendental Consciousness through the Transcendental Meditation technique.

By examining how modern science describes the unified field, and how the science of consciousness describes Transcendental Consciousness, scientists who are experts in both areas of knowledge have proposed that the unified field of all the laws of nature can be directly experienced as Transcendental Consciousness through the technique of Transcendental Meditation, with the result that the characteristics of this field—for example, order, creativity, and self-sufficiency—grow in daily life.
• Characteristics of the unified field of all the laws of nature:

The unified field is the unseen source of all order in nature. Even though it cannot be seen, the unified field is the source of the perfectly orderly functioning of the laws of nature throughout the universe.

The unified field is a field of unlimited creative potential, giving rise to the innumerable laws of nature that organize and govern the functioning of natural law at every level of the universe—from the sub-atomic particle to the vast, spinning galaxies.

The unified field is self-referral. Self-referral means that it doesn’t need anything outside of itself to create; it gives rise to all the laws of nature from its self-interaction.

The unified field is the non-changing source of the ever-changing expressions of creativity and intelligence in the universe. The unified field of all the laws of nature is a field that never changes, while giving rise to everything else in the universe, which is constantly changing—some things like mountains changing very slowly, other things quickly.

All these characteristics of the unified field are the characteristics of our own Transcendental Consciousness.

This is an important point about the discovery of the unified field in relation to human life: in the view of scientists who are experts in both unified field theories and the science of consciousness, human beings can
experience this field in their own consciousness, as Transcendental Consciousness, through the technologies of consciousness, the Transcendental Meditation and TM-Sidhi programs.

Transcendental Consciousness can thus be understood as the experience of the unlimited field of creativity and intelligence at the basis not only of our self, but also at the basis of everyone and everything—the unified field of all the laws of nature (see both sides of Chart 6, p. 17).

3. The Transcendental Meditation Sidhi Program

After a few months of practicing the Transcendental Meditation technique, students can learn an advanced program called the Transcendental Meditation Sidhi Program, or TM-Sidhi program.

As we have discussed, the practice of the Transcendental Meditation technique gives the experience of Transcendental Consciousness, the field of our full creative potential. The TM-Sidhi program, develops the ability to think and act from Transcendental Consciousness, the most silent and unbounded level of our awareness, and in this way stabilizes the experience of Transcendental Consciousness for increasingly effective and dynamic thought and action.

One part of the TM-Sidhi program is called “Yogic Flying,” during which one feels full of energy, springing forward in short hops. This part of the TM-Sidhi program has an especially positive effect on mind-body coordination. It integrates inner silence of the mind with dynamic activity of the body, resulting in very high levels of coherent brain functioning (see Chart 7, next page).
The purpose of the TM-Sidhi program is to fully stabilize the experience of Transcendental Consciousness, so that throughout daily activity, the peace and broad comprehension of Transcendental Consciousness are always maintained no matter what we are doing.

**CHART 7.** During the TM-Sidhi Yogic Flying technique, high levels of EEG coherence of brain functioning have been recorded. At the point that one lifts up in hops, EEG coherence is maximum (113). As shown in Chart 5 on page 16, high levels of EEG coherence in the brain are associated with more effective functioning of mind and body. (32) (19)

4. **Groups of students creating a positive influence for the whole school, community, nation, and world**

When students of a school practice the Transcendental Meditation and TM-Sidhi programs in a group, they feel bliss, energy, and positivity even more. The whole school atmosphere becomes more ideal—calmer, happier, more focused, peaceful, and progressive, with students enjoying their classes, supporting each other, and appreciating their teachers.

This effect of growing harmony and positivity in the entire educational institution has been found worldwide—wherever all students in a school practice the technology of consciousness together twice daily: in North America, South America, Europe, the Middle East, Africa, Asia, and Australia (see inside back cover, p. 55).

One of the newly arrived teachers in a Consciousness-BasedSM school (where all students and teachers practice the Transcendental Meditation
program) said this: “I walked into a school assembly, it was an awards assembly, and I looked around at the student body. Usually when you teach, as the students get older, they seem to get less interested in education. But here every student was beautiful; they seemed to be so enthusiastic, so friendly, and friendly to the teachers. There didn’t seem to be that separation between the teachers and the students.”

