

# Yoga meditation: an antihypertension agent

## Abstract

The word “meditation” is derived from the Latin word “madri” which means “to heal”. Meditation can certainly be considered as a healing process – spiritual, mental, and emotional with proven benefits to physical well-being.<sup>1</sup> Meditation may be used to reduce stress, anxiety, depression, and pain.<sup>2</sup> It improves heart health, boosts mood and immunity and resolves pregnancy problems.<sup>3</sup> Meditation is a wide term and can not be defined by one single, precise definition. Hence its dictionary meaning, religions and spiritual concept and opinions of various yoga experts about it is given. There are certain elements of meditation which should be achieved before sitting for meditation and are described. Transcendental meditation, TM is the meditation done with mental repetitions of mantras and is very effective and powerful. A mantra is a sacred word or phrase which is repeated over and over again to produce a change in the mental state of a person and have magical religious and spiritual impacts on the mind. Mantras when repeated in meditation take individuals to a higher state of consciousness. It is said that the utterance of mantras unlocks the doors to the absolute. After the sound of mantras get associated with a state of tranquil meditation which generates calmness, quietness, and peace in the mind and relaxes the muscles and tones the nervous system and becomes the cause for lowering blood pressure, heart rate, and rate of breath. This creates brainwaves which deal with stress and its consequences. Mantras are normally given by a guru (spiritual teacher) who invest them with their own pranic energy or they are chosen by individuals as according to their requirement and needs. The opinion of several yoga masters and distinguished medical experts who worked on meditation for decades is expressed.

**Keywords:** Yoga, meditation, transcendental meditation, mantras, antihypertension, asanas, breathing, pratyahara, concentration, consciousness, self-realization, super conscious

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## Meditation and definitions

Sitting alone in one of the yogic postures, shutting the mind to the external world and diverting all its powers inside with concentration on Trikuti (space between two eye-brows), eyes closed, breathing slowly through both nostrils and getting absorbed in the Absolute until the knower, the known, and the knowing become one in the enlightenment. This practice offers unique powers and a wide range of benefits. This is the process of meditation. It clears the mind, refines and clarifies the consciousness, promotes the mental equilibrium and evenness of temperament. It relaxes the nervous system and thus promotes psycho-physical balance and a quiet mind which protects us against everyday stress of life.

Meditation is a wide term and is difficult to define by one single precise definition which will cover all its aspects. Slightly different meanings are given to meditation or contemplation in different dictionaries and religions.

### I. Dictionary definitions

**Concise oxford dictionary:** It defines contemplate as ‘gaze upon’, i.e., view mentally. Contemplative is defined as ‘meditative’ or ‘thoughtful’.

**Nuttal’s standard dictionary.** Defines ‘contemplation’ as ‘continued attention to a particular subject’.

**HBJ School Dictionary.** ‘Meditate’ means ‘to think quietly and deeply over a period of time’ or ‘to think about doing; to plan.’

**Merriam webster’s collegiate dictionary.** ‘Meditate’ means ‘to focus one’s thought or reflect or ponder over’. The other meaning was given as ‘to plan or project in the mind’.

**Dictionary macmillian.** ‘Meditation’ is defined as ‘a serious and careful thought’.

**The world book dictionary.** ‘Meditation’ means ‘continued thought’.

### II. Religions

The concept of meditation in different religions also differ slightly.<sup>4</sup> In Christianity and Islam, meditation is believed to be knowledge of ‘Absolute’, while in Hinduism, Buddhism, Zen, and Taoism, it is considered as ‘higher knowledge’ or ‘heightened consciousness’ or ‘intuitive awareness’. Different yoga masters have looked upon meditation from different points of view and have expressed it accordingly.

