

# HEART DISEASE

## SCIENCE AND SPIRITUALITY



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## Introduction

*"The art of integrated living consists in the spirit of intelligent cooperation between nature and spirit. Nature is blind without spirit; spirit is lame without nature.... Nature and spirit, by virtue of their purposive togetherness, can make life gloriously meaningful."*

Science is defined in the *Oxford Dictionary* as the systematic knowledge of physical and natural objects based on self-evident truths. In fact, it is a systematic observation and study of the manifestations, physical and material, of all that exists in the universe. Scientific temper is not merely intelligence, it is also reason, an objective approach free from all bias. Logical and rational thinking is vital to any scientific pursuit. However, when we question 'why' in relation to all things, there is a chance of a stalemate leading to a futile controversy. On the other hand, the inquiry, how a particular thing happens, usually stimulates a logical approach.

Matter and mind, atom and self are the various descriptions of the dual aspects of reality of all that exists in the universe. The ancient Indian scriptures talk about these dual aspects of reality. The seers of all the lands have observed that an easily palpable dimension of duality is

impermanent reality and the invisible aspect is the permanent reality, ground substance of all that exists. The celestial bodies - suns, moons, stars - and oceans, rivers, mountains, plant kingdom, animal kingdom and human beings are all the varied and multiple manifestations of that ground substance, the singular reality that pervades all - synonymous with the vedic concept of spirit or Self or *Atman* or *Brahman*.

Both realities, permanent and impermanent, co-exist. The existence of matter or atom, without Mind (the Universal Mind) or Self is unthinkable and the presence of pure Mind or Self is a matter of imagination. Physical sensory organs cannot experience that Self. They derive from that source. All that is visible to the naked eye and all that is available to the deepest scientific inquiries up to the very atom and beyond atom to the farthest imaginable limit that the scientific research may probe, still cannot fathom the source from which all emerge. It keeps on eluding all scientific efforts. However, physics of the 20th Century points its needle to the singular element as the basis of all that exists. Science and spirituality seem to be two ultimate points on the circumference of life which are farthest from and yet closest to each other. (*'taddure tadvantike'*) When was spirituality ever unscientific? When was scientific inquiry exclusively material? When Sri Aurobindo talks of 'spiritualising matter', does he not also refer to the union of the two? Even medical science has stemmed from the human consciousness which is, at bottom, spiritual. It is in the reconciliation of the two that we have an integral way of life. For, science and spirituality are two sides of the same coin if not synonymous.

One would wonder how these thoughts or postulates relate

to the management of coronary heart disease which is our chief concern. They have assumed relevance in the light of recent research findings and scientific data emerging from the pioneering work of Dr. Dean Ornish and many others in the field of coronary heart disease including our experience with the Universal Healing Program which we started at Ahmedabad (India) 5 years ago, on October 2, 1991.

The mind in the usual parlance is the faculty of the brain which is part of the human body and is therefore an impermanent physical reality. Mind which is Universal Mind is all pervading, and is synonymous with vedic terms, *Atman* or *Brahman*.

In the treatment of coronary heart disease it is astonishing to find how the inner strength of an individual is a vital helpful factor in improving his physical state. Ordinarily the spiritual aspect of an individual lies unrealised and unexploited in the fierce struggle of existence where the activities of the body and the mind reign supreme. The sole occupation with the activities of the body and the mind alienates an individual. The more intense the activity, the greater is the tendency of negative and harmful emotions of anger, hostility, resentment, jealousy, fear, vanity, selfcentredness and cynicism to flourish. It is intriguing to note how these negative emotions affect the health in general and the heart in particular, resulting in the narrowing of the coronary arteries, increase in the stickiness of blood elements, increase of bad cholesterol (LDL) and reduction of good one (HDL). These emotions also lower the heart rate variability (HRV), increasing the proneness to sudden death in patients of heart disease with a history of heart attack.

Shri Swami Satchidananda of the Divine Life Mission settled in Virginia, USA, has evolved a simple set of yogic

exercises of the body and mind so that the spirit automatically shines forth. The exercises involve stretching and relaxation of the various parts of the body, leading to progressive deep relaxation (*Shavasana*). During *Shavasana* all the muscles of the body are stretched and relaxed from toe to head, keeping one's awareness on the group of muscles being stretched and relaxed. *Shavasana* is followed by 3 to 5 minutes of meditation in which a participant assumes a relaxed sitting posture, and with his eyes gently closed, keeps his awareness to the natural process of breathing without making any effort to breathe in any special way. As the participant tries to keep his awareness on the flow of breath through his nostrils, it may wander to some thoughts. This is natural. Each time that the awareness wanders to the thoughts, it is gently brought back - lassoed back - to the process of breathing. *This gentle process of bringing back the awareness to breathing is the essence of meditation.* This appears very simple. However, when practised it gives a great feeling of wellbeing and bliss to the doer. There is nothing mystical about meditation. Meditation is simply the practice of being in the present moment. During meditation one is fully awake in the present moment. This liberates one from the bonds of the past and the future. While meditating, when you are one with your breath - the life force - you experience oneness, which kindles love, compassion, forgiveness, and above all, freedom from fear.

This indeed is the quintessence of the Universal Healing Program discussed in detail in the chapters that follow.

Yoga literally means connectedness. However, connectedness has to be experienced to be believed. This experience has become a reality for UHP Participants who have been practising Yoga discipline twice a week, for an

hour, in the evening from 6 to 7 for last 5 years. The experience of connection is "Sanyoga" and the experience of separation is "Viyoga". The overall health and longevity have a lot to do with feeling of connectedness versus the feeling of separation. The feeling of separatedness breeds selfcentredness, hostility, cynicism and fear, which are toxic to the heart and health of immune system in general. An antidote to these toxins is connectedness, yoga. This is why yoga should be included in the curriculum of all education. It should be taught from childhood.

The Navajivan Publishing House have published our three books on the importance of yoga in management of coronary heart disease. *Primer of Universal Healing*, the first book, deals with the various aspects of the U.H. program, explaining each one in detail. The second book *Wealth of Food, Health of Heart* clarifies the concept of dieting without the feeling of deprivation.

Low fat vegetarian diet rich in complex carbohydrates (seasonal fruits, vegetables, lentils and cereals) may help in reversing the atherosclerotic process in coronary arteries. Non-vegetarian diet breeds separatedness and ills of separatedness while vegetarian diet promotes the feeling of connectedness which restores health. The third book *Heart Disease, a New Direction*, brings into focus the non-physical (psychosocial) causes of increasing incidence of coronary heart disease in the young. These causes include - sense of isolation, hostility, selfcentredness, cynicism, lack of social support, family and job stress.

This book puts forth the role of science and spirituality in the treatment of coronary heart disease and promotion of health and longevity.



# The Inner World of an Individual

*"What need of so much news from abroad,  
when all that concerns either life or death is all  
transacting and at work within us ?"*

- William Law.

By inner world we mean the concept of an individual about self and reactions of his mind to various happenings in day to day affairs. Of all our preconceptions about ourselves, the most basic is that there is a self. All of us give the highest importance to the self, making it the centre of our universe. We dedicate our lives to seeking self-fulfilment considering that to be the way to happiness. The thought of living in a different way seems unnatural or even threatening. What is needed is not self-denial or self-repression but the liberation from our mistaken notion of self. And the way to achieve this is by realising that what we call self is in fact ephemeral, a phenomenon in constant change. Meditation is a way to gain this insight.

Whenever a reaction arises in the mind to any outward happening, two types of changes occur at the physical level. One of them is readily apparent : the change in the character of breathing. The other is more subtle in nature : a biochemical reaction, a sensation, takes place in the body. If the sensation is pleasant, a wish forms to prolong and

intensify the experience. If it is unpleasant, the wish is to stop it, to push it away. **With proper training even a person of average intelligence can easily develop the ability to observe respiration and sensation. This allows us to use changes in the breath and the sensations as warnings to alert us to a negative reaction before it can gather dangerous strength. If we are mindful of our respiration and sensation, we easily emerge from negativity. Of course the habit of reaction is deeply ingrained and cannot be removed all at once. However, in daily life if we practise meditation, we notice at least a few occasions when instead of reacting involuntarily, we simply observe ourselves. Gradually, the moments of observation increase and the moments of reaction become infrequent. If we do react negatively the period and intensity of reaction diminish. Eventually, even in the most provocative situations we are able to observe respiration and sensation and remain balanced and calm. With this balance, this equanimity at the deepest level of mind, one becomes capable for the first time for the real action. The real action is always positive and creative. Instead of automatically responding in kind to the negativity of others, we can select the response that is most beneficial.** When confronted by someone burning with anger, normally one tends to become angry in return and the result is a quarrel. That causes unhappiness to both. But if one remains calm and balanced, one can help the other person to control anger and deal constructively with the problem.

