

Mindfulness Meditation Can Heal Illnesses

Hồng Quang



In the article “Mindfulness, Health and Benefits”, I introduced evidence presented by medical experts and scientists, proving that MINDFULNESS MEDITATION is believed to be capable of healing many illnesses, of resisting against the aging process, of making people more beautiful, more intelligent and healthy. Apparently meditation also makes people live longer and happier.

This article introduces more evidence that, although people don’t take miraculous medication or eat miraculous food, but just sit down and meditate two times for twenty minutes or half an hour per sessions a day, their illnesses could be healed and they would also enjoy many other tangible benefits.

More than twenty centuries ago the Gautama Buddha taught in Dhammapada that “All experience is preceded by mind, led by mind, made by mind”, stress is obviously originated from mind. When in stress, a chemical called cortisol triggers indocrine glands to release hormones which may make body susceptible to a certain illness, like cardiovascular, high blood pressure, and stomach ulcer (1).

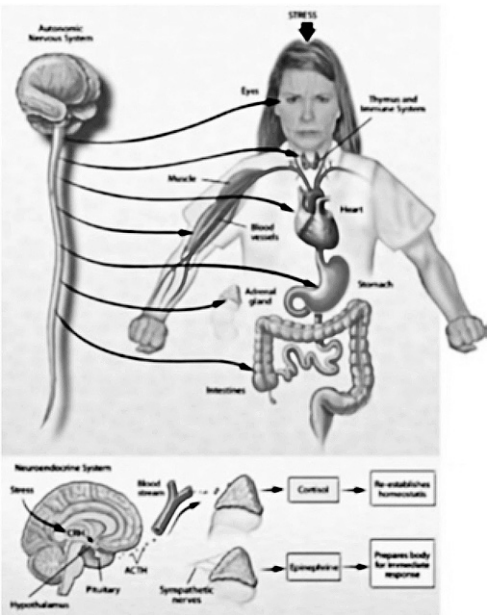
1. EMOTIONS AND STRESS

In his book “Manual for facial action coding system”, Consulting Psychologists Press, 1978, Dr. Ekman (2) classifies 6 emotions reflecting in six images below:



(a) Anger, surprise, contempt, sadness, happiness and fear.

Among them, only happiness will be beneficial to our health. The remaining emotions either cause harmful effects or stress. While being stressed out, the brain sends alarming signals to all the main organs like heart, liver, spleen, lungs and kidneys, which will release chemicals called neurotransmitters (such as cortisol and epinephrine) to maintain the body balance. If these chemicals are accumulated for a long time, they will certainly have adverse effects on our health.



www.sfn.org. Society for Neuroscience/stress/Brain Facts

THE MIND“S ACTIVITIES DURING STRESS

The Mind could make us feel peaceful or unhappy. Happiness is the joy we have in life (Wikipedia).

Many clinical researches have proved that happiness and suffering closely influence our health and illnesses. Peace or happiness could make people healthy and live longer, find the meaning of life and as a result,

they are urged to contribute their positive efforts to society. On the contrary, destructive emotions predispose us to many illnesses and make people pessimistic and prone to failure.

Professor Ed Diener and his collaborators (3) conclude that happiness is usually perceived by individuals in three different categories:

- Positive emotions (like love)
- Joy of life (joy and contentment).
- Less anxiety and angry.

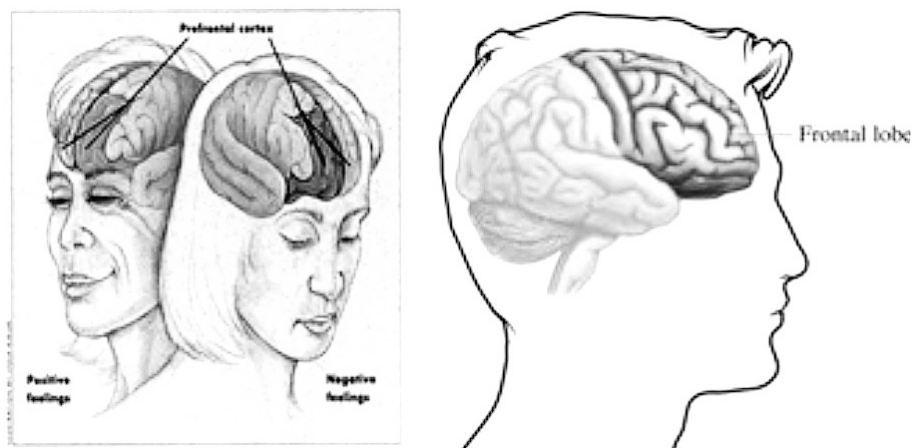
Constructive emotions like happiness will have positive effects on our health. Destructive emotions, like anger and contempt, make us feel

pessimistic and fear and have negative affects on our health.