• Large groups of TM-Sidhi participants benefit the nation

Large groups of students practicing the TM-Sidhi program together benefit not only the school, but also the surroundings.

Research has shown that if the group of individuals practicing this technology is large enough, the influence of positivity and coherence spreads to the whole community and beyond.

Fifty scientific research studies have shown that when 1% of a population practices the Transcendental Meditation program, or when a group numbering the square root of 1% of the population of a country practices this technique and the TM-Sidhi program together in one place, negative trends in society decrease, such as crime, accidents, and social conflicts; and positive trends in society increase, such as improvement in quality of life.

This is called the “Maharishi Effect” in the scientific papers, named after Maharishi, who predicted it many decades ago. These scientists explain this as a “field effect” in society, in which an influence generated from one place spreads at a distance. This effect is explained as the result of a group of TM-Sidhi participants enlivening the unified field of all the laws of nature, the field of Transcendental Consciousness.
Research has found that to create this effect for the whole society, the size of the group practicing the TM–Sidhi program together must be at least the square root of one percent of the population.

For example, a country of 16 million people requires a group of at least 400 TM-Sidhi participants practicing together twice daily. A country of 36 million requires at least 600 participants. This group could be formed by the students of a large school or university, which then can become a source of harmony for the whole society.

With the growth of cohesiveness in national consciousness in a country, the nation becomes increasingly integrated, with all the different areas of society supporting each other, progressing together. This harmony in society gives internal strength to the nation, making the nation more naturally resistant to any negative influences that may arise from inside or outside the country, more invincible. Such a society automatically has a positive effect on the surrounding countries.

Many decades of research on coherence-creating groups practicing the
technology of consciousness indicate that these groups can measurably raise the quality of national life at all levels of society—a city, nation, and the world, depending on the size of the group.

Research confirms that this effect was achieved at the global level during three periods of time when large assemblies of TM-Sidhi participants gathered together for several weeks. These groups created a significant influence of positivity in the world, as indicated by reduced international conflict. (Chart 8.)

![Global Maharishi Effect: Reduced International Conflict](chart8)

**CHART 8.** In the winter of 1983–84, a group of 7,000 TM-Sidhi participants (approximately the square root of one percent of the world’s population at that time) assembled in Fairfield, Iowa, USA, to create an influence of coherence and harmony in world consciousness. Two other large assemblies were held in the following two years—in The Netherlands and in Washington, DC. During each of these three assemblies there was a significant decrease in international conflict worldwide. (114)

In schools and universities in India, South America, and North America, thousands of students are practicing the TM-Sidhi program, to create an influence of peace and stability in their countries (see inside back cover for a list of countries).
5. Rising to Higher States of Consciousness—Life in Enlightenment

With regular practice of the Transcendental Meditation and TM-Sidhi programs, stresses that have prevented people from living their unbounded potential begin to be dissolved; and Transcendental Consciousness, the fourth state of consciousness, the wide-awake state of restful alertness, begins to be maintained outside of meditation, no matter what one is doing—during activity, dreaming, or deep sleep.

Research confirms that when people experience Transcendental Consciousness during waking or sleeping, their brain functions in a unique and beneficial way (Chart 9).

CHART 9. A characteristic of the growth of higher states of consciousness is the experience that Transcendental Consciousness is maintained at all times. In this study, EEG coherence in the front of the brain (which governs decision-making) was higher during a task requiring rapid choices among those who had learned the Transcendental Meditation technique (middle bar), in comparison to non-meditating controls; and was higher still among individuals practicing this technique who reported the experience of stabilized Transcendental Consciousness throughout waking and sleeping. (112)
When a person's mind and body are completely stress-free, then Transcendental Consciousness—the blissful, peaceful, completely wakeful state of one's full potential—is experienced all the time.

This is the fifth state of consciousness, traditionally called “Cosmic Consciousness” because awareness is all-inclusive, fully wakeful—cosmic. In this state people are aware not only of what they are doing right now, but at the same time they have an unbounded understanding of life. This is the state of enlightenment, in which their understanding is all-comprehensive, even while they are focusing on everything they have to do. To contrast this state with regular waking state, we could say it is like reading in a fully lit room, in contrast to reading in the dark with a flashlight.