### III. Definitions of meditation as given by some prominent yoga masters

- (i) **George:** One of the simplest definitions of meditation is “the correct use of mind”. The initial aim of meditation is not to deny our thoughts, but to be aware of our mind, gain mastery over our mental activity, and regenerate the highest quality of thoughts.<sup>5</sup>
- (ii) **Patanjali Yoga Sutras:** When the mind becomes free from thinking of sense objects and their enjoyment, it is meditation.<sup>6</sup>
- (iii) **George:** Meditation is the art of cultivating self-awareness so we can become more skillful at using our energy – mental, emotional, and physical – in ways which increase our inner resources, not deplete them. In many ways, meditation is simply the art of self-awareness.<sup>2</sup>
- (iv) **Hewitt:** Yoga meditation promotes psycho-physical poise and a quiet mind that protects against the stress of modern life, which destroys health and happiness, and is indeed a major killer in the civilized society.<sup>5</sup>

- (v) **Hewitt:** Yoga meditation cleans the mind, refines and clarifies consciousness, lightens the spirit, and fosters poise and equanimity. Meditation calms and tones the nervous system, relaxes, harmonizes psychic energies and cultivates serenity.<sup>5</sup>
- (vi) **http://www.yogapedia.com:** Meditation is the process of quieting the mind in order to spend time in thought for relaxation for religious/spiritual purposes. The goal is to attain an inner state of awareness and intensify personal and spiritual growth. In practice, meditation involves concentrated focus on something such as a sound, image, or feeling.<sup>7</sup>
- (vii) **Swami Vishnu-Devananda:** Meditation is a continuous flow of perception or thought like the flow of water in a river.<sup>8</sup>

## Fundamentals of meditation

Meditation is a general term applied to the methods of steadying, quieting, or opening the mind for the purpose of altering state of consciousness. In order to understand meditation clearly, we should first understand some of the basic terms used in meditation.

### I. Asana

The process of relaxing the brain is achieved through asana. In asanas, our consciousness spreads throughout the body, eventually diffusing in every cell, creating a complete awareness. In this way, stressful thought is drained away, and our mind focuses on the body, intelligence, and awareness as a whole.<sup>9</sup>

It is therefore essential that the process of meditation should be accompanied by the process of asanas.

### II. Breathing

In Hatha Yoga Pradipika (an ancient yogic scripture) it is said that our senses are governed by breath and the breath is governed by the nerves. In ancient yoga books the breath is mentioned as a string and mind as a kite. The breath is like a “string which controls the kite”. Therefore, as the breath moves so moves the mind. If our breathing is short and rapid, our mind will work nervously and agitatedly. If breathing is erratic, the mind is disturbed and anxious. If the breath is long, slow, smooth, and even, the mind will become calm and quiet.<sup>10</sup> The breath is the link between the body and mind where the physical changes are converted to mental. The yogi learned to use the mind to govern his senses and he uses his breath to control the mind. Yet our mind and breath are not always calm and in control.<sup>5</sup>

Pranayama (breath control) brings calmness and quietness to our mind. According to B.K.S. Iyengar<sup>9</sup> in Pranayama, exhalations empty the brain and pacify the ego and bring silence and humbleness to our mind. When we empty the brain through this process of exhalation, toxins of the memory are also released. Thus, in the process of exhalation and retention, we release resentment, anger, envy, hatred, and bitterness to clear our mind resulting in quietness, calmness, and positivity.<sup>10</sup>

### III. Sense withdrawal (Pratyahara)

It is the detaching of mind from the sense organs. It checks the outgoing powers of the mind and turns them inwards. It is gathering in and integration of previously scattered mental energies. In pratyahara, one frees himself from the slavery of sense organs.<sup>5</sup> When senses are withdrawn, the external world is shut out in Yoga meditation and all power of mind are diverted towards inside.

The aim of meditation is not to deny our thoughts but we should become aware of our mind and control our mental activities so that

highest quality of thought is generated. In time, with practice, we will be able to slow down our thoughts and enter them in inner space, within our consciousness where there are no conscious thoughts, and only silence is observed. Our mind is established in the Absolute and no worldly thoughts can distract.<sup>2</sup>

### IV. Concentration

“To maintain mind fixed on one spot is called concentration”. Concentration is the holding of the mind to one form or object steadily for a long time. Concentration is fixing the mind on an external object or internal chakra (center of spiritual energy). (Yoga Sutra 3.1).<sup>6</sup>

According to James Hewitt,<sup>4</sup> “shutting out the external contact with sense object, the eyes fixed between the eyebrows, and equalizing the current of Prana (incoming breath) and Apana (outgoing breath) inside the nostrils, the meditative man, having mastered the senses, mind and intellect, being freed from desire, fear and anger, regarding freedom as a supreme goal, is liberated forever”.