Observing our sensations teaches us that whenever we are overwhelmed with negativity we suffer. Examining one's mind before taking any action is extremely important.

If we act from love, compassion and forgiveness we cannot go wrong.

Heartcentred living is living with understanding that we are all one at one level and in the interest of all lies our own interest. Whomsoever I hurt, I hurt myself in turn. This is alright in precept. However, this is experienced when one meditates regularly for 10 to 15 minutes daily and it leads to favourable changes in the body leading to good health. Mindcentred living (here, mind in small letters, mean local mind of an individual. Universal Mind is present everywhere, is non-local - not confined to space and time) is living with exaggerated concern of one's limited self. There is a constant threat to security, fear and uncertainty leading to anger, hostility and cynicism.

All this is crucial to the management of coronary heart disease. It has been seen in many studies that negative emotions of anger, hatred, resentment, jealousy, pride, egoism, decrease the heart rate variability (HRV) and increase 5-fold the proneness to sudden death, in the patients with history of heart attack. This happens due to biochemical changes in the body, increased secretion of catecholamines and increase in sympathetic tone. They also increase viscosity of blood due to increase in stickiness of the platelets. All these change occur through various chemical and neuro-hormonal reactions. These emotions also affect the health of the immune system and make the body prone to ill-health in general. As against that, the positive emotions of caring love, compassion and altruism promote healthy biochemical reactions leading to good health and longevity.

## Coronary Heart Disease

- Unsolved problem
- No unanimity of approach
- Competent doctors differ on management of coronary heart disease.

Heart has been considered the seat of emotions from the days of yore. No wonder, coronary artery disease which results in coronary heart disease is now considered to be the ailment caused by the defilement of spiritual qualities also. As the material progress abounds, with the neglect of spiritual qualities, the incidence of the disease increases. This was the cornerstone of philosophy of Ayurved in causation of disease. The pioneering work of Dr. Dean Ornish and many others including our experience with the Universal Healing Program has clearly shown that in the ultimate analysis the development of spiritual strength checks the progress of the disease at its roots. These observations are made with full regard for the physical aspects of the disease and its effective treatment by the physical measures - drugs and surgery when required.

The qualities of the spirit have been defined in all the scriptures of the world. However, the impact of spiritual qualities on the physical plane of the body and the mind has lately become quite clear in all biological sciences.

A patient of coronary heart disease (CHD) may have a strong family history, may be overweight, may be sedentary in habits, may be a heavy smoker or may be drinking alcohol in excess. He may have an abnormal lipid profile (high serum cholesterol, low HDL, high LDL) and may be suffering from diabetes and hypertension. If not all these, he may be overstressed with a lack of social support and feel isolated.

Efforts were directed to deal with all these aspects during the last fifty years, with measures like the change in food habits, cessation of smoking, reduction of alcohol intake, moderate exercise, medications which may reduce the level of cholesterol in the blood and clotting mechanism of the blood to low level. The control of diabetes and blood pressure has also been attempted with relevant medicines and hygienic measures. All these have made an appreciable impact on the course of coronary heart disease. Drugs which dilate the coronary arteries and interventions that dilate the obstructed arteries or bypass obstructed arteries have improved the quality of life of patients of coronary heart disease. However, a fundamentally important factor in the causation of CHD was overlooked in all these endeavours. These measures aimed at correcting the physical abnormalities failed to take note of the individual's inner world. That probably is the cause of limited success of the conventional measures in management of CHD.

The tell-tale causes of coronary heart disease operate in less than 10 per cent of the patients suffering from heart attack. In a majority of them a severe sense of isolation seems to play an important role. The sense of isolation occurs due to the mind-centred living with complete

disregard of the spirit. The mind-centered living is the outcome of material success. It tends to make an individual selfcentred. Anger, hatred, jealousy, resentment and greed are the attributes of a selfcentred individual. The influence of these qualities of the mind-centred individual on the body chemistry is totally against health. They increase the production of noradrenaline like hormones which diminish the heart rate variability which in turn results in the increased liability to sudden death of the patients recovering from heart attack.

We now have a very practical and useful tool for developing spiritual strength. Science has verified this tool. This tool is in-built in the individual's make-up. The cultivation of this tool does not require a herculean effort. A mere 15 to 30 minutes of stretching and relaxation exercises which are easy to perform by any individual - some are feasible even for a person who is bed-ridden with illness - spark off the fountain of spiritual strength in the individual who practises this simple discipline regularly.

A large number of Coronary Heart Disease patients recover fully from heart attack and are able to resume their normal life and lead a meaningful existence.

Chronic angina on its own does not result in sudden death. If it does not interfere with routine to a great extent, it does not come in the way of living a useful life. However, fear, that persistent angina may result in sudden heart attack, does a lot of harm. As long as ejection fraction of left ventricle which is most important part of the heart is within the normal range, there is no cause for concern. A lot of misconception prevails regarding percentage of ejection fraction, e.g. if the patient is reported to have ejection fraction of left ventricle 60%, he thinks, his

capacity is reduced by 40%. However, 50 to 60 % is a normal ejection fraction of left ventricle. Further, in the management of coronary heart disease the approach varies from doctor to doctor and from patient to patient. It all depends not only on the severity of the disease but also on the perception of the severity by the attending doctor. Dr. Dean Ornish's research during last fifteen years has thrown considerable light on the grey areas of coronary heart disease. He has conclusively shown that patients, even with advanced coronary heart disease, especially those who are considered technically unfit for surgical intervention are benefited by intensive medical management, comprehensive lifestyle changes and indepth stress management.

At one end of the spectrum there are patients of coronary heart disease with a very mild problem for whom most doctors recommend only medical management. At the other end there are patients with advanced disease, with severely compromised left ventricular function who cannot be helped by the available surgical techniques. For them also, the usual advice is to continue intensive medical management along with indepth stress management. The patients between these two extremes demand a judicious decision making. Some patients are advised bypass surgery whereas in others angioplasty is considered to be the most advisable approach. Some physicians would recommend angioplasty or bypass surgery only if the clinical symptoms, in spite of adequate medical therapy warrant a surgical approach; notwithstanding any disturbance in the coronary anatomy.

In a developing country like India, there are a large number of patients who cannot afford surgery. They also

now have a ray of hope in successful management of their problem. This involves patient's participation in indepth stress management consisting of abdominal breathing, Shavasana, meditation, visual imagery and group discussion with emphasis on sharing of feeling; of course along with intensive medical management. These observations are based on the result of the program of Dr. Dean Ornish and many other such programs conducted in the USA and the Universal Healing Program conducted at Ahmedabad, India for the last 5 years.

Certain aspects of coronary heart disease have become clearer during the last 25 years while investigating the problem with various scanning techniques like thallium scan, petscan and coronary angiography which shows the anatomy of coronary circulation. The narrowing of coronary arteries seen in the coronary angiogram on their own does not predict the progress or outcome of the disease in an individual. In quite a large number of patients the coronary narrowing and development of collateral circulation go hand in hand. Often, narrowing of the arteries seen in the coronary angiogram does not co-relate with the clinical picture. In some patients the ejection fraction of the left ventricle, i.e. in lay terms, the power of contraction of the left ventricle is within the normal range, in spite of a gloomy picture seen on the coronary angiogram.

The arteries which are termed critically narrow showing 95 to 99% narrowing lose their sinister significance in the light of new data which reveal that the complete occlusion resulting in infarction is almost always the result of thrombotic obstruction in a near normal vessel. Most occlusive thrombi begin on small plaque which seldom



produce angiographic blocks greater than 50%. The overriding consideration in all cases is the clinical evaluation of the patient.