With the rise of enlightenment, people experience life in a new way: When Transcendental Consciousness is experienced for all 24 hours of the day, they experience all-time inner peace, contentment, and bliss, which naturally flows out to others in love, kindness, and appreciation; and into thinking and action that is most beneficial for everyone.

When one is permanently functioning from the level of Transcendental Consciousness, then the brain is always functioning in an integrated way (see Chart 9, previous page); one is thinking with full alertness intelligence, and creativity, with the result that choices, decisions, and actions are most useful for oneself and the environment.

With this type of thinking, speech, and action enlightened people gain support from everywhere to help them achieve their goals without struggling. This support for their success is often experienced as “good luck”—being at the right place at the right time with the right thought.
In the state of enlightenment communication flows without distortion, without friction, always with the desired effect, always helpful to those one is communicating with. Because enlightened people are completely fulfilled inside, their motivation for speech and action is always to give; and their 360-degree wide-awake awareness assures that they give what is most needed at the time.

“\textit{W}hen the study of Transcendental Meditation is introduced along with the study of any discipline, then while the \textit{knowledge} is being gained, the \textit{knower} is becoming more and more wide awake within himself. This results in the students owning the knowledge; knowledge becomes a part of their life—it doesn’t remain outside. Then every wave of knowledge is a wave of happiness, a wave of fulfillment.”

—Maharishi
More than 600 scientific research findings, conducted at 250 universities and research institutes in 33 countries, validate the holistic development resulting from regular practice of the Transcendental Meditation and TM-Sidhi programs.

1. Benefits for the Individual

• Development of the Mind
When students regularly practice the Transcendental Meditation technique, they find they begin to learn more easily, think more clearly and creatively, sit and focus on their school work more calmly and enjoyably, and solve problems with less effort.

As one secondary student wrote, “I do more and more things that I never thought I could do. I’m realizing that I can do so much.”

Students find that their grades improve; they can apply what they learn more easily, understand complicated information and instructions more quickly, and focus on the details of a situation or idea without losing sight of the “big picture.”
Researchers have found a very interesting result with the Transcendental Meditation practice and growth of intelligence. A person’s IQ, (“intelligence quotient”—the standard measure of intelligence) was previously thought to stop increasing by the end of teenage years. But now scientific research has shown that through regular practice of the Transcendental Meditation technique, IQ continues to grow into adulthood (Chart 10).

**Chart 10.** University students who practiced the Transcendental Meditation and TM-Sidhi programs increased significantly in intelligence in contrast to control students. This is a very interesting finding, since intelligence previously had been found to stop increasing by the end of secondary school. (7)

Scientific research findings on the Transcendental Meditation program related to development of the mind include the following:

- Increased Intelligence (1–7, 101, 102)
- Increased Learning Ability (8, 9)
- Improved Memory (9, 10)
- Higher Level of Cognitive (thinking) Abilities in Children (11, 12, 13)
- Improved Accuracy of Thinking and Perception (9, 10)
- Increased Ability to Learn (8)
• Faster Processing of Complex Information (14)
• More Positive Perception of Others and the Environment (16)
• Improved Problem-Solving Ability (2)
• Improved Academic Performance at All Levels of Education (17–20)
• Enhanced Creativity (2, 5, 21)
• Increased Originality (2)
• Broader Comprehension with Improved Ability To Focus Attention (called “Field Independence”) (4, 13, 15)

Students in Consciousness-Based schools in Uganda and USA

• Greater Use of the Total Brain

Our thinking becomes clearer and more effective through the Transcendental Meditation and TM-Sidhi programs because these techniques enliven more of our total brain potential.

Usually our attention is focused on one specific thing at a time, whether it is something we are looking at, thinking about, studying, or feeling. This results in specific, isolated areas of the brain being activated, but not the whole brain.