2. HAPPINESS

It is proven that happy feelings are associated with activities of the left side of pre-frontal cortex (PFC). Mindfulness is clinically proven to activate this part of the brain and help people recover quickly after stressful events and prolong their positive feelings. The opposite area, the right pre-frontal cortex, is closely related to negative and destructive emotions.



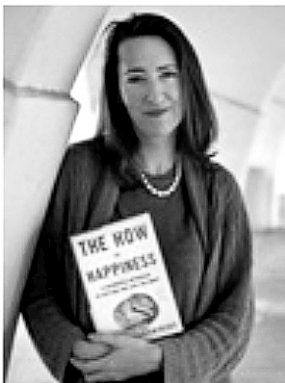
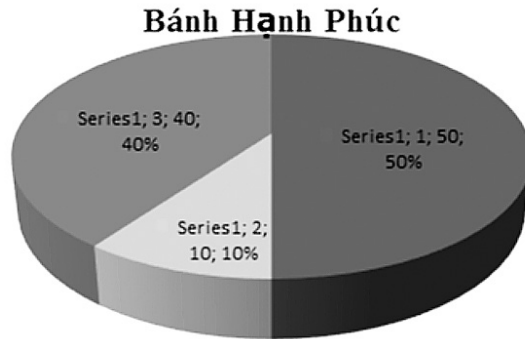
The left side of the pre-frontal cortex (PFC in red) increases the activation of well-being feelings. The right side of pre-frontal cortex (in blue) increases the activation of suffering feelings.



In his book “Authentic Happiness” Dr. Martin E.P. Seligman, (5) Director of Research Center of Positive Psychology at University of Pennsylvania, describes happy feelings in different categories as follows:

- Happy feelings from small activities like enjoying a piece of cake, drinking a nice cup of tea, watching the blue sky through the window.
- Enjoying the holiday with loved ones.
- Being passionate about a favorite programme.
- Contentment with what we have, etc...

To understand this more please observe the image of a cake below, sketched by Prof. Sonja Lyubomirsky:



Professor Sonja Lyubomirsky and her associates have conducted hundreds of experiments during the last 20 years and reached the conclusion that well-being feelings are caused mainly by 3 factors (6):

- * Genetics [50%].
- * Exercise [40%].
- * Living environment [10%].

Therefore, happiness can be summarized by this equation:

$$HP = DT + TL + MT$$

$$[H = G + Ex + En]$$

In “The How of Happiness: A Practical Approach to Getting the Life you Want”, Prof Sonja Lyubomirsky uses the image of the Cake to depict the “origination” of happiness. According to the equation, 50% of happiness is originated from genetics, 40% from individual efforts and only 10% from the living environment.

Coming back to the above 6 emotions, if we want to add up more happiness, apart from our genes, we should be optimistic, and always

keep a positive view of life, because happiness means health, and being worried means illness. In other words, happiness results from loving life, content with what we have, not craving (the second Noble truth) as in a Zen Poem “Zen Mind” below:

*“Neither living with anger and jealousy, nor blaming anyone
Always holding a smile, challenging many obstacles
Always living with noble ideals, like the sunlight in the morning
Living in harmony with others around us
Life is dynamic yet keep our mind from swinging
Live is love but we do not get stuck or clinging to emotions
Live peacefully, not chasing after false reputation or self interest
The mind is unmoved among the constantly changing life.”*

Or as in a Zen poem:

“I am coming from birth and death

Sitting on the mountain peak, smiling with the Moon
Getting a job in order to feed and raise a family and to contribute good deeds to society.
Mindfulness helps us to complete work more efficiently and create a good team-work spirit with our co-workers.



Well beings and sufferings may be hereditary and it is said that a mother’s temperament and behaviours during pregnancy may have deep effects on the unborn child on physical appearance, behaviour and intelligence.

Recently neurologists identified the parts of the brain and the neuro systems that initiate the happy feelings. As a result the application to increase the happy feeling seems more easily and realistically to bring benefits to the mindfulness meditation practitioners.

According to Gregory Fricchione, M.D. Director of the Body and Mind Center, during the meditation practice, the physiological condition of the body changes and the genes will work against the stress.