Swami Sivananda<sup>11</sup> writes “Leading a virtuous life is not sufficient for God-realization. Concentration of mind is absolutely essential. A good virtuous life prepares the mind as a fit instrument for concentration and meditation which finally lead to self-realization”.

The mind has greater ability when all its powers instead of being scattered are brought to one point. A Raj Yogi concentrates<sup>11</sup> on the Trikuti (space between two eyebrows) which is considered as a seat of mind in the waking state. The mind can easily be controlled if one considers as a seat of mind in the waking state. The mind can easily be controlled if one concentrates on this region. A devotee should concentrate on the heart, the seat of emotions and feelings. This will give him enormous pleasure.<sup>12</sup>

### V. Consciousness

Awareness is consciousness. Conscious mind is our normal waking state of awareness. Conscious means our capacity to be aware both externally as well as internally. This is called self-awareness. It represents only a small fraction of our total consciousness ( $\cong 10\%$ ). The mind is not conscious of the greater portion of its own activities and therefore, only a fraction of knowledge can remain in consciousness at any point.

The other state of consciousness is subconscious mind. This is termed as Chitta in Vedanta.<sup>11</sup> Most of our subconscious consists of submerged experiences, memories thrown into background but recoverable. It is said 90% of mental activity takes place in the subconscious mind.

The superconscious represents a much higher degree of awareness. It is situated above our normal state of wakefulness. Gillian Dalgiesh<sup>13</sup> states “As we go deeper in meditation and a deepening peace, calmness, divine love, and even bliss, then we are experiencing deeper levels of super consciousness”.

According to Swami Parmahansa,<sup>14</sup> “When your mind is fully withdrawn in superconsciousness, it becomes centered in the bliss of Spine. You are then in your ideational, or casual body. That is the level of the soul”. Superconsciousness is also referred to as the State of Samadhi.

### VI. Stress management and meditation

Our life is full of stress and tension, and it is very difficult to remove them from our life as every action in life is stressful. We go to watch a movie with an aim to release our tension but come out with more stress as the movie itself was stressful. When good work is done

without any selfish motive, the stress caused by it is positive and it is not much harmful. The main reasons of negative stress<sup>9</sup> are anger, fear, speed, and greed. Unhealthy ambitions are extremely damaging and harmful. Walking, eating, reading all give stress but differ in their degree. We have unavoidable stress in our lives. This stress on the mind builds up mental disturbances such as anger and desire and result in emotional stress. Meditation is only possible when one has already achieved a certain “stress-less” state. By learning how to relax the brain one can begin to remove stress. In fact, true yogic meditation in yogic sense cannot be done by a person who is under stress. In the process of asanas (yogic postures) the body releases its stress and strain through movement. Similarly, while doing the pranayama (breathcontrol exercises), the soothed body is fully energized, the nerves are sited, the brain is calmed, and the hardness and rigidity of the lungs are loosened. There is certain vibration, which can make us rhythmic and subtle in our asanas and pranayama practice without force or stress. We become one in our self and are in the meditative state.<sup>9</sup>

### VII. Contemplation or meditation

Attention flowing evenly and effortlessly in one direction is contemplation or meditation. It is referred to as Dhyana.<sup>9</sup>

### VIII. Self-Realization

Self-realization is reached when consciousness becomes one with the object being contemplated, so that there is no awareness of the ego-self; that pure state of existence is self-realization. It is called as Samadhi.<sup>10</sup>

### IX. Mantras

A mantra is a sacred word or phrase which is repeated over and over again to clear the mind. Repetition of mantras produce a change in the mental state; practitioners report how mantras create religious and spiritual feelings. Mantras are recited silently or by whispering or are spoken at a louder pitch. After reciting the mantras for some time, the sound of mantras gets associated with a state of tranquil meditation which produces calmness, quietness, and peace in the mind. This relaxes the muscles and tones the nervous system. It is an ancient Indian belief that the light of the divine takes the form of sacred letters in mantras and then speaks through the power of holy words.<sup>15</sup> The literal meaning of mantra<sup>16</sup> as translated from Pali is “mind vehicle” which means the meditation object on which the mind rests, the silent mantra is employed as a meditation object for personal meditation practice.