In contrast, during the practice of the technology of consciousness, our consciousness becomes unbounded, fully aware, without being limited to one point of focus. Research indicates that the experience of Transcendental Consciousness is unique in activating the brain in a holistic way—that is, activating the functioning of the total brain.
Scientific research findings on the Transcendental Meditation program related to greater use of total brain functioning include the following:

• More Efficient Brain Functioning (14, 23–28)
• Increased Blood Flow to the Brain during Transcendental Meditation (indicating greater enlivening of the brain) (103) (Chart 12, p. 31)
• Greater Use of the Brain’s Unused Reserves (22)
• Increased Coherence (orderliness) of Brain Functioning (104, 105)
• Increased Brain Integration (111) (Chart 4, p. 15)
• Greater Activation of Both Brain Hemispheres (31) (Chart 11, below)

**CHART 11.** Participants in the Transcendental Meditation program, in comparison to controls, showed greater activation of the left hemisphere (left side) of the brain, which is responsible for analytic functioning (e.g., solving mathematics problems); and greater activation in the right hemisphere (right side), which is responsible for spatial functioning (e.g., fitting pieces into a puzzle, finding one’s way around a city). This research finding indicates that both hemispheres of the brain function more effectively in those who practice the technique. (31)
Increased Blood Flow to the Brain
THROUGH TRANSCENDENTAL MEDITATION

CHART 12. Individuals who practiced the Transcendental Meditation technique displayed significantly increased cerebral blood flow during the practice, in contrast to controls. Increased cerebral blood flow was found during the technique both in the occipital (back) area of the brain, charted above, and also in the frontal area. (103)

• Improved Skill in Action

Skill in action means the ability to achieve one’s goals efficiently, without stress and struggle. When students practice the Transcendental Meditation technique, they become more competent, more skillful, in both academic work and their other activities.

Students start to feel more comfortable and interested in their different school subjects, and as a result, perform better and gain greater joy from learning.

Emotions that may have kept us from being confident and doing well start to dissolve, and we more clearly evaluate situations inside and outside school. As a result, we respond more skillfully.
Scientific research findings on the Transcendental Meditation technique related to skill in action include the following:

• Improved Performance on National Standardized Tests (17, 18)
• Improved Mathematics and Language Achievement Scores (118)
• Faster Decision-Making Ability (37)
• Increased Efficiency (41, 42)
• Decreased Tendency to Procrastinate (achieving without delaying) (43)
• Greater Physical Calmness While Performing a Task (42)
• Faster Reaction Time (29, 30, 34–36) (Chart 13.)

**Faster Reaction Time**

**THROUGH TRANSCENDENTAL MEDITATION**

![Graph showing faster reaction time](chart13.png)

**CHART 13.** University students who practiced the Transcendental Meditation and TM-Sidhi programs showed a significant improvement in the ability to more quickly make correct decisions, in contrast to a control group of students. These same students also showed improvement in intelligence test scores. (7)
• Improved Health, Well-Being, and Energy

When students begin to practice the Transcendental Meditation technique they find that they have more energy, feel better physically and mentally, and enjoy a greater sense of well-being. They become less tired and their health improves.

Scientific research findings related to improved health, well-being, and energy include the following:

• Increased Physical and Mental Well-Being (9, 45–47)
• Decreased Fatigue (42)
• Reduced Health Care Costs (48)
• Improved Self-Health Rating (9, 42, 45, 46, 49)
• Decreased Blood Pressure Among Adolescents with High Normal Blood Pressure (117)
• Decreased Sleepiness (111)
• Increased Energy and Enthusiasm (2, 42, 44) (Chart 14.)

CHART 14.
A group of students in secondary school who learned the Transcendental Meditation program showed greater energy levels after 14 weeks, in contrast to a control group of students who did not learn the practice. (2)
• **Development of the Personality**

When students practice the Transcendental Meditation technique they find they become more and more of who they want to be. They start to feel less dependent on the opinions of others, and more confident and happy in themselves.

They are naturally more positive, and feel comfortable being with positive, strong people.