The white blood cells count increases, and the immune system becomes stronger in fighting against toxic germs and viruses, and heals the illnesses (Monthly Review “Mind, Mood and Memory, Sept, 2008).

According to many clinical researches, meditation increases activities of the left pre-frontal cortex and consequently the person will enjoy many physiological and mental positive effects.

- Well-being feelings increase, so do the number of white blood cells and the immune system becomes much stronger.
- More active and positive thinking will help us deal with difficulties in life more effectively
- Chemicals like cortisol (the stress hormone) decrease, lower blood pressure, and lower regular heart beats.
- Quick recovery after accidents or illnesses.



3. MEDITATION MAKES CHANGES IN THE STRUCTURE BECAUSE GENES CHANGE

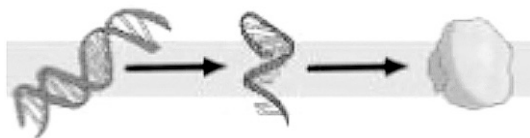
The experiment was conducted on two groups: group A consists of 19 people who had practiced walking meditation for many years, while group B also consists of 19 counterparts, who had never practiced meditation. The subjects were examined to find out their gene expression. People in group B (who had never practiced meditation) were taught to practice walking meditation in 8 weeks to see if there were any changes in their gene expression.

The result was encouraging: even though they only practiced meditation for only 8 weeks their gene expression was changed positively.

Gene expression is a process showing the changes from chromosomes in DNA hereditary from parents to their offsprings in appearance such as eyes and hair colour and skin complexion, etc...

Meditation is able to make genes work positively when DNA changes into RNA and then to protein. The protein in the chromosomes consists of

20 different types of amino acids, in the shape of a ball with double strings twisting around. All the organs in our body like heart, liver, spleen, lungs, bones, blood and brain neurons are made up by these proteins.

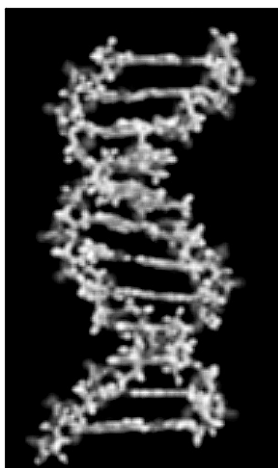


**DNA $\rightarrow$ RNA $\rightarrow$ proteins
(Wikipedia, The Free Encyclopedia)*

Studies on newly born children show that the genes will determine the hereditary human characters, but human beings are also capable to increase or decrease activities of the genes in the direction we would like to.

Many researches show that meditation may change activities of the genes which are fundamental factors of life. If genes are developing well, our life, from physiological to mental factors, will change in the positive direction.

As a result, meditation will increase the well-being feelings, improve our health, give more energy, more “intelligence”, better memory and increase our life expectancy, etc...



**DNA with double twisted rings will create the protein in the cells*

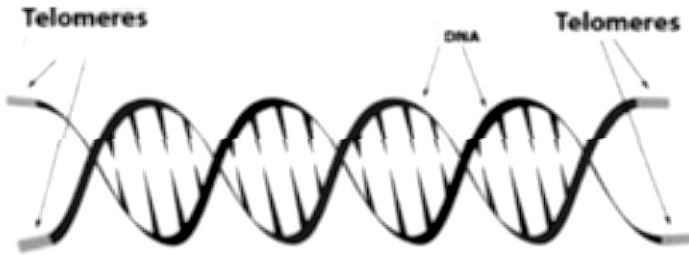
4. MEDITATION HELPS PEOPLE TO STAY YOUNG, SLOW DOWN AGING PROCESS AND INCREASE LIFE EXPECTANCY



*Michael F. Roizen
& Mehmet C. Oz*

Dr. Michael F. Roizen and Dr. Mehmet C. Oz, in “(Staying Young: The Owner's Manual for Extending Your Warranty, by Michael F. Roizen, Mehmet Oz, 2007), the aging process is related to many factors in our body:

The chromosomes in the cells are like double spiralled strings (double helix), with small parts at the end called telomeres, like the hard part of the end of shoestrings to tie up the shoelaces as the below image:



. Every time a cell produces a new one by self deviding, the telomeres are shortened until the production ceases. When the production ceases, the cell becomes self destructive (apoptosis). See the below image:



**Apoptosis increasing from normal cells (top) to apoptotic ones (bottom)
[the upper half: gradually disappears]*

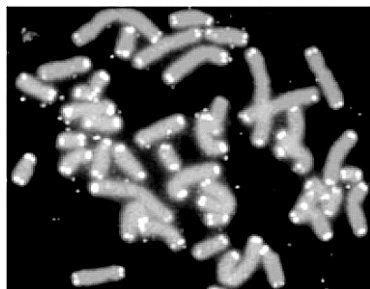
The more the cells are destroyed the more the body aged. The research is conducted on two groups with short and long telomeres. People with long telomeres live longer than people with short telomeres up to 5 years.