The routine treadmill test done in a hurry after recovery from myocardial infarction to assess the state of coronary circulation is also the cause of undue concern to the patient as well as the attending physician. The experience of many rehabilitation centres all over the world shows that a large majority of coronary heart disease patients are able to meet the increased demand of the heart muscles when trained to do so in a rehabilitation laboratory under congenial conditions. The voluminous data collected all over the world very convincingly shows that a fresh thinking in the management of coronary heart disease is overdue. The article of Dr. Hegde in the proceedings of Royal College of Physicians of Edinburgh in July 1995 offers testimony to this. Rethinking is vital because it will not only cut down the enormous unnecessary expenditure of interventional procedures like angiography, angioplasty and bypass surgery but also reduce the avoidable panic in the patients' relations and the attending doctors.

All said and done, there will remain a core of patients who would benefit from intervention. However, decision for intervention should be made, based on the patient's symptoms and disability rather than merely on the blockages seen in coronary angiograms.

All the research in patients of coronary heart disease show that prevention of heart attack and probably an increase in the life span can be achieved through measures which diminish sympathetic activity and keep the clotting tendency of the blood at low level. The other landmark finding is that HRV is affected favourably by measures

which reduce sympathetic activity. These findings have brought indepth stress management in sharp focus.

It is our experience of last 5 years while conducting Universal Healing Program that almost all the patients who regularly practise abdominal breathing, *Shavasana* and meditation are benefited. The evidence of benefit is so strong that we recommend it as a regular prescription in our previous book, viz. "Heart Disease, a New Direction". The point worth emphasising is that the yogic disciplines have an effect like beta - blocker drugs. If the patient fails to do the exercise regularly for more than a month, the beneficial effect tends to wear off just as it would if the patient discontinues beta-blocker. There is generally an excuse put forward by the participants in the program that for a particular period of time they were occupied with very important engagements and so they did not find time to do yogic exercises regularly. This is a lapse which occurs because of lack of proper understanding of the importance of yogic disciplines. In reality, when a person is hardpressed for time he needs to do yogic exercises all the more. The time spent on exercises is very well compensated by the benefit that accrues, which increases the inner strength of the individual to face the challenging circumstances. This is borne out by several feedbacks of the participants of our program.

Normally, the whole program of light stretching and relaxation exercises, followed by *Shavasana* and meditation lasts for about 40 minutes. However, with experience, one can condense the whole program into 10 to 15 minutes only and yet have adequate benefit. Abdominal breathing can be practised almost anywhere and at any time. It comes very handy in bringing about tranquillity and

diminishing the overdrive of sympathetic activity. Shavasana which follows light stretching and relaxation exercises can be practised for mere 5 to 7 minutes. Meditation can be done either following Shavasana or on its own for 3 to 5 minutes only. All this is explained in the exercise section of 'Primer of Universal Healing' and 'Heart Disease, a New Direction'.

## Universal Healing Program

*"If the mind wanders, bring it back to the breath and gently replace it tenderly there. Breath is Prana. Even if you did nothing during your efforts at meditation but bring your mind back and place it again in prana, though it went away everytime you brought it back, your time spent during this effort would be very well employed".*

Dalai Lama's guru explained quite succinctly to the author (at a personal meeting in 1993) why a simple program of *Shavasana* and meditation is so effective. He said that **the concept of separate existence is the root cause of all strifes, diseases and fear of death. The concept of separate existence is nurtured and nourished by the activities of the body and the mind. We remain so engrossed in the activities of the body and the mind that we forget that we are the spirit as well. In reality, the spirit is permanent and deathless. The body and the mind of all of us are separate manifestations of that singular spirit. In *Shavasana* and meditation, when we learn to quieten the body and the mind, the qualities of the spirit are experienced. The separateness and all the strifes recede in the background and oneness shines forth. Coronary heart**

disease and for that matter, even cancer, thrive on the background of separateness and isolation. The feeling of oneness which occurs during *Shavasana* and meditation heals an individual.

We have been practising with a five-point program for the patients of CHD for the last 5 years in Ahmedabad, a metropolis of India. The program consists of low-fat vegetarian diet, modest exercise like walking on the level for 30 to 40 minutes, the stretching and relaxing of various muscle-groups of the body leading to progressive deep relaxation, viz. "Shavasana", meditation, visual imagery and group discussion with an emphasis on the sharing of feeling. An experienced yoga instructor teaches Shavasana and meditation. A qualified dietitian guides the participants and their spouses individually taking into account the dietary habits of the family. The presence of the founder cardiologist at each session inspires confidence in the participants. Towards the end of the program the participants share their feelings in a group discussion. In addition to the bi-weekly program, talks with visuals are held at intervals of six weeks. Nearly 2500 patients have participated so far and many more have used our books and cassettes with advantage. 150 to 200 CHD patients from all walks of life, in the age group of 30 to 70 years, both male and female in the ratio of 4 to 1, meet twice a week in the evening for one and a half hours for the program on a campus in tune with nature.

The five points of the program work in unison, each one supporting the other. While conducting the program the concepts of right diet, exercise, and the impact of comprehensive life-style changes have become clearer. Instead of emphasis on the total caloric value of the diet,

only limiting fat calories and the maximum use of calories from complex carbohydrates derived from vegetarian diet, appear to be the sound basis of dietetic counseling. (1). Complex calorie charts can be safely done away with. Modest exercise which can be performed by anyone is more beneficial than intensive exercise. Moreover, intensive exercise uses carbohydrates as fuel more than the body fat. Basal metabolic rate (BMR) decreases during intensive exercise regime which militates against weight loss. The comprehensive life-style changes which are considered impracticable have become easier through this program. Powerful motivation are the rapid improvements experienced by the participants through comprehensive changes.

The technique of "Shavasana" and meditation as practised in the program is extremely simple, easy to perform and yet effective in bringing about mental peace and fortitude. The very busy people who are fighting for time can also practise this yogic discipline for 10 to 15 minutes daily which improves the competence of the practitioner by an hour. There is hardly any excuse, hence, for not being able to spare time. In fact, the busier and more stressed the person the greater the need for practising this discipline.

"Shavasana" is a technique to relax the body which results in the relaxation of the mind. Breathing is central to all the three yogic disciplines, abdominal breathing, "Shavasana" and meditation. These disciplines are called "Yogic" because they connect the individual to one's larger self. They help him to realize his inner strength, soul force and real identity. Patanjali Yogashastra intuitively observes that the control of breathing controls the restless mind

which in turn controls the circulation. Normally, our breathing is involuntary and reflects the state of our mind. When our mind is not at peace, breathing is rapid and shallow. When the mind is at peace as during sleep the breathing is slow, rhythmic and abdominal. So when we consciously breathe slowly, rhythmically and abdominally, the mind automatically becomes calm. During meditation, one becomes one with breath, one with the life-force and this brings about an experience of the soul-force within oneself. The realization of the soul-force brings forth the qualities of the soul. They are love, compassion, and freedom from fear. It is easy to see that when these qualities develop, all the healthful changes occur in the body.

(2). Doctors and their trained personnel can teach these techniques in their clinics as a supportive therapy with great advantage.

Our experience with this program corroborates the research findings of Dr. Dean Ornish and others in U.S.A.

(3). It has been observed that after attending only 10 to 12 sessions over a period of 6 weeks, a majority of the participants not only report benefit in the number of episodes of anginal pain but are also motivated to make life-style changes, i.e. giving up smoking, alcohol and choosing low-fat vegetarian diet. Within three months their level of hostility drops remarkably.

The program is being conducted in a centrally situated, sprawling campus of a school with abundant greenery and peaceful atmosphere. The venue of the program is the prayer hall of the school with a covered roof and sides open to the green trees. We have been permitted to use this site for 2 hours twice a week for past five years without any cost. There are no stipulated fees for the program except a

token payment for registration of attendance. Competent retired executives offer their services voluntarily for the program. Three books in Gujarati - vernacular language of the state - and three books in English have been published by Navajivan Publishing House, Ahmedabad, established by Mahatma Gandhi. These publications are low-priced, affordable to every section of the society. Audio and video cassettes are also priced to cover the cost. The participants of the program have not to spend the consulting fees of the medical director, cardiologist of the program prior to admission. A large majority of the participants are patients of the other consultants of the city and consult Dr. Kapadia in the clinic run by another charitable trust where just nominal fee is charged by the trust. Moreover, in this trust-clinic (L.R. Cardiac Rehabilitation Center) some of the participants go through a rehabilitation program of gradually increasing exercise on a treadmill under the supervision of a competent physician. A great care is taken that the participants to the program continue with their physicians for follow-up.