![Students in Consciousness-Based schools in U.K., USA, and Australia](image)

**Scientific research findings related to development of the personality include the following:**

- Increased Self-Actualization (increased use of full potential) (38–40)
- More Positive Perception of Others and the Environment (16)
- Increased Inner-Directedness (greater self-sufficiency) (2, 40, 50)
- Less Sensitivity to Criticism (51)
- Decreased Anxiety (65)
- Enhanced Self-Esteem (2, 51, 53, 54)
- Higher Levels of Self-Development (100)
- Enhanced Inner Well-Being (9)
- Increased Emotional Stability (43, 55, 56)
- Increased Emotional Maturity (44)
- Improved Mental Health (9, 38–40, 42–46, 51, 52, 54, 55, 57–64)
- Increased Strength of Self-Concept (stronger sense of one’s self) (52) ([Chart 15](next page))
**Increased Strength of Self-Concept**

*THROUGH TRANSCENDENTAL MEDITATION*

CHART 15. Individuals practicing the Transcendental Meditation technique found that after one month they had naturally developed a stronger sense of who they were, in comparison to controls; and were becoming more who they wanted to be. (52)

• **Growth of Ideal Social Behavior**

When students practice the Transcendental Meditation technique and begin to feel more full and happy inside, they naturally begin to appreciate other people more. Then they are able to give more; and as a result their relationships improve. They become more respectful of other people’s opinions, needs, and ideas; more trusting and comfortable with others; and more mature, friendly, kind, and compassionate.
Scientific research findings related to growth of ideal social behavior include the following:

• Increased Social Maturity (3)
• Increased Ability To Be Sociable With Others (44)
• Increased Capacity for Warm Interpersonal Relationships (39, 43, 44)
• Increased Friendliness (43)
• Improved Personal Relationships (42)
• Increased Ability To Be Fair-Minded and Reasonable (44)
• Increased Good Humor (43)
• Increased Trust (51)
• Increased Tolerance (2, 44)
• Growth of a More Sympathetic, Helpful, and Caring Nature (44)
• Increased Sensitivity to the Feelings of Others (44)
• Reduced Behavior Problems in School: Decreased Absenteeism, Decreased Rule Infractions, and Decreased Suspensions Days (109)
• Greater Appreciation of Others (Chart 16.)

CHART 16.
Students practicing the Transcendental Meditation program, in comparison to control students, were more positive about the important people in their lives, including parents and other family members. (16)

The most accurate method for drawing conclusions from many scientific research studies is a statistical technique called “meta-analysis.” In this approach, many studies on the same topic (for example, on anxiety) are analyzed as one big study. Combining all studies on the same topic make the conclusions from meta-analyses very reliable.

Here are three examples of meta-analyses on the effects of the Transcendental Meditation program in comparison to other techniques:

(1) Meta-Analysis of Increased Physiological Rest
This meta-analysis, which reviewed the results of 31 studies, found that the Transcendental Meditation practice produces more than twice the degree of rest (measured in the physiology) than is produced by simply sitting with one’s eyes closed (Chart 17, next page).
CHART 17. A meta-analysis of physiological research on the Transcendental Meditation program found that it produces a deeper state of rest than resting with eyes closed by the control group. Deep rest was measured by reduced respiration rate (slower breathing), reduced basal skin conductance (indicating calmness), and reduced plasma lactate (biochemical associated with stress). (98)
(2) Meta-Analysis of Decreased Anxiety
This meta-analysis, which reviewed 146 research findings on anxiety, found that practice of the Transcendental Meditation technique results in more than twice the reduction in trait anxiety than produced by other techniques (65). Trait anxiety is general anxiety—in contrast to being anxious about a specific event (Chart 18).

CHART 18.
A meta-analysis of 146 independent research study results found that the Transcendental Meditation technique is significantly more effective in reducing anxiety than other mental or physical relaxation techniques. (65)

(3) Meta-Analysis of Increased Self-Actualization
A meta-analysis showed the Transcendental Meditation technique to increase self-actualization three times as much as that of other techniques (40). Self-actualization is a measure of how much of our full potential we are using. (Chart 19.)

CHART 19. Self-actualization is defined as the full realization of one’s potential. An analysis of 42 studies found that practice of the Transcendental Meditation technique increased self-actualization by three times as much as other meditation practices. (40)
## Conclusion of this section on meta-analyses:

Meta-analyses combine the results of many research studies on the same topic, to give a more powerful estimate of the effects of what is being studied—in this case, the effects of the Transcendental Meditation program. The meta-analyses shown in the previous pages indicate that regular practice of this technology produces unique benefits. This is shown by (1) deep rest during the practice compared to simply closing the eyes; (2) reduced anxiety compared to other techniques; and (3) increased self-actualization compared with other techniques.