**Diagram of a replicated and condensed metaphase eukaryotic chromosome. (1) Chromatid – one of the two identical parts of the chromosome after S phase. (2) Centromere – the point where the two chromatids touch, and where the microtubules attach. (3) Short arm. (4) Long foot.*

Telomeres are responsible for preventing chromosomes from merging with each others and also preventing the cells from changing their structures. If there is a sudden change that person may contract cancer.

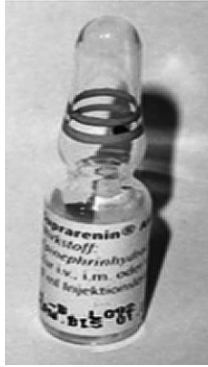
Dr Roizen warns in that book: "Those who are under stress usually have 50% shortened telomeres than those who are not. Meditation decreases the stress therefore also decreases the shortened telomeres from happening early because of stress."



Telomeres: shortened when cells are reproduced.

5. MORE ILLNESSES, QUICK AGING PROCESS, DYING YOUNG BECAUSE OF STRESS

When stress arises, the sympathetic system is triggered, the neurons release a chemical called norepinephrine and the pararenal (?) releases epinephrine or adrenaline.



**Epinephrine ampule, 1 mg (Suprarenin).*

Adrenaline stimulates the heart and muscles to increase their activities. The para-sympathetic system (PSS) releases acetylcholine to balance the body. The endocrine system produces CRH (corticotrophin-releasing hormone) to maintain the balance.



**Corticotropin releasing hormone*

CRH then is transferred to pituitary gland which releases ACTH (adrenocorticotrophic hormone). This chemical is carried along by blood to the forrenal and stimulates it to produce cortisol which has the responsibility to restore to equilibrium in the body. Please see the process in the below picture.

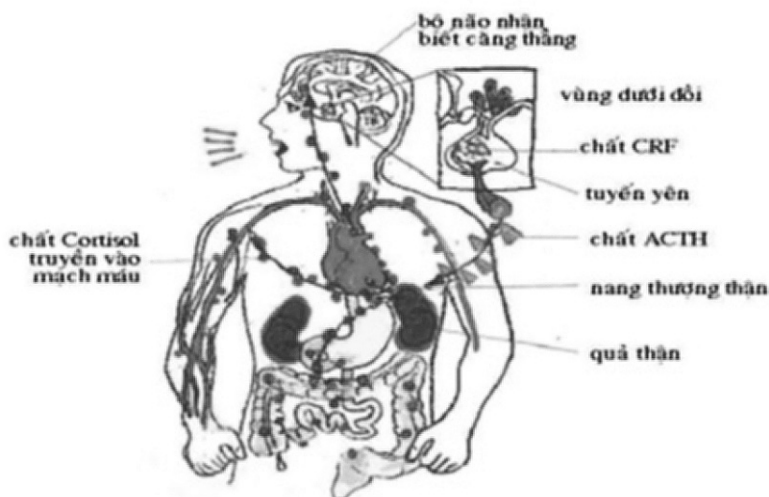


Figure 1: Stress is inter-related between Mind and Body (7)



Dr Herbert Benson

Dr. Herbert Benson (8) says that from 60% to 90% illnesses are caused by stress. After conducting many experiments he believes that:

- Meditation helps people to reduce stress
- And everybody can self care

SUMMARY

a. The sympathetic system automatically informs the organs such as heart, liver, spleen, kidneys... and stimulates them to release chemicals to restore the normal body balance.

- The neurons release chemicals called norepinephrine.
- The ad-renal releases chemical called epinephrine.

These two chemicals increase the activities of the heart and muscles which may be in the long run harmful to the other organs.

b. The para-sympathetic system:

- Releases acetylcholine to restore the balance of the body.
- The corticotrophine produces hormones CRH to contribute to restoring the balance of the body.
- The Pituitary gland releases ACTH (adrenocorticotrophic hormone), which is carried in the blood to the ad-renal gland to produce cortisol which restores the body balance.