The activities of the program are run under the auspices of a trust called "Universal Healing Charitable Trust". The main aims of the trust are:

- ❑ A holistic approach accommodating all measures of drug as well as non-drug ones - conventional as well as alternative therapies.
- ❑ To create mass awareness regarding coronary heart disease, and dispel unnecessary fear of the disease.
- ❑ To promote research and original thinking in the prevention, treatment and rehabilitation of patients with coronary disease.



- ❑ To simplify the treatment of coronary heart disease bearing in mind the cost effectiveness of all interventions.
- ❑ All the above efforts are made with the scientific temper without prejudice to the widely accepted current methods of treatment and prevention.

We now have 24 participants who have had triple vessel disease and who would have in a normal course gone for bypass surgery, and are now rehabilitated completely on maintenance medical therapy. They have adopted their life-style changes very willingly. In fact, they enjoy the new way of life and are full of confidence in their well-being. This has resulted in a savings of nearly Rs. 1,50,000 (approximately 5000 US dollars) per patient. The program including rehabilitation with all the guidance from the physicians, dietitians and the yoga teacher cost a meagre sum of Rs. 1,500 (approximately 50 US dollars) only.

We understand our limitations in not having PET scan like facility for monitoring the improvement in the coronary circulation to the heart muscles or have all the investigations like 2 D echo, computerized treadmill test and lipid profiles done routinely under one roof. However, routine ECG, treadmill test, 2 D echo and lipid studies are done by participants' physicians in the different laboratories. We maintain a regular register of attendance and try to get the forms filled up by the participants. In the summer of 1995, we analyzed the clinical records of 130 randomly selected patients and very satisfying data emerged from this study. The overall improvement in the number of anginal episodes, absence of hospital admissions during the span of 3 years and a very confident outlook on

life were the striking findings. Out of twenty-five patients who were advised bypass surgery three years ago, twenty-four feel so well now that they and their spouses feel that they will not require surgery at all.

We have at least 10 patients who were denied bypass surgery because of severe diffuse atherosclerosis in their coronary arteries making CABG technically difficult to perform. We have others with ejection fraction of left ventricle reduced below 20% who were considered unfit for CABG. All these patients after being on the program for more than one year have remarkably improved in their physical status. Their ejection fractions have gone up to 40%, they are able to lead a normal life.

Dr. Dean Ornish and others have documented several such patients of Coronary heart disease who have improved through comprehensive lifestyle changes and in-depth stress management program like the Universal Healing Program.

We wish to highlight the fact that programs like the universal healing empower the participants to make necessary lifestyle changes and increase their inner strength to face the vicissitudes of life. Our emphasis is on spiritual gain which automatically results in physical improvement. The spiritual gain is difficult to quantify.

One of the participants observes that now he is able to put up with his quarrelsome nagging wife. Another says he is able to cope with the irritable temperament of his boss better and is much less upset than before. Another observes that he is now less rigid in his views - he has become somewhat flexible. One executive remarks that his subordinates see a great change in his behaviour; he is more friendly and compassionate with them than before.

Some observe that they do not miss tobacco and do not crave for alcohol. They enjoy low-fat vegetarian food. Some say that they sleep without taking sleeping pills . . . and so on. All these participants admit of having less anginal pains than before. Their consumption of sub-lingual nitrates has decreased considerably.

Some of the participants of the Universal Healing program take part in cardiac rehabilitation program at L. R. (initials of the donor of the center) Cardiac Rehabilitation Center which is in operation since 1988. One cardiologist is in charge of the center. Dr. Kapadia and two other senior cardiologists of the city attend the center twice a week each. The center provides comprehensive cardiac rehabilitation with ECG monitored treadmill or bicycle ergometer exercise, dietary counselling, psycho-social counselling, patient education, and group discussion all under one roof. After explaining the pros and cons of various therapeutic modalities, if they are willing, we enroll patients of stable angina NYHA I to III, post MI patients, post CABG, post angioplasty patients having no contraindications to the treatment. The initial evaluation of every patient on entry includes the following :

- Detailed history and physical examination, resting ECG.
- Symptom limited maximal treadmill test, with usual medicines continued.
- Laboratory investigations like lipid profiles, fasting and post-prandial blood sugar, haemoglobin, urea, creatinine, complete urine analysis.
- Assessment of risk factor score based on Framingham study.

- ❑ 2 D echo cardiogram and coronary anioqram wherever indicated and feasible, considering the economic condition of the patient.
- ❑ Assessment of psycho-social status.

Patients are given ECG monitored exercise of twenty-five minutes duration (along with 3 minutes of warming up and cooling down exercise) on alternate day on a treadmill beginning at 60 % of the maximum heart rate achieved on entry TMT and gradually increasing the intensity of the exercise (by increasing the speed and/or elevation) as physical conditioning occurs. On an average the patients do 40 sessions by which time they usually acquire optimum fitness and benefit from the rehabilitation program. The exercise program is supervised by the experienced staff and cardiologists. Blood pressure and pulse rate are measured before, during and after the exercise. A graph of the patient's performance (workload in METS, pulse rate multiplied by systolic blood pressure, i.e. a double product and conditioning index) is plotted to assess the patient's progress. The conditioning index is measured as : Exercise workload in Mets, divided by Double product.

The conditioning index has been accepted as a reliable and quantifiable indicator of tolerance achieved. It is a valuable aid in assessing the benefit achieved by the exercise training. A sample study of 25 patients in this rehabilitation program was quite impressive. There was 228% increase in conditioning index; 59 % increase in exercise performance in TMT after 40 exercise sessions; 40% decrease in coronary risk factor score and 50% decrease in medications.

The disability in most patients with coronary heart disease persists even after adequate medical and surgical

management. Approximately only 10% disability is attributed to irreversible cardiac tissue pathology. The remaining 90% of the disability is due to various non-cardiac, more or less reversible factors. Therefore, a rehabilitation program for the patients with coronary heart disease must be comprehensive so that it provides medical management, reduce its risk factors, reverses physiological deconditioning and provides psychological counselling.

### **Evaluation on exit from the program :**

- ❑ For each patient, a graph is plotted of exercise sessions with respect to Double Product, workload in METS and Conditioning Index.
- ❑ A follow-up exercise tolerance test using the exercise protocol on entry is carried out to evaluate the improvement achieved.
- ❑ Lipid and blood sugar levels are re-estimated.
- ❑ Risk factor score including the body weight is reassessed.

According to the maximum workload and the conditioning effect achieved, each patient is advised to carry out a home exercise prescription to maintain the conditioning effect. A monthly exercise follow up and 6-monthly exercise tolerance test are advised.

L. R. Cardiac Rehabilitation Center has so far enrolled 1320 heart patients for rehabilitation and has done 14,400 patient hours of medically supervised ECG monitored exercise.

In summer of 1995 we compiled data of 113 patients (refer to detailed data) at random to study the feedback of the program. What emerged from this data was quite astonishing. In almost all the participants the fear of death

vanished and all had become very compassionate, friendly and co-operative in every sphere of life. All those who were advised CABG or angioplasty are now convinced that they do not need any such interventions. Their attending physician and their families are also happy about their clinical progress. They are able to control minor episodes of angina with abdominal breathing and overcome sleeplessness with "Shavasana" and meditation. Some observe that visualization after meditation helps them to increase their capacity to work without angina. Quite heartening information has emerged from the observations of the participants' spouses. All of them observe that there is no special diet for their spouses and their families have adopted a new way of eating which they enjoy without any feeling of deprivation. They do not have the fear of the disease anymore. They are confident that their husbands will continue to do well and would not lag behind in their pursuits. Their husbands have become less irascible. The situations which used to irritate them before do not upset them any longer.