## 3. More Studies with Students

### (1) Study of Canadian secondary students

Secondary school students who learned the Transcendental Meditation technique showed increased intelligence after 14 weeks, in contrast to control students from the same school who did not begin the practice (Chart 20, below).

The students who learned the technique also showed increased creativity (Chart 21, next page); increased tolerance (Chart 22, next page); increased self-esteem (Chart 23, next page); as well as increased energy and decreased anxiety, in comparison to a control group of students from the same school.

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**CHART 20.** Secondary school students in Canada who learned the Transcendental Meditation technique showed increased intelligence after 14 weeks, in contrast to a control group of students. (2)
CHART 21. Canadian secondary school students who practiced the Transcendental Meditation program showed greater creativity 14 weeks after learning, in contrast to a control group of students who did not begin the practice. (2)

CHART 22. Canadian secondary students who learned the Transcendental Meditation technique showed increased tolerance after 14 weeks, in contrast to a control group of students. (2)

CHART 23. Canadian secondary students who practiced the Transcendental Meditation program showed increased self-esteem after 14 weeks, in contrast to a control group of students. (2)
(2) Study of Cambodian students before they began university study

Among Cambodian students taking one year of preparatory study before beginning their university degree programs, one group learned the Transcendental Meditation technique, while two other groups did not.

The students who learned the technique showed increased intelligence after three months, in contrast to the control students (102); and also improved physical health, decreased depression, decreased anxiety, and increased self-esteem in contrast to the two groups of control students (Chart 24).

CHART 24.
Students in Cambodia who learned the Transcendental Meditation technique showed improvement in general health (physical, mental, and social factors) after three months, in contrast to the control groups of students from two other universities. (84)

(3) Studies of Chinese secondary students

Research studies found that Chinese secondary students who learned the Transcendental Meditation technique, in comparison to control subjects who participated in other programs, showed increased creativity; increased practical intelligence (a measure of the ability to understand the practical results of one’s decisions and actions); increased field independence (the ability to maintain broad comprehension together with sharp focus); increased mental efficiency (the ability of the mind to quickly make correct decisions); and increased fluid intelligence (the ability to reason and learn abstract ideas). These students also showed decreased anxiety, no shown on the chart (Chart 25, next page).
Holistic Improvement in Intellectual Performance

THROUGH TRANSCENDENTAL MEDITATION

Effect size in contrast to controls

Creativity Practical Intelligence Field Independence Mental Efficiency Fluid Intelligence

p < .001 for each

CHART 25. Studies of Chinese students found that in contrast to control groups, those who learned the Transcendental Meditation technique showed significant improvement in five measures of intellectual functioning: Creativity, Practical Intelligence (the ability to see the practical consequences of actions); Field Independence (broad comprehension together with sharp focus); Mental Efficiency (the ability of the mind to quickly make correct decisions); and Fluid Intelligence (the ability to reason and learn abstract ideas). (101)

(4) Study of American university students, re-tested years after graduation

Four groups of students attending a university in the U.S. were measured on a scale of self-development; and then measured again 10 years later, after graduating from the university. The students who were practicing the Transcendental Meditation and TM-Sidhi programs showed a highly significant increase in self-development over this period, in contrast to no significant change in the three groups of non-meditating students.

Usually with this test of self-development, there is little change after adolescence. So the increase in self-development found several years after university graduation among those practicing the technology is especially interesting (Chart 26, next page).
CHART 26. University students in the U.S. who were practicing the Transcendental Meditation and TM-Sidhi programs increased significantly in self-development (which measures mental and emotional maturity) when they were tested years after graduation, in contrast to control groups of students who had graduated from three other universities and had not learned the technique. (100)

How One Technique Benefits Every Area of Life

Scientific research shows, and experience shows, that with one technique, many aspects of our life improve—mental abilities, health, relationships, success in and outside of school. This is because the basis of all these areas of life is our consciousness; and as our consciousness becomes more fully awake, then all areas of life benefit.

