

# PROJECT CLEAR LIGHT

BUDDHIST OUTREACH PROGRAM - IN SERVICE / INSIDE

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## Summary of Research on the Beneficial Effects of a Regular Meditation Practice

What follows is a brief summary of some of the conclusions that researchers have reached in their study of meditation and its effects on the practitioner. A brief bibliography is appended. Much of this research focused on the practice of Transcendental Meditation (TM) a form of meditation adapted for Western practitioners by Maharisi Yogi. Due to its simplicity, early introduction in the US and broad appeal, TM has been more extensively researched than the study of other systems.

Research conducted around the world documents that this program is effective for all cultural and ethnic groups. Studies show that all age groups benefit, from increased alertness in infants of meditating parents to increased health, happiness, and longevity in meditating elderly, suggesting that people spanning the full range of socioeconomic levels and intellectual abilities benefit.

Improved Mental Abilities: Increased intelligence, increased creativity, improved learning ability, improved memory, improved reaction time, higher levels of moral reasoning, improved academic achievement, greater orderliness of brain functioning, increased self-actualization.

Improved Health: Reduced stress and anxiety, reduced hospitalization, reduced incidence of disease, reduced need for out-patient medical care, reduced health care costs, reduced use of alcohol and drugs, improved cardiovascular health, reduced physical complaints, increased longevity.

Improved Social Behavior: Improved self-confidence, reduced anxiety, improved family life, improved relationships at home and at work, increased tolerance, improved job performance, increased job satisfaction.

### Physiological Benefits

The original landmark research on the physiological correlates of the TM technique was published in Science, American Journal of Physiology, and Scientific American in 1970-1972 (papers 1, 3, 4). This research found that the TM technique produces a physiological state of restful alertness. During the technique the physiology becomes deeply rested, as indicated by significant reductions in respiration, minute ventilation, tidal volume, and blood lactate, and significant increases in basal skin resistance (an index of relaxation). At the same time the physiology is alert rather than asleep, as indicated by an increased abundance of alpha waves in the EEG. These findings led researcher Dr. Keith Wallace to conclude that restful alertness is a fourth major state of consciousness, termed transcendental

consciousness, that is physiologically distinct from ordinary waking, dreaming, and deep sleep (paper 2).

Many other researchers have confirmed the reality of Transcendental Consciousness. Moreover, they have found that through regular practice of the TM technique, the physiology becomes more relaxed outside of meditation as well. Baseline levels of respiration rate, heart rate, plasma lactate, and skin resistance are all lower. The autonomic nervous system, which regulates vital internal processes, becomes more stable, integrated, and adaptable, as indicated by its increased ability to recover rapidly from the effects of stress. Brain functioning becomes more orderly, as indicated by the growth of physiological correlates of creativity and intelligence, such as shorter latencies of cognitive evoked potentials, faster paired H-reflexes, increased EEG coherence, shorter inspection time, and faster choice reaction time.

Medical researchers have found a reduction of important cardiovascular risk factors such as high blood pressure and serum cholesterol. Large health insurance studies have found that people practicing the Transcendental Meditation and TM-Sidhi programs, in all age groups combined, display a 50% reduction in both inpatient and outpatient medical care utilization compared to controls. Hospitalization is 87% lower for heart disease and 55% lower for cancer. And what is most remarkable, meditators over 40 years old have approximately 70% fewer medical problems than others in their age group.

Other research has found that meditating individuals in their mid-50s have a biological age twelve years younger than their chronological age, and that people beginning the practice even at 80 years of age live longer and are healthier and happier than controls of the same age (see Part I: Physiology in Vols. 1-5, and in the recent research section).

### **Psychological Benefits**

Numerous studies have found that the practice of the TM program increases broad comprehension and improves the ability to focus sharply (field independence). Through regular practice of this program, the physiology becomes habituated to sustain the experience of restful alertness at all times. Research shows that this is the best means of reducing anxiety, depression, and anger. Transcendental Consciousness, the experience of one's higher Self, becomes a stable internal frame of reference, providing an unshakable sense of self even during dynamic activity. Meditators become better able to see another person's perspective, yet they cannot easily be swayed by social pressure to do something which they judge to be wrong. They tend to perceive the world more positively and holistically.

Creativity increases, as measured by tests of both verbal and pictorial fluency, flexibility, and originality. Perception becomes more accurate and less driven by preconceptions and misconceptions. Basic memory processes improve. School children who practice the TM technique significantly improve in their basic skills in mathematics, reading, language and study skills within a semester. Studies of elementary school students, high school students, college students, and adults have found significant increased IQ scores compared to non-meditating controls over the same period. A ten-year longitudinal study following meditating college students after they graduated found significant increases on holistic measures of self development (ego development) compared to data sets for

graduates of three control universities matched for gender and age. The meditators reached higher levels of moral reasoning, autonomy and integration than has ever been seen before in any other group. The conclusion of all the research on meditation and relaxation techniques in the field of self-actualization shows that the TM technique is unparalleled in its ability to fully develop the unique potential of the individual. This technique makes a person more self-sufficient, more spontaneous, more productive, better able to meet challenges, and more capable of warm interpersonal relationships (see Part II: Psychology in Vols. 1-5, and in the recent research section).

### **Sociological Benefits**

A quantitative review of 198 studies found that the TM program is the most effective means of preventing and treating drug and alcohol abuse. In a study of transient, chronic alcoholics it was found that the technique produced a 65% abstinence rate and another study of high school and college drug users in a rehabilitation center found an 89% reduction in drug usage.

A study of war veterans with post-traumatic adjustment problems found that the TM technique produced significant decreases in emotional numbness, alcohol consumption, family problems, insomnia, unemployment, and overall post-traumatic stress disorder, in comparison to controls receiving psychotherapy.

The Japanese Ministry of Labor commissioned a five-month study of the effects of the TM program on 447 of their employees in a major heavy industry. The study found decreased physical complaints, decreased anxiety, decreased depression, decreased smoking, decreased insomnia, decreased digestive problems, and a decreased tendency towards neurosis and psychosomatic problems among those who learned this technique compared to non-meditating controls.

The TM program has been widely used for effective prison rehabilitation. Studies indicate that it produces positive changes in health, personality development, behavior, and reduced recidivism (lower return to prison) among inmates. One study of recidivism found that 259 inmates of Folsom and San Quentin prisons and Deuel Vocational Institute in California who learned TM technique had 35-40% fewer new prison terms compared to the matched controls, whereas it is known that traditional prison education, vocational training, and psychotherapy do not consistently reduce recidivism. A large scale study of 11,000 prisoners and 900 staff officers in Senegal, West Africa in 1987 found that the TM program markedly decreased prison violence, health problems and that it reduced recidivism to a mere 8% (see Part III: Sociology in Vols. 1-5, and in the recent research section).

More than 1,000 peer-reviewed scientific articles have been published on the subject of meditation. Until recently, most of them simply observed correlations between meditating and improved mood or decreased disease symptoms. But with so many scientists -- and thousands of consumers -- becoming "believers" in meditation, researchers seek to move beyond simply showing that meditation can influence the brain, to knowing exactly how that influence is accomplished.