The most crucial part in the management of CHD is to lessen fear and apprehension. (9). In the course of 35 years of practice, results of the conventional treatment coupled with fearless reassurance have been rewarding. In this context, Dalai Lama's observations made during his meeting with the visiting American cardiologist of Harvard who had gone to Dharamsala to study the benefits of meditation are pertinent. **The quintessence of Tibetan medicine, according to the Lama, consists of three conditions vital to the curing of any disease.**

- a) The doctor's faith in himself to cure the patient
- b) The patient's faith in his doctor that he will cure him
- c) The doctor's karma - his skill and its application with love

It is important to note that Dalai Lama stresses that faith of the doctor in himself that he will be able to cure the patient as the foremost of the above three vital conditions. The oriental yogic method of healing is now established. A chain of heart reversal program centers exist in U. S. A., Canada, Australia and India.

There is little room for controversy regarding the usefulness of this approach to complement the conventional one. This approach is so vindicated that not making it a part of the conventional treatment would mean incomplete management of CHD. No less an authority than Dr. Larry Dossey, Co-Chairman, Alternative Medicine National Institute of Health Bethesda, Maryland, U. S. A., in his introductory remarks to the books on UHP has this to say :

"India, where Yoga was birthed, is now rediscovering its power to reintegrate mind, body and spirit, and to "change the flesh" in the process. This does not mean, of course, that we should abandon the conventional science, for it, too, is a powerful tool to change the body; and the beauty of UHP is that it honors both body and spirit, yoga and conventional science. The Universal Healing approach to treating heart disease is inherently nonviolent and gentle by nature. This noninvasive, nonsurgical approach has been proved not only to stop the advance of heart disease but actually reverse it. ..."

"In my opinion, it shall lead to a form of medicine more glorious than any previously known to the human race.

India should be honoured that its spiritual heritage is being illuminated in this program; and the West should be grateful that this wisdom is being shared with us."

The frontiers of medicine are advancing. Consciousness and the spiritual inner strength of the healer, i.e. the physician and the healed are acquiring crucial importance. Scientific evidence of such a comprehensive approach is mounting. It is difficult to turn a blind eye to this development which has transformed medicine in the last decade of this century. Let us pay heed to it.



# Heart Rate Variability

## (HRV)

The altruistic changes assume a great significance in the context of their effect on the Heart Rate Variability (HRV) which is of late a subject of frontline research. (4). The HRV is not cardiac arrhythmia or irregular heart beats. Rather it is a variation in the sinus rhythm itself as it changes from beat to beat. Mathematically, HRV is the fluctuation of the heart rate around a mean heart rate. In sinus rhythm each beat has a variable distance from the next beat. In other words the time between beats 1 and 2 can differ from that between beats 2 and 3, 4 and 5 and so on. This beat to beat time variation is called HRV. This variability can be small and erratic or large and balanced. The disturbance in HRV is a sensitive index of mind and body malfunction. (5)(6). Positive emotions like caring - love, appreciation and compassion allow a smooth, even and harmonious HRV. The Negative emotions like anger, frustrations, envy, worry, anxiety, fear, guilt and sadness cause erratic and non-harmonious HRV. (7). In a normal person, the HRV is rhythmic, with a value of more than fifty miliseconds on average between beats. A Multicentre Post infarction Research group study found that low HRV, less than 50 miliseconds, has a 5.3 times higher chance of

sudden death. (8). This is due to dampening of the parasympathetic pathway. The erratic HRV puts extra wear and tear on blood vessels and heart. HRV has corresponding changes in the cellular DNA and the immune system also. The beat to beat variation can be captured by the computer screen and studied in detail. This is the modern medicine's recent gift in elucidating the effect of stress on health and longevity. The yogic disciplines admirably bring about the dampening of the sympathetic pathways and has beneficial effect on the HRV.

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## Feedback

*"Human beings become humane only when they have learned to feel with others, for this is the meaning of compassion. It is the crown of consciousness marking the king among men; but it is a crown which any commoner may lift to his own head. That crown does not signify conquest of power over others, but conquest and power over the self."*

- One of our distinguished participants, who would like to remain anonymous, who once held a very responsible executive position during his active years and now enjoys a fruitful retirement, keeping himself engaged in the various social activities, has this to observe about science and spirituality in coronary heart disease.

"How does spirituality help me along the course of living with coronary heart disease ? In the first instance, when I learnt that I had coronary heart disease I received the news with complete cool and command over my mind and body. I thought I should undoubtedly look for the best expert available to me, and develop and retain faith in him as a friend and guide. I should follow his advice and go through the

necessary investigations with a lot of confidence and optimism. During diagnosis and prescription of treatment should the doctor take a narrow anatomical view of my ailment, I would enter into a dialogue with him as to what kind of apparent risk I would have to take. For instance, if the doctor advised immediate bypass surgery for me in view of the serious clogging of arteries I might request him to consider my faith in alternative approaches like that of Dr. Dean Ornish in the USA or Dr. Ramesh Kapadia in India.

"Over time, if a large number of patients can develop a meaningful dialogue with their doctors on the role of methods that increase the inner strength of the patients there is a good chance of doctors developing a holistic perspective. The spiritual outlook of the patient may thus yield rich dividends. "When a doctor is already oriented to a holistic, spiritual and humane approach, he may be able to help his patients to build up courage and confidence with great ease. Dr. Ramesh Kapadia's patients are singularly lucky in this respect. His long experience with a wide spectrum of coronary heart disease cases constitutes the foundation of his unique mission. The main strength of his work and achievements derives from his deeply holistic and spiritual outlook of life and work and search for new knowledge combined with extraordinary willingness and ability to learn from every new experience. His patients have gained useful information, insight or perspective from him whenever they met him personally. Some of his patients regard their coronary heart disease ailment as

a gift of God because it led them to Dr. Kapadia who inspired them to develop a spiritual outlook or reinforce their existing spirituality. These include some patients who have had almost written their life off in the prime of their youth. They have been able to return to their normal social and work life due to scientific-spiritual orientation they received from him. "It may be useful here to narrate my experience as a patient in synthesis of scientific and spiritual aspects of human life during '*Shavasana*' and '*Meditation*' as practised in the Universal Healing Program.

"*Shavasana* is preceded by light exercises of stretching and relaxation of various limbs. During *Shavasana* this process of stretching and relaxation continues. At the end of it, it is suggested that the relaxation of the body leads to the peace of mind which is easy to understand and experience. Then one is asked to shift one's total awareness to *prana* (breathing process) and witness it. At this stage one may ask what *prana* means to one's body. The body cannot survive without *prana*. The end of breathing is the end of existence. But the physical air we breathe in and out is still there all over the dead body and reaches all its recesses through the pores and tubes. All that air is however useless. The body begins rotting. So, breathing involves an energizer which governs the individual's ability to live. Who is this energizer? Science seems not to know. Here, spirituality takes over.

"When the experience in *Shavasana* is sufficiently and intensively internalised, meditation easily yields a blissful experience of peace and joy. Sitting where

you are, you experience total contentment. You do not want anything. You acquire the capability and confidence to withstand any kind of physical and mental pain. Your tensions and anxieties are on the run. Your coronary arteries and other parts of your anatomy will have no choice but to behave themselves. If they still do not behave, you will do well to remember that chaos and turbulence are an integral part of order in nature. So one can perhaps manage to live happily with chaos also. You feel at peace with yourself. Meanwhile you continue to respect science for what it is and what it can tell us about everything we need to know.

"In conclusion there is much we can learn from Marty Kaplan, a molecular biologist of Jewish origin who had become a confirmed agnostic during his education at Harvard University. Later, he turned to meditation and faith in God. He reflects :

'What attracted me to meditation was its apparent religious neutrality. You do not have to believe in anything all you have to do is do it. The spirituality of it ambushed me. Unwittingly I was engaged in a practice that is at the heart of religious mysticism for millenia. To separate 20 minutes from the day for silence and meditation is to worship, whether to call it that or not, to be awaked to the miracle of existence - to experience.'