As mentioned at the beginning of this booklet, practicing the technology of consciousness can be compared to watering the root of a tree: every part of the tree is nourished from its basis just by watering the root. By enlivening the fundamental field of our intelligence with the practice of the Transcendental Meditation technique, every aspect of life thrives.

Collective consciousness is the consciousness of all members of a group of people of any size considered as a whole—a family, a school, a community, a nation, the world.

If the individuals of a family or school are happy and peaceful, the collective consciousness of the family or school is coherent and orderly. In the same way, the collective consciousness of a country expresses the consciousness of the individual citizens of the country. If most of the citizens of the country are orderly and contented, the collective consciousness is orderly and harmonious. If most of the citizens in the country are disorderly, the collective consciousness is disorderly.

As discussed in Part I of this booklet, many scientific research studies show that when large groups practice the Transcendental Meditation and TM-Sidhi programs together in one place, they generate a positive influence in the whole society; and if the group is large enough, in the whole world.

This effect is measured, for example, by reduced crime, reduced conflict in society, reduced accidents, and improved quality of life. The research studies use the strongest and most advanced statistical methods to confirm the validity of these scientific findings.
The scientific findings on these large groups practicing the Transcendental Meditation and TM-Sidhi programs include—

- Decreased crime; decreased violence (85–87, 89, 91);
- Improved overall quality of life (87, 88, 91–93);
- Reduced national and regional conflict; and increased progress towards peace (74, 87, 96, 97);
- Improved economic trends (88, 94, 95).

These results have been found at city, state, nation, and world levels:

- At the levels of city and state (Chart 27, below);
- At the levels of the nation and many nations (called “regional level”) (Chart 28 and Chart 39, next page); and
- On a global scale (Chart 30, p. 48).

**CHART 27.** During two periods of time in which groups of TM-Sidhi participants assembled in the state of Rhode Island, USA, the quality of life improved in that state, in comparison to a control state (a state where there were no groups of TM-Sidhi participants). Quality of life was evaluated by improvement in a standard index of eight measures, which included reduced violence, reduced accidents, more healthy behavior, and improved economic trends. (91)
CHART 28. In 1978, teams of TM-Sidhi participants traveled to the areas in the world where there was greatest conflict and violence. Through their group practice of the technology of consciousness, these groups significantly reduced the intensity of conflict (reduced hostile acts), and increased progress towards peace (increased cooperative events). (116)

CHART 29. During 7 periods from 1983–1985 when large groups of TM-Sidhi participants were assembled, there was a significant increase in progress towards peace in the Middle East, as measured by an index that included increased cooperation, reduced war fatalities, and reduced war injuries. (96)
CHART 30. During a three-week assembly of TM-Sidhi participants numbering more than the square root of one percent of the world’s population, analysis of news reports in major news sources showed more positive statements and actions of heads of state throughout the world, and greater national and international support for their policies and leadership, indicating greater harmony within and between nations. (115)

These important, unique findings indicate how the schools of any country, or one very large school or university, can create and maintain peace and progress for the whole nation. If the groups of students are large enough—at least the square root of one percent of the nation’s population—they will be radiating a steady influence of coherence in the nation as individually they rise to fulfill their potential.
CONCLUSION:
Education for Enlightenment and Progress of Society

The results of hundreds of scientific research studies on the Transcendental Meditation and TM-Sidhi programs, together with five decades of educational experience worldwide, confirm that students develop many aspects of life by adding the twice-daily practice of this technology of consciousness to their daily routine.

Scientific research results include development of mental abilities, with improved academic performance, increased creativity and intelligence, improved problem-solving ability, and faster reaction time; greater use of the total brain; improved skill in action; improved health, well-being, and energy; development of the personality in the direction of greater confidence, enhanced well-being, increased self-esteem, increased self-actualization, and decreased anxiety; growth of more positive and rewarding social behavior, with improved personal relationships and greater tolerance and ability to enjoy others.