Andre Van Lysebeth,<sup>17</sup> a leading European Hatha Yoga teacher says “The sound of ‘OM’ and other mantras give a vibromessage in various glands and vital organs in the thoracic cavity and the abdomen stimulating deeper breathing and toning the nervous system”.

The practice of mantras increases our concentration of mind and protects us against the worldly distractions. In mantra meditation, we sit quietly, choose a word or phrase and repeat it again and again, resting our mind on the sound and the feelings it generates. If at any time the mind is distracted, it is brought back to the mantra to achieve the concentration of mind again.

### X. Transcendental meditation

Transcendental Meditation uses mental repetition of a mantra and is known, for short, as TM. The method was brought to the West by Maharishi Mahesh Yogi in 1959. The method is simple.<sup>4</sup> One mentally repeats a word while sitting still without moving the lips and tongue.

The eyes are closed and the attention wanders from the word, the mantra is reintroduced.

The Maharishi denies<sup>4</sup> that the mind is controlled in Transcendental Meditation, and says that the mind moves naturally to greater happiness which he called bliss consciousness.

### Common mantras used in meditation

In mantra meditation, the mind is concentrated by Japa. Japa is the repetition of sacred syllables, words, or prayers called as mantras. In meditation, one mentally repeats a sacred word or phrase while sitting still. The lips and tongue do not move. The eyes are closed and attention is turned inwards (transcendental meditation).<sup>4</sup>

Mantras have great effects on the mind. They cut the useless thoughts and change them to one single thought which purifies the mind, refine and clarifies the consciousness, and lighten the spirit.<sup>4</sup> It is said that the utterance of mantras unlocks the door to absolute. “Om” is the word of glory representing the absolute”. According to Givonni<sup>18</sup> “A mantra replaces 10,000 different thoughts by one thought – a thought that gives peace and awareness. It allows you to collect your scattered attention, which is spread thin all over the place, and unifies it, thus empowering it”.

It is believed that there is a specific mantra to suit the nervous system of each person. This is normally assigned by a Guru, the spiritual teacher and kept strictly confidential. The other way is to choose a mantra by yourself and find its advantage by practice.

### Some important mantras used during meditation:

**Om (Aum):** It is the sacred syllable representing the absolute. The sacred sound ‘Om’ which is the beginning of many vedic mantras and represents the supreme lord is a word of glory and represents the absolute.<sup>4</sup> The word ‘Om’ is pronounced as AUM. The ‘O’ is generated deep within the body, and is slowly brought upwards joining with the ‘M’ which then resonates through the entire head.<sup>4</sup> Repeating ‘Om’ again and over again relaxes every cell in the body.

Some ancient Indian scriptures (Vedas and Upanishad) have described ‘Om’ as follows:<sup>19</sup>

1. **Yajur Veda:** “‘Om’ is the Great God who is omnipresent”
2. **Chhandogga Upanishad:** “He alone whose name is ‘Om’, who is immortal, is worthy of adoration and non-other”
3. **Manduk Upanishad:** “All Vedas and shastras declare ‘Om’ as the primary name of God and all other names are secondary”
4. **Kath Upanishad:** “He whom all the Vedas declare worthy of homage, whom all devotions and righteous actions lead to, and for whose realization, the most pious life is led, is called ‘Om’”.