- A male, aged 58 years, with two vessel disease, who was advised angioplasty three years ago, has been attending our program regularly twice a week. He became free of pain and was on maintenance therapy

for hypertension. However, his lipid profile showed increased cholesterol level of 280 mg % and low HDL of 36 mg %. He was advised to take lipid lowering agent. He frequently travels abroad on business tour. In June 1996, he got severe chest pain at Paris airport and was taken to an emergency room of a hospital in Paris. He was diagnosed to have threatened inferior wall infarction. Thrombolytic therapy did not relieve his pain and an emergency coronary angiography was done which revealed the critical narrowing of right coronary artery. An emergency angioplasty was done. All this happened on 8th June and he was discharged on 14th June, symptomless. He observed that in spite of severe pain in a foreign country he kept calm and felt confident from the start that all would be well. His son who was accompanying him, was surprised with the quiet demeanour of his father throughout this episode. He returned home on 15th June 1996. He attributes all the calm and confidence to the strength he derived from the Universal Healing Program. The doctor in Paris who treated him advised him to keep his cholesterol level in blood below 200 mgm% either by dieting or with the help of lipid lowering drugs.

The case history underlines the fact that the program is not a panacea. If the participant neglects the basic tenets of prevention he may get into trouble. All the same, meditation did give him enough inner strength to face acute emergency in a foreign land with equanimity and confidence.

- This is what the wife of another participant has written to us: "My husband underwent bypass surgery for triple vessel disease in 1992. He joined the



Universal Healing Program after bypass surgery. Within a short time of joining the program he observed that the fear of the disease diminished. He began to take all events in his stride. For the first one year after the bypass he used to get some chest pain. Now it is rare. He enjoys low fat diet. Encouraged by the changes taking place in my husband, I joined the program 2 years ago. I also experience great peace of mind. Restlessness in me has lessened. Now I adjust my work at home so that I keep every Tuesday and Friday evenings free to attend the programme."

This account of a patient shows that heart surgery did not completely relieve him of the symptoms. The spiritual strength derived from the program made a considerable difference to his sense of wellbeing. Moreover his spouse also joined the program and gained peace of mind.

- The account of a retired senior insurance executive has also a message about the importance of adherence to the program in making and sustaining useful lifestyle changes. This participant who was a chain smoker, smoked about 35 cigarettes a day till he got a heart attack in early December 1992. He was also grossly overweight, weighing about 85 kgs with the height 5'-6". He joined our program in January 1993. He gave up smoking, reduced his weight to 75 kgs and became a pure vegetarian and improved his treadmill performance. From the middle of 1995 he gradually became slack in attending the program. This resulted in over-eating, increase in weight and increase in cholesterol level of the blood. Not only that, he became irritable and experienced some

discomfort in the chest. He was cautioned by his physician and he started attending the program regularly from the beginning of this year. Again he began to follow a low fat vegetarian diet, lost some weight, became cheerful and, in his own words, "back to a happy situation". He observed that the program works like an effective drug which when discontinued results in recurrence of symptoms. The case underlines the importance of consistency in following the program.

- An autorickshaw driver, aged about 35 years, who had chest pain on 11th November, 1995, was admitted to a city general hospital. His ECG showed non-transmural anterior wall infarction. He had no diabetes or high blood pressure. His serum cholesterol was normal. However, his HDL was low and he was under great financial stress during the last one year. He joined the Universal Healing Program on 5th March, 1996. After a month of joining the program he observed that he had no chest pain. He had given up smoking and relished low fat food and felt fully confident that he would continue to do full time work as an autorickshaw driver. His treadmill test was also normal. In this case, psychosocial factors seem to have played an important role in the causation of heart attack. It also shows how meditation can help to gain freedom from the fear of disease and make changes in lifestyle with a smile.
- A 45 year-old white collar worker with a strong family history of the coronary disease and serum cholesterol level of 265 mg%, has been with the

Universal Healing Program for more than 3 years. Before joining the program he was very short-tempered, and given to overeating and was overweight. He was always in haste to do any work and had the lurking fear of premature death due to heart attack. Now for the last 2 years his cholesterol has been below 200 mg% without the help of any lipid lowering agent. He now feels less tense at work, helps his wife in daily chores, takes interest in his children's education, works amicably with his boss and colleagues; he is polite to the customers; his weight is now normal; he enjoys his low fat food and has become moderate in his habits. He looks out for opportunities to help others, especially old and handicapped, and feels happy at the progress of others. He has gained considerable control over his anger. He now likes to pray and enjoys prayer.

The case demonstrates how meditation enables a participant to overcome hostility. It also shows how the development of the feeling of love, compassion and altruism results in favourable changes in the physical condition.

- Another regular participant of our program, a male, 65 years of age, with coronary heart disease who attended our program twice a week with his spouse, astonished us when he came to see us after his absence for two months and said, "I have some happy news to convey to you. We were not able to come to the program because my wife was diagnosed to have cancer of breast 2 months ago! She was advised radiation therapy. The doctor attending her was pleased to see that she tolerated radiation therapy

without much side-effects. She now feels much better. Her doctor is satisfied with her progress. We will be attending the program regularly from next week. In spite of this diagnosis, we kept calm and did everything what was advised by the doctor. The doctor commented on our courage and coolness. We attribute all these to the inner strength we have cultivated due to this program." What an example of inner strength!

# A Study and Data Analysis

## A STUDY OF 113 MEMBERS COLLECTED THROUGH SELF ADMINISTERED QUESTIONNAIRE

We have conducted two studies. The first one was conducted in Feb. / March 1995 and the other in April 1996. A self administered questionnaire was given to the participants who were selected at random. Based on their replies, we compiled data and prepared tables given here. An attempt has been made to study the subjective feelings and the perception of changes in their ailments/attitudes after going through program.

In the first study, 113 participants who had attended the program regularly for more than six months were given the questionnaire while in the second, 29 participants who were advised intervention before joining the program were selected.

The participants were divided into five groups in the first study :

(1) AIU : Undergone intervention, bypass surgery / angioplasty

- (2) AINU : Advised intervention but not undergone
- (3) H A : Had heart attack
- (4) I P : Ischemic pain (Angina)
- (5) B P Only high blood pressure

In the second study, the participants were divided into two groups :

- (1) UI : Undergone intervention and then joined the program
- (2) AINU : Not undergone intervention, instead joined the program

Majority of patients in the first study were those who had Ischemic pain and joined the program to avoid heart attack or future intervention. Next came those who were advised intervention. Although they could afford it, they preferred to join the program and reverse the disease by this alternative. Others were of other category.

Age Group : The age group is 31 to 80 years and majority between 51 to 70 years.

Walking : It is most striking to see that 94 % of the study group have taken to walking exercise and have understood the importance of the same.

Diet : Majority of them have changed their dietary habits as per the counselling of our dietitian and are satisfied with the present diet.

Choice between intervention and our program : As can be seen, the 70% of the AINU participants in the second study could easily afford intervention but opted to join the program and seek an alternative.

Future Intervention : It could be seen from the above that they not only opted for this alternative but had confidence in the program - nine out of eleven are confident that they will not have to undergo surgery.

Clinical changes : Some of the clinical changes that have been observed are :

- Weight loss
- Control of high B. P.
- Decreased cholesterol with increase in HDL
- Reduction in angina ( Ischoemic Pain)
- Improvement in stress test
- Reduction in medicine dosages

Life style changes : Participants observed reduction in

- Feeling of isolation
- Anxiety of future
- Worry about social support
- Worry of death / disease
- Mental / physical tension

An important observation is that regularity in doing the program gives maximum benefit.

Data for presentations - collected during february/march 1995 through a self administered questionnaire.

Collected information - characteristics, daily activities, nature of physical ailments, tests undergone, underlying attitudes. Value-orientations of the participants.

Have no longitudinal or control group study.

Attempt made - study participants' perception of change in their ailments attitudes - after joining the program.