With sufficiently large groups of students practicing the Transcendental Meditation and TM-Sidhi programs together in one place, the influence of positivity can benefit the whole country and even the whole world, with the family of nations growing in harmony and peace.
References for the Scientific Research Findings in this Booklet

Throughout the booklet you’ll see numbers in parentheses, at the end of the captions underneath the scientific charts, and after each scientific finding that is listed. These numbers refer to the list on the next five pages—the scientific journals that printed the article written by the scientists about their research study and findings on the Transcendental Meditation and TM-Sidhi programs. Here is the list of these journals that published the research papers, with the journal number, pages, and date written after each journal papers listing.

(49) Farinelli, L. Doctoral thesis, Faculty of Medicine and Surgery, University of Padova, Verona, Italy, 1981.


The Transcendental Meditation® program, founded by Maharishi Mahesh Yogi, has been taught to school and university students for more than 50 years. University academic courses with Transcendental Meditation began in 1972. The first Consciousness-Based schools and university, where all students, teachers, and administrators practice Transcendental Meditation, were founded in 1972. The advanced Transcendental Meditation SidhiSM program with Yogic Flying® was first offered as part of an academic curriculum in 1977. Over 10 million people worldwide have learned the Transcendental Meditation technique, including hundreds of thousands of students and teachers. **Currently it is implemented in more than 700 educational institutions in over 60 countries, with more than 400,000 students.**

1. **Countries where schools or higher education institutions offer the Transcendental Meditation or TM-Sidhi® program as part of their academic curriculum:**
   - **North America:** Canada, United States • **Latin America:** Cuba, Jamaica, Puerto Rico (U.S.), Mexico, Dominican Republic, Haiti, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Bolivia, Brazil, Colombia, Peru, Ecuador, Chile, Argentina, Venezuela, Guyana, Suriname, Uruguay, Paraguay, Curacao • **Europe:** Spain, Portugal, United Kingdom, Ireland, Belgium, The Netherlands, Denmark, Sweden, Italy, Bosnia and Herzegovina, Hungary, Greece, Republic of Georgia, Ukraine • **Africa:** Cape Verde, Mali, Egypt, Togo, Guinea Bissau, Ghana, São Tome and Principe, Kenya, Uganda, Mozambique, Zambia, South Africa • **Asia:** India, Nepal, Mongolia, Thailand, Japan, Philippines, Malaysia, Indonesia • **Australia and the Pacific:** Australia, Solomon Islands.
   
   More facts about Latin America: Over 410,000 students have learned Transcendental Meditation, in 479 schools; 45 higher education institutions have implemented the Transcendental Meditation and TM-Sidhi programs; Over 74,000 students practice the TM-Sidhi program.

2. **Countries with Consciousness-BasedSM schools or higher education—where all students and teachers practice the Transcendental Meditation or TM-Sidhi® program and the disciplines are taught in light of the Science of Consciousness:**
   - United States (school and university), India (schools and universities), South Africa (schools and higher education), Thailand (schools and higher education) United Kingdom, Australia, Netherlands, Canada.
   
   More facts about India: 191 schools in the Consciousness-Based system, 104,000 students in 16 states; a Consciousness-Based university; 4 branches of Maharishi Institute of Management; 4 Maharishi Colleges; 25,000 students in schools for traditional knowledge; over 45,000 students practicing the TM-Sidhi program.
Comments from Students Who Practice the Transcendental Meditation program

“What I appreciate most when I meditate is the inner calm and deep rest. It makes my mind clearer, and my day so much smoother.”  —Age 17, practicing for 7 years

“I feel peaceful when I meditate. Everyone should experience this. —Age 14, practicing for 4 years

“I look forward to my TM practice. It’s a good preparation for the intensity of my school day; and a good way to end the day as well.”  —Age 13, practicing for 3 years

“I would say TM makes me very happy. I feel happy inside when I meditate and I feel happy when I am done meditating.”  —Age 11, practicing for 1 year

More Comments from Secondary Students:

“My mind just settles down until I feel very relaxed and very quiet inside. Afterwards I have so much energy.”

“I experience the silence, and then when I finish meditating, I take part of that silence with me into the day—and the whole day goes better.”

“During meditation my mind is totally clear; and afterwards my thinking is crisp and I concentrate better in class.”

“All the weight of a stressful day comes off my shoulders, and I can relax and see things more clearly.”

“It’s quiet and comfortable, and I feel connected to everyone and everything.”