**Ram:** Ram is the energy pattern for truth, righteousness and virtue. “This mantra contains kleembeej sound.<sup>20</sup> This sound is magnetic seed to attract success and happiness into one’s life. Lord Ram as a Charismatic God who can promote the peace and harmony in the universe. Chanting Ram mantra continuously can enhance the self-confidence, mental energy, and willpower of an individual. This was a favorite mantra of Mahatma Gandhi, widely recognized as one of the 20<sup>th</sup> centuries’ great political and spiritual leader who used it in his daily prayers. His last words before death were “Hey Ram”.

**Shyam:** This mantra represents cosmic love and compassion in the male aspect, it transmutes all emotions and unconditional love.<sup>21</sup>

**Soham:** This mantra is unconsciously repeated each time we breath-inhaling “so”exhaling “ham” which means “I am that” beyond the limitations of mind and body, at one with the absolute.<sup>4</sup>

**Hare Krishna mantra:** Hare Krishna Mantra is also known as Maha Mantra—great chantand is recited as

Hare Krishna, Hare Krishna

Krishna Krishna, Hare Hare

Hare Rama, Hare Rama,

Rama Rama, Hare Hare

According to His Divine Grace A.C. Bhaktivedanta Swami Prabhupada, founder & Acharya of the International society for Krishna consciousness.<sup>22</sup>

*“Hare Krishna mantra is a transcendental process for reviving original pure consciousness. By chanting this transcendental vibration, we cleanse away all his giving within our hearts. This consciousness is original, natural energy of the living entity. When we hear this transcendental vibration, the consciousness is revived. By practical experience also, one can perceive that by chanting this maha-mantra or Great Chanting for deliverance, one can at once feel a transcendent ecstasy coming through from spiritual stratum”.*

*“Hare Krishna Mantra is a chant for enhancing consciousness to greatest possible degree. Chanting the Hare Krishna mantra can give peace, happiness, God Realization, freedom from repeated birth and death, and total fulfillment. It is also known as Maha mantra – Great Chant. Mantra is most commonly translated as O’Lord, O’Energy of the Lord, please engage me in your service”.* (Krishna.com)<sup>23</sup>

**Om Namah Shivaya:** It is a popular mantra of Lord Shiva. The literal meaning is “I bow to Lord Shiva, the God of destruction and re-creation”. This mantra purifies the body and mind and Lord Shivas’ blessings are showered on the devotee. This mantra is generally recited 108 times if possible. *“This mantra is associated with qualities of prayer, divine love, grace, truth, and blissfulness. When done correctly, it calms the mind and brings spiritual insight and knowledge. It also keeps the devotee close to Lord Shiva and within His protective global fellowship”.* (Hindu mantras<sup>24</sup>)

### Om Hanumate namah

The meaning is, I bow to Lord Hanuman. “He is very simple, compassionate, powerful, and courageous. He never delays to give the quickest and most plentiful benefits to his devotees. Lord Hanuman is the symbol of elevation and dedication” says Satish Shastri.<sup>25</sup>

### Om Sri Maha Lakshmyai namah

Lakshmi is seen as God taking the form of the ever-giving mother. She is the source and giver of all blessings, wealth, and prosperity. Her blessings give the inner peace and spirituality.<sup>26</sup>

### Om Gam Ganapataye namah

Ganapathi is another name for Lord Ganesha. He grants success, prosperity, and protection against adversity. He is worshipped on almost every religious and secular occasion. It is said that before undertaking a new venture, Ganesh mantra should be<sup>27</sup> chanted to get prosperity and good luck.

### Om Sri Durgayai namah

Mother Durga also knows as Maa Durga is mother Goddess and is a divine protector. It is said that she holds all the power or shakti of

the universe in her arms.<sup>26</sup> She rides a lion which symbolizes strong power, will, and determination. She blesses her devotees with power, prosperity, and positive energy.

**Om Aim Saraswatyai namah:** Mother Saraswati is the goddess of learning and wisdom. Saraswati mantra is highly powerful. Regular chanting of this mantra can win the grace of Mother Saraswati and her devotees are blessed with knowledge, wisdom and spirituality. This mantra can clarify thoughts, improve willpower, and the power of self-determination. The mantra can dispel ignorance and help quick mastering of all that is learned.<sup>28</sup> This mantra is often chosen by artists and musicians to enhance their performance.