The three chemicals have bad influence on the cells and other organs such as the digestive system and liver, kidneys and accelerate the aging process and early death.

To have a peaceful and happy life and to stay young longer and healthier to fight against illnesses, many scientists and medical experts recommend people to sit for meditation at least two sessions of ten minutes a day.

6. CONDITIONS AND SOURCES OF STRESS

Stress is probably the main source of illnesses. The symptoms of stress (in according to “Consumer Report On Health”, 2008):

- Mind: Anger, sad, irritated, frightened and insomnia.
- Body: stomach aches, headaches, exhaustion, stiff muscles, grinding teeth.
- Over eating, loss of appetite, alcoholic.

The two main sources of stress are:

a. Hereditary: Genes contain hereditary. Some are sensitive, easy to lose appetite or lose sleep. Others aren’t. Some are in the middle.

b. Situation and environment:

- Sexually harassed when young.
- Jobs and career,
- Overworking,
- Long term care for disabled parents or relatives, raising children
- Disharmony in the family.
- Traffic jam.
- Dirty environment

Cronic stress slows the growth in children and diminish the joy of

living and predispose many illnesses in adults, like hypertension and high cholesterol...

7. PRACTICING MEDITATION TO RELIEVE STRESS

Sit on a cushion, a chair or a cement step of a staircase. The main purpose is to be aware of any thing appearing in the mind. If you are able to sit in the lotus position or half lotus it is better, but that is not essential. Please refer to the meditation positions in the booklet in “Meditation, Health and its tangible effects”.

Apart from the 4 methods of meditation presents in the above article, you can practice breathing by diagrammatic breathing technique, called ĐÀN ĐIỀN (Thở bụng) [9].

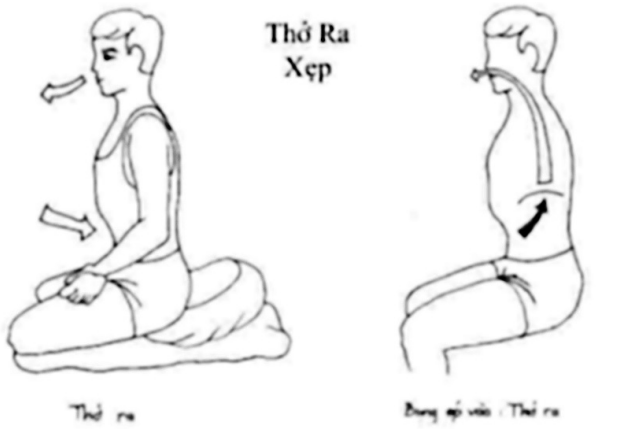
You can practice this breathing technique by sitting on a chair, a cushion, a cement step or even lying down, whichever posture suitable to you.

Diagrammatic breathing technique: breathing in by the nose and observe the abdomen expanding, and breathing out, the abdomen falling.

Breath in and out evenly.



Breathing in, abdomen expanding



Breathing out, abdomen falling

8. MEDITATION AND THE BRAIN

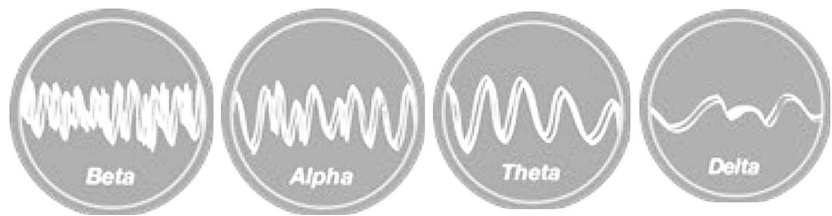
The relationship between mind and brain is a complex issue. Here are some sketchy details about the relationship of the two, so readers can recognize the “progress” when practicing Meditation.



Meditation practice session of 61 finalists of 19 different Ethnic groups in the beauty contest at Vinh Nghiem Pagoda, Vietnam, 29.11.2011

a. What really happens when you meditate

When you sit down to meditate, your brain waves shift and enter a deeper level of consciousness.