## **Classification**

AIU	Undergone Intervention - Bypass surgery / angioplasty
AINU	Advised intervention -but not undergone
HA	Had heart attack
IP	Ischemic pain
BP	Only high blood pressure

### Age Distribution

	AIU	AINU	HA	IP	BP	Total	%
31-40 yrs.	—	2	1	—	—	3	2.7
41-50 yrs.	1	3	3	6	1	14	12.4
51-60 yrs.	5	4	6	19	9	43	38.1
61-70- yrs.	6	13	7	14	6	46	40.7
71-80 yrs.	—	2	1	2	2	7	6.2
Total	12	24	18	41	18	113	100
%	10.6	21.2	15.9	36.3	15.9	100	

### Sex Distribution

	AIU	AINU	HA	IP	BP	Total	%
Males	11	22	18	29	12	92	81.4
Females	1	2	—	12	6	21	18.6
Total	12	24	18	41	18	113	100



### Daily Walk

	AIU	AINU	HA	IP	BP	Total	%
No	—	8	1	3	5	17	15.3
Yes	12	16	17	37	12	94	84.7
Total	12	24	18	40	17	111	100

Missing Observations : 2

### Feeling of Isolation

	AIU	AINU	HA	IP	BP	Total	%
No	10	16	13	28	11	78	77.2
Sometimes	1	6	5	6	3	21	20.8
Mostly	1	1	—	—	—	2	2.0
Total	12	23	18	34	14	101	100

Missing Observations : 12

### **Anxiety about the future**

	AIU	AINU	HA	IP	BP	Total	%
No	7	13	12	30	13	75	78.1
Sometimes	3	7	5	4	1	20	20.9
Mostly	—	1	—	—	—	1	1.0
Total	10	21	17	34	14	96	100

Missing Observations : 17

### **Worry about Social Support**

	AIU	AINU	HA	IP	BP	Total	%
No	9	16	14	29	12	80	84.2
Sometimes	—	3	3	6	2	14	14.7
Mostly	—	1	—	—	—	1	1.1
Total	9	20	17	35	14	95	100

Missing Observations : 18

## Measurement of Different Factors

A = Always, S = Sometimes, N = Never

		A	S	N
1.	<b>Work Concern</b> Do you get angry and upset if people you expect to follow your advice / instructions, fail to do so ?	16	73	20
2.	Do you feel bad and worry when you are unable to do the work entrusted to you ?	51	46	10
3.	Is it difficult for you to tolerate sluggishness and procrastination of persons with whom you deal ?	17	55	35
4.	Do you think that you are much more cautious, tense and strung-up than necessary ?	24	56	30

		A	S	N
5.	Do you worry about your diet and its effect on your body or health ?	40	49	20
6.	Do you try to ignore what is said in anger by you or to you ?	74	25	8
7.	Do you consider yourself a happier person than many others ?	57	41	10
8.	Do you feel that you are a relaxed and a happy - go-lucky person ?	44	52	10
9.	Do you feel that other people are taking advantage of your generosity ?	15	59	32
10.	Do you worry as to what will happen to your family members in your absence ?	17	40	50

A = Agree, D = Disagree, N = Neutral

	<b>Accommodativeness</b>	A	D	N
1.	To adjust with the thinking and behaviour of others is the best way to have a happy family life	101	4	4
2.	In the long turn, hostility towards anybody harms one's own self	108	3	2
3.	One ought to discuss most matters with the members of his family	109	3	1
4.	<b>Fatalism</b> It is easy to lose confidence in one's ability	49	48	14
5.	<b>Isolation</b> No one cares much these days as to what happens to you	52	43	16
6.	Life is just one worry after another	63	34	10
7.	There is really no point in living any longer	9	82	17

## Participation in UHP

Do you attend the programme regularly ?

1.	Yes, regularly	66
2.	Yes, mostly	35
3.	Regularly in the beginning, but irregular later on	5
4.	When convenient	3

**Do you perform light exercise, Shavasana and meditation at home ?**

		Regularly	Sometimes	No
1.	Light exercise	42	43	17
2.	Shavasana	38	51	17
3.	Meditation	37	44	15

## Improvement Scores

		Improve- ment	No Change	Deterio- ration	Not Appli- cable
1.	Weight	38	59	1	3
2.	Cholesterol	28	25	7	17
3.	Triglycerides	16	6	3	29
4.	H.D.L.	18	7	4	23
5.	Cardiogram	43	23	2	10
6.	Stress test	22	12	1	28
7.	Dose of reg- ular medicine	33	46	—	3
8.	Sleep	43	46	3	7
9.	Speed of climbing stairs	51	34	3	4
10.	Opinion of family members regarding your insis- tent nature	33	19	5	22
11.	Mental stress	73	9	1	9
12.	Getting angry frequently	60	9	3	19

		Improve- ment	No Change	Deterio- ration	Not Appli- cable
13.	Tolerance for unpleasant matters	58	21	4	10
14.	Pain in chest	42	8	1	21
15.	Speed of walking	48	39	4	1
16.	Desire to eat	43	41	4	7

**Do you ever think that, given the current condition of your heart you will have to undergo angioplasty or bypass surgery in future?**

	AIU	AINU	HA	IP	BP	Total	%
No	8	21	15	34	14	92	92
Yes - Sometimes	—	2	1	4	—	7	7.0
Yes - Mostly	1	—	—	—	—	1	1.0
Total	9	23	16	38	14	100	100

Missing Observations : 13



**Randomly selected 29 participants of U.H.P. who were advised Intervention before joining the program**

18	UI	Undergone Intervention before joining U.H.P.
11.	AINU	Advised Intervention but not undergone, instead joined U.H.P.

### **Sex Distribution**

	Males	Females	Total
U.I.	17	1	18
A.I.N.U.	10	1	11
Total	27	2	29

### **U. H. Program - Attendance**

Regular	24
Once a week	1
2/3 times a month	3
Rarely	1
Total	29

**Do you perform at home light exercise/Shavasan/meditation?**

**AINU**

	No	Sometimes	Regular
Light exercise	1	3	7
Shavasan	2	4	5
Meditation	—	5	6

**U.I.**

	No	Sometimes	Regular
Light exercise	1	6	11
Shavasan	5	8	11
Meditation	4	6	8

	AINU		UI	
	Yes	No	Yes	No
1. Do you do Shavasan meditation when you get angina or have any problem?	7	2	8	10
2. Do you walk regularly?	10	1	16	2
3. Before joining the UHP were you walking regularly?	9	2	12	6
4. Has there been a change in your diet after joining UHP?	9	2	12	5
5. Are you satisfied with your present diet?	8	3	10	6

### **Economic Status of AINU**

Could you afford the cost of Intervention?

1.	Yes, easily	6
2.	Could somehow manage with some difficulty	3
3.	No, require financial assistance	1
4.	Not replied	1
	Total	11

### **Changes in AINU participants after joining UHP**

		Yes	No	No Change	NA*
1.	Weight loss	8	1	2	—
2.	Control of B.P.	8	1	1	1
3.	Decreased Cholesterol	6	1	2	2
	Increase in HDL	1	1	1	8
	Decrease in Triglycerides	3	1	1	6

		Yes	No	No Change	NA*
4.	Control in chest pain	8	—	1	2
5.	Increased capacity/speed in walking	8	—	2	1
6.	Increased capacity/speed in climbing	7	—	2	2
7.	Sound sleep	8	1	1	1
8.	Reduced tension	8	—	1	2
9.	Life-style changes	7	1	1	2
10.	Worry of death	—	8	1	2

\* NA - Not Applicable

**Looking at your present condition of your heart do you think in future you will have to undergo Intervention?**

Never	9
Doubtful	2
Total	11

It is evident from the data that participants of UHP gain inner strength and wisdom to change their lifestyle which results in beneficial changes expected from conventional treatment by medicine and surgery.

We have no control group study. However, such control group study shows that (Dr. Ornish et. al.) those taking advantage of stress management program (like UHP) fair significantly better than those who rely solely on conventional treatment.

### **Universal Healing Program**

Started	:	2nd October, 1991
No. of Participants	:	About 3000
Average Attendance per session	:	150

### **Types of Participants**

- Strong family history of CHD/ Abnormal lipid profile / interested in prevention.
- Mild disease - concerned with prevention of further progression.
- Those who cannot afford cost of intervention.
- Those who fear intervention.
- Those who consider intervention as a temporary measure and want an alternative.
- Those who are interested in long-term benefits of intervention by life style changes.
- Those who have not benefited from intervention and do not wish repeat intervention.
- Those who are technically unfit for intervention.