**Om Namō nārāyaṇāya:** This is a powerful mantra to bring harmony and balance. It is used by people in times of troubles to bring the strength to retain harmony in their lives.<sup>4</sup>

## How to meditate

### I. Mental preparation for meditation

- (i) Most of the thoughts that crowd our mind everyday are useless and therefore, we should try to cut down their number.
- (ii) As with a wild horse, the mind can only be tamed by gentleness and patience.
- (iii) Observe the stream of thoughts in passive awareness. Feel yourself detached “I”, observing your thoughts as if they are your fingers, toes, or some other part of the body.
- (iv) We are each responsible for our own thoughts and feelings. We miss learning inner self responsibility for our own thoughts and feelings which results in our own stress in life.<sup>4</sup>

### II. Sitting for meditation

- (i) **Sitting for meditation:** Sit in the meditation room or any other lonely place in Padma, Sidha, or Sukha asana. Observe all the above requirements for meditation. Free yourself from all passions, emotions, and impulses. Close the eyes and concentrate the gaze on Trikuti (the space between two eyebrows).<sup>4</sup>



Figure 1 (a) Padmasana (b) Sidhasana (c) Sukhasana

- (ii) **Place:** The room chosen for meditation should be clean and airy and free from extreme temperatures. The place should be free from interruptions like telephone and TV, etc.
- (iii) **Clothing:** Clothing should be light and comfortable. Remove the tie, collar, belt, etc. Do not wear shoes or stockings.
- (iv) **Cleanliness:** Bathe or sponge the face, hands, and the whole body before sitting for meditation. Cleanliness and purification are an important part of yoga meditation.
- (v) **Eating, drinking, and sleeping habits:** Should be normal and in moderation, as Lord Krishna has mentioned in the Bhagavad Gita that our food should be sattvic (high quality of purity) and the mind should be full of sattvic gunas (qualities).

## There are three stages in meditation

- (vi) **Purification – external and internal:** External purification is mentioned under cleanliness above. Internal purification is shutting the mind to useless thoughts and the external world and diverting the attention inwards (Pratyahara).
- (vii) **Concentration:** The concentration of mind is absolutely essential for yogameditation. (Discussed under Fundamentals of Meditation).
- (viii) **Absorption:** Think of the Almighty, the Creator of this world. Chant the word “OM” at least five times and get absorbed. This is the state of meditation. Do not strain the eyes. Do not strain the brain. Do not struggle with the mind. Sit in this state for about twenty minutes.

## Physical and mental benefits of meditation

Laboratory investigations confirm scientifically that meditation lowers blood pressure, relaxes the muscles and mind, refines and clarifies the consciousness. It calms and tones the nervous system. It eases chronic pain, anxiety, and stress while improving heart health.

Some well-known yoga masters and distinguished medical professionals worked on meditation for decades and found that transcendental meditation is very effective and is probably the best way to meditate. They tried to establish their findings scientifically.

Meditation is an excellent way to reduce high blood pressure naturally. Since the body is in such a relaxed condition during meditation, it requires less oxygen (~20% less oxygen depending on the kind of meditation). This reduces heart rate and lowers the blood pressure.<sup>29</sup> In fact, during stress response, a substance called vasopressin is released in the body<sup>30</sup> which constricts the body and causes more pressure on the circulation of blood and increases the heart rate and consequently the blood pressure. Since high blood pressure is the major cause of heart disease, stroke, and kidney failure, keeping it under control is essential. Medication can lower high cholesterol levels. As cholesterol is a primary risk factor for heart attacks, its lowering has proved to be very helpful.<sup>31</sup> It is now well established that medication has a deeply relaxing and calming effect on our nervous system, balancing our physical energies. This results in reducing our blood pressure, greater vitality, better sleep, and pain control. Jeanie Lerche David gave scientific evidence showing how meditation works in people who are meditating.<sup>32</sup> Their brain scans MRI show an increase in activity in areas that control metabolism.