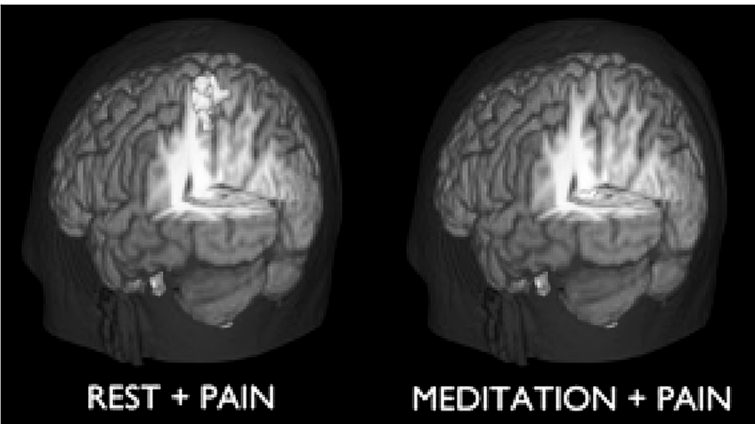
Brain Wave Frequency (cycles per seconds)

14-21 cps and higher. 7-14 cps. 4-7 cps. 0-4 cps.

[“Mind” waves 14-21+ cycles per second. 7-14 giây. 4-7 giây. 0-4 giây]

Before meditation, the brain wave frequency is from 14 cps to 21 cps [Beta]. When in meditation the mind is much calmer, the brain wave is about from 7-14 cps [Alpha]. When the Mind is really in big calm, the brain wave is about 4-7 cps [Theta], and finally when the Mind in the Absolute Calm (ĐẠI ĐỊNH), the Brain Wave is only from 0-4 cps [Delta]. Delta is the best level for a meditator. In this situation the meditator is entering the first level of preliminary level of minfulness (Entering the stream).

b. Meditation and Headaches



In the first figure, non-meditation and severe headaches [yellow]. In the second fig, in meditation (meditation), the headache is about to disappear [yellow] .

(Meditation has long been touted as a holistic approach to pain relief. And studies show that long-time meditators can tolerate quite a bit of pain [Source: Robert Coghill/Wake Forest University School of Medicine] .

The technique presented here is “Thiền sức khỏe” (meditation for health), NOT “Thiền giác ngộ” (meditation for enlightenment) therefore there will be no serious side effects. Those who practise Tịnh Độ (Pure Land, Reciting Buddha’s names) or Tibetan “Mantras” all have similar results and the meditators may enter the Big Calm. Therefore practising Zen Meditation, or Reciting Buddha’s name or the Mantras, would have the same effects in healing illnesses and make people happier. In addition a healthy diet and regular exercises are all essential in keeping us healthy.

Ironically there are a lot of Vietnamese senior monks who should have been much healthier than the general public. But this is not the case. Why this irony? First of all, the diet regime of the senior monks are usually not healthy. Their staple food is cooked by volunrary staff (Công quả) which is not as healthy or as nutritious enough for the body, either too much sugar, too much salt or oil. Their work load is also heavy and the lack of exercise is another reason. Fortunately without practising Meditation the result could have been much worse.

CONCLUSION

In recent years more and more scientists and medical experts have been interested in meditation and meditation has become the mainstream treatments in many American hospitals. There have been discoveries that Mind and Body are interrelated. They conclude that Meditation could reduce stress which is one of the main causes of illnesses.

Nobody can espape Aging, Illnesses and finally, Death. But eveyone wishes to have a heathy life but wishful thinking is not enough. We should set aside some time to practise meditation regularly.

Traditional medicine, herbal or western medication all have their limits, may cause many side effects and are obviously very costly. Taking medication if it is required, together with two or three sessions of meditation of 20 minutes each day, and exercising regularly would be enormously beneficial to our Mind and Body alike. We would be more beautiful physically and more intelligent, would live a longer happy and healthy life, slow down the aging process and contract fewer illnesses.

Benefits to individuals mean benefitting the whole society, practising meditation would contribute to our country renovation. The country will be prosperous, the standard of living of people would be higher, the health budget would be reduced enormously and the younger generations would be much more energetic and more intelligent. Practising meditation costs almost nothing except a little time that you set aside for the practice ... Enormous benefit yet with minimal costs.

Because of these reasons, I would suggest the Congregation of Vietnamese Sangha to conduct a training program for young monks and nuns as well as for lay followers, and eventually send them to the remote areas to propagate the Dharma. Meditation centers should be established in every pagoda in the country where a large number of people still suffer serious illnesses. The cost of establishing these centers is virtually minimal. This is the Buddhisatva's Way of practicing the Dharma and a big contribution to the welfare of many sentient beings in this world and surely, it would contribute to World Peace.

A few words to our Readers

Disclaimer: I have done this research paper for the benefit of readers with evidence presented by scientists and medical experts in the advanced countries. But when practicing, you should consult with a Master or Masters in meditation to avoid serious mishaps.

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