## **Components of Program**

- ❑ Diet Counselling
- ❑ Moderate exercise - walking on level for 40 minutes daily.
- ❑ Stretching and relaxation exercises leading to Shavasana (progressive deep relaxation).
- ❑ Meditation and Visual Imagery
- ❑ Group discussion - sharing of feeling

## **About the Program**

- ❑ Before joining the program, the patient is referred to our Cardiologist who decides whether he is suitable for the program.
- ❑ The program is held twice a week - lasting for one hour.
- ❑ A Yoga Instructor gives guidance to newcomers before the beginning of the program.
- ❑ A qualified dietitian guides the participants and their spouses regarding diet - gives individual advice taking into account the dietetic habits of the family.
- ❑ The Program Instructor demonstrates each exercise sequentially and gives instructions for Shavasana and Meditation.
- ❑ At the end of the program participants are encouraged to share their feelings and experiences.
- ❑ Program ends with an all-religion prayer composed by Shri Vinoba Bhave.
- ❑ Dr. Kapadia is always present and actively participates in each session of the program.

- Lectures with visuals and group discussions - held at intervals of 6/8 weeks.
- One day excursions with spouses - 3 times a year - where heartsmart meals are served - an opportunity for informal exchange among the members.
- Audio-video cassettes to facilitate practice of the program at home.

### **Our Constraints**

- No premises or office of our own.
- All work carried out at Dr. Kapadia's clinic or residence.
- No paid staff.
- Have no grants or financial assistance.
- No facilities available to conduct research in conventional manner. However, we maintain record of attendance. Patients are followed up by their respective physicians.

### **Our Assets**

- The programme is conducted in the prayer hall of a reputed school which can accommodate 200 people at a time in a natural, peaceful surrounding.
- It is cost effective, affordable for everyone.
- Easy to perform.
- Can be performed by anyone from the age of 10 to 90 years.
- No special dress is necessary.
- Medical practitioners have extended co-operation.



- All organizational work is attended to by a retired para-medical management executive and other volunteers from all walks of life

### **Our Publications**

1. Primer of Universal Healing
2. Wealth of Food - Health of Heart
3. Heart Disease - A New Direction
4. Heart Disease, Science and Spirituality

## UHP and Education

Education is closer to life than any other human endeavour. Education is not merely an exploration of reality but a quest for truth also.

Prof. A. N. Whitehead, while talking about the aims of Education emphasises two things : One, “the joy of discovery, two, “an understanding of an insistent present the eternal now. “It is from this angle that the program such as the UHP has relevance to our educational set up. **The UHP’s cardinal aim is to enable the participant to understand the value of the present and learn to live as much as possible in the present moment. Once one is stabilized in the present moment, one gets such firm foothold in time that things all around fall in a healthy and harmonious perspective.**

Educational process is both scientific and spiritual. Education must improve the quality of life. Quality of life is defined in terms of the desirable standards of human, social and economic satisfaction and opportunities. The younger generation should be guided to comprehend the personal and social consequences of the pleasure principle and evolve alternatives that would ensure the quality of life for one and all. Thus by introducing instruction akin to UHP in our educational cur-

riculum, we will be opening up new avenues of a healthier society.

One is apt to be a bit dazed by the W.H.O. prediction of the probable steep rise in the incidence of CHD among the young below 35 in the third world countries including India. As an antidote to this grim predicament, let us plan an educational structure which would help the young to lead a more integrated and healthy life.

Yogasanas are helpful in training the physical body and may be of value in certain physical ailments also. e.g. *Pavanmukta asana* may relieve constipation or bring about reduction in abdominal fat. But the Yogic disciplines e.g. deep breathing, abdominal breathing, *shavasana* and meditation achieve much higher objective. They help the person to relax the body and the mind. Above all, specially meditation has a potential to make the individual aware of his/her real identity. This awareness results in a feeling of oneness which develops caring love, compassion and altruism.

## Epilogue

*"Only a life lived for others is a life worthwhile. Man who regards his own life and that of his fellow creatures as meaningless is not merely unhappy but hardly fit for life. Try not to become a man of success but rather try to become a man of value."*

- Einstein

In the course of our efforts to find solution to the enigmatic problem of coronary heart disease, the union of physical science and science of spirituality seems to show the way. The wonder of it all is that this realisation has come from practising very simple stretching and relaxation exercises in a group of 150 to 200 participants for one hour, twice a week, for the last five years. The simple exercises are illustrated in our first publication, Primer of Universal Healing. Furthermore, what we do for healing the coronary arteries in reality serves a much larger objective of making the participants aware of their inner strength and spiritual identity, the healing of heart being a happy byproduct. As this conviction grows, one feels proud of the ancient Indian cultural heritage whose rishies 5000 years ago saw no conflict between knowledge and wisdom, between physical sciences and science of spirituality. This great testament

finds eloquent expression in the words uttered three thousand years ago by Sri Krishna, in his teaching to his disciple Uddhava in the *Srimad Bhagavatam* (XI. VIII. 19-21):

*Prayena manuja loke  
lokatattva-vicaksanah;  
Samuddharanti atmanam  
atmanaivo-subhasaya-*

Generally speaking, in the world the human beings, who are efficient in the investigations into the truth of the external world of nature, uplift themselves by themselves from all that is dismal and primitive.

*Atmano gurur atmaiva  
purusasy visesatah;  
Yat pratyaksanumanabhyam  
sreyo savanuvindate-*

In the case of a human being particularly, (unlike in the case of all sub-human species which depend entirely on physical nature), his or her guru or teacher is himself or herself; this is so because the human being achieves material and social welfare through (inquiring into the data of) direct sense experience and (inductive and deductive) inference based on the same.

These two verses proclaim the importance of the pursuit of the physical sciences and technology, and the intellectual discipline they involve, for human growth and development. But are they enough for his welfare, and do they constitute the entire gamut of human possibilities? No. So, in the third verse, verse 21, Sri Krishna, speaking as the Incarnation of the One Divine Self in all, says:

*Purusatve ca mam dhirah  
sankya-yoga-visaradah;  
Avistaram prapasyanti  
sarva-sakryupabrunhitam-*

"In this very human personality, also the *dhiras* (people endowed with intelligence and courage), who have mastered the science and technique of spirituality, also realise Me (God as the universal Self of all) as the infinite reservoir of all energies."

In the light of this profound reflection, the confluence of these two energy streams of physical and spiritual sciences in the coming decades holds the promise of our amazing modern scientific civilization progressing steadily in the direction of universal peace, well-being and fulfilment - individual and collective.

*"Character is that, which can do without success."*

- Emerson

## Additional Reading

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- 3) Eliot, R. (1994) : *From Stress to Strength*. New York : Bantam Books.
- 4) Siegel, Bernie S. (1990) : *Peace, Love and Healing*, Body-Mind Communication and The Path to Self-Healing. New York : Harper Perennial.
- 5) Jon Kabat-Zinn (1990) : *Full Catastrophe Living*, Using the Wisdom of Your Body and Mind to Face Stress, Pain and Illness. New York : Delacorte Press.
- 6) Dossey, Dr. Larry M. D. : *Space Time Medicine, Recovering The Soul, Beyond Illness, Meaning and Medicine, Healing Words*. New York : Bantam Books.
- 7) Dr. Naras Bhat : *How to Reverse and Prevent - Heart Disease and Cancer*. California : New Editions Publishing.
- 8) Kapadia, Dr. Ramesh I. : *Primer of Universal Healing, Wealth of Food Health of Heart, Heart Disease - A New Direction*, Ahmedabad: Navajivan Publications.

## Glossary

- ❑ BMR : Basal Metabolic Rate. Rate at which body utilises oxygen for doing a unit of Work.
- ❑ CABG : Coronary artery bypass grafting. Another term for bypass surgery.
- ❑ Myocardial Infarction : Heart attack.
- ❑ Post Prandial : Following meals.
- ❑ Ejection Fraction : Power of contraction of the heart muscle
- ❑ Complex Carbohydrates : Carbohydrates with fiber. e.g. Fresh fruits, green vegetables, lentils and cereals. Complex carbohydrates are desirable in diet. They cause less insulin swings in the blood, give feeling of satiety and increase BMR which helps in weight reduction.
- ❑ Simple Carbohydrates : Carbohydrates without fibre. e.g. sugar, jaggery, polished rice etc. They are rapidly absorbed in the blood, cause more insulin swings and increase triglycerides level in the blood.

NYHA Classification : New York Heart Association Criteria for grading incapacity of patients of heart disease.