**Dr. James W. Anderson**, Professor of Medicine at the University of Kentucky, College of Medicine said that “Transcendental Meditation is an effective treatment for controlling high blood pressure with added benefits of bypassing possible side effects and hazards of antihypertension drugs”.<sup>33</sup> He further said that blood pressure reductions of this magnitude would be expected to be accompanied by significant reductions in risk for atherosclerotic cardiovascular disease – without drug side effect. Anderson also said that “adding Transcendental Meditation is about equivalent to adding a second antihypertension agent to one’s current regimen only safer and less troublesome.

**Herbert Benson, M.D.**, Well known cardiologist, Professor at Harvard Medical School and founder of Benson-Henry Institute for Mind Body Medicine who worked for over three decades on health benefits of meditation has stated in his article “Meditation Balances the Body’s Systems”<sup>34</sup> that stress evokes the flight-or-flight response, it increases energy metabolism, heart rate, blood pressure, and rate of

breathing. It triggers the secretion of adrenaline and noradrenaline, but because of lack of exercise and sleep, the body cannot use these hormones appropriately. Unused adrenaline puts us at increased risk for a number of diseases and conditions – anxiety, depression, insomnia, heart attacks, strokes, bowel disorders, and infertility. This can lead to taking excessive medications and several visits to doctors. He further said there is a response opposite to stress response and it is called a relaxation response, a physiological genetic set of changes that counteract stress response. One of the best ways to bring relaxation response is meditation. He further said meditation done with repetition of a word (such as OM), mantras or prayers is very effective and is also called Transcendental Meditation. This brings quietness to mind and decreases heart rate, blood pressure, and rate of breath. This creates specific brain waves, and are wonderful in terms of dealing with stress and its consequences. The extent that any ache or pain is being caused by stress, the relaxation response (meditation) takes care of it.

**Dean Ornish, M.D.**, cardiologist, healthcare reformer, founder and president of the nonprofit Preventive Medicine and Professor of Clinical Medicine at the University of California, San Francisco, is the first clinician to offer documented proof that heart disease can be halted, or even reversed, simply by changing one’s lifestyle such as regular program of exercise, meditation, dietary changes, and more.<sup>35,36</sup> Dr. Dean Ornish’s program has yielded amazing results.<sup>37</sup> Participants reduced or discontinued medications, they learned how to lower blood pressure through meditation; their chest pain diminished or disappeared; they felt more energetic, happy and calm; blockages in the coronary arteries were reduced. The practice of meditation helped patients to reduce stress and lower blood pressure. Dr. Dean Ornish’s program<sup>38</sup> for reversing heart disease is working for former President Bill Clinton and many other patients with heart disease.

**Jon Kabat-Zinn, Ph.D.**, Professor Emeritus of medicine and the creator of the StressReduction Center for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School practiced Yoga and worked to establish his findings scientifically.<sup>39</sup> The mindfulness-based stress reduction program (MBSR) created by Kabat-Zinn is offered by medical centers, hospitals, and other health care organizations. He and his colleagues have helped hundreds of patients with varieties of health problems such as stress, anxiety, and pain, training them in yoga and mindfulness meditation.

**Giovanni Dienstmann**, in his article: *Scientific Benefits of Meditation—76 Things you Might be Missing Out On*—has described many scientific benefits of meditation in details.<sup>40</sup>

According to Dienstmann, there are the following benefits of meditation:

- (i) It reduces worry and anxiety.
- (ii) It reduces stress, fear, loneliness, and depression.
- (iii) It increases optimism, relaxation, and awareness.
- (iv) It helps develop social connections.
- (v) It increases mental strength and concentration.
- (vi) It helps increase memory retention and recall.
- (vii) It helps in ignoring mental distractions.
- (viii) It improves immune system and energy level.
- (ix) It improves breathing and heart rate.
- (x) It reduces blood pressure.

- (xi) It lessens heart and brain problems.  
(xii) It helps prevent arthritis and asthma.

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## Conflicts of interest

The author declares there are no conflicts of interest.

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