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## Preventing Coronary Artery Disease through Yoga

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### **Abstract:**

*Today the people living in the world are with health problems, because of their life style and food habits. This may lead to CAD, and their knowledge is very poor in this problem. It is very dangerous silent killer we do not know when it will assault our body, so awareness is must among society. For this problem many researchers were conduct many kind of system to cure the diseases but it does not cured fully. To solve this problem here we study and analyze the potential benefit for the patients with CAD though yoga. Yoga is the best method to solve the CAD disease. From our knowledge we had taken yoga with two different group first one with drugs and yoga and second are yogasana, pranayama, satkriys and natural diet. To know experimentally how the result will effect to the people.*

**Keywords:** Stress, drugs, CAD, heart disease, yogasana, pranayama and satkriys

### **1. Introduction**

Coronary artery disease (CAD) is most common type of heart disease and its the cause of heart attacks which foremost cause of death across the world. It is also known as atherosclerotic cardiovascular disease (ACD), atherosclerotic heart disease, and coronary heart disease [1]. Most of reason for causing this disease is stresses, when the people under stress, there are an increase in the emission of stress hormones and reduce the flow of oxygen and produce rich blood to heart. Then it produces symptoms like shortness of breath, angina (chest pain) and the cardinal signs of myocardial infarction (heart attack) then it will lead to stroke and death. The symptoms of this disease were known in the advanced stage not in the beginning stage. Hence it is caused because of an unstable mind in the circumstance of stress and it lead to angina, and it where increases because of smoking, blood pressure, high blood cholesterol and more. And it will lead to hospitalized. There is a limited evidence for curing this disease from the hospital with the help of the tablet, no more where cured from this quarter percentage of people were not cured from the hospital treatment. Many researches were analyze with the diagnosis of ACD is with an electrocardiogram, cardiac markers (blood tests), a coronary angiogram based on the symptoms and taken a medication provide a poor result or outcomes. For this problem many researchers were conduct many kind of system to cure the diseases but it does not cured fully. To solve this problem here we study and analyze the potential benefit for the patients with CAD though yoga. Yoga is the best method to solve the CAD disease [2]. The aim of the yoga is to fetch enlightenment to the people through mental, spiritual, physical and provide a stable mind to the people through the observation of controlled breathing which is said to be pranayama. Combination of Yoga and meditation with a low-fat diet and cluster support could considerably decrease the blockage of coronary arteries. Some other studies from various researchers have shown yoga's help in minimizing the stress-related issues such as blood pressure and cholesterol. Yoga lifestyle interference checks progression and maximize regression of coronary atherosclerosis in patients with the harsh coronary artery disease. It also recovers suggestive status, practical class and risk factor profile.

We evaluate the potential function of lifestyle adaptation incorporating yoga, on retardation of coronary atherosclerotic disease. For this experiment we had taken into a two different group first one with drugs and yoga and second are yogasana, pranayama, satkriys and natural diet [3]. Yoga is a method to control the mind with the conventional medicine. Guidelines for lifestyle and dietary modification in patients with coronary artery Disease (CAD) are mainly supported by evidence from general population studies. Different methods of treatment aspects are available; at the same time yoga is an effective tool and time tested method for improving and developing health as well as prevention. Yoga therapy is an application of internal and external movement of the body in certain angle and force. If CAD affected humans day to day life were spoiled and unable to perform our daily work where the yoga ruled out the problems in a simple technique.

## 2. Related Article

From M. Sharma, M. Meena, et al [4] tries to reduce the hypertension; which is the most common cardiovascular disease affecting more than one billion people worldwide. Regular Yogic exercises (Asana, Pranayama and Meditation) have positive effects on hypertension. Their aim of their study was to evaluate the effects of yogasana, pranayama, and meditation as an adjunct to pharmacological therapeutic treatment of hypertension. They conclude that yogic practices joint with anti-hypertensive drugs were found effective in minimizing BP & PR in latent condition and during stimulus encouraged conditions as well in gentle to moderate hypertension. It reduced the necessity of the dose of antihypertensive drugs in majority of the hypertensive patients. Particularly, it was found to distress cardiovascular autonomic regulation and tends to normalize that hypertension.

Ameet G. Sattur, et al. [5] analyze the Coronary arterio venous fistula (CAVF) is an abnormal communication between the coronary artery and a cardiac chamber or great vessels. They have detected during the course of work up for other cardiac disease and management is critical. They describe their experience in seven adult patients with CAVFs to delineate the process of diagnostic evaluation and management strategy. Data was retrieved from the Department of Medical Records and seven adult patients were found to have CAVF. The data were examined for clinical presentation, diagnostic events, concomitant pathologies and management. In view of the severe complications that may develop due to CAVF, haemodynamically significant CAVF should be treated invasively, by surgery or transcatheter closure. The essential problem remains determined, which fistulas require definitive occlusion whether by surgical ligation or transcatheter closure. A common intelligence approach to this difficulty as detailed in their experience leads to successful clinical outcomes.

Tundwala, Vijay, et al [6] analyze the result of Pranayama and assured yogic asanas on parameters of fatness viz. weight reduction (BMI and waist hip ratio), Blood pressure and lipid report were analyzed. Their experiment included in 150 patients after selection inclusion and exclusion criteria for fatness, hypertension and dyslipidemia. The study period was 3 months. Several parameters on demographic and clinical data for these diseases were evident at the start of the study. Study group patients of 75 were to present in their Yoga camp daily for 3 months. The clinical data were over recorded at the end of the study period of 3 months for judgment. There were significantly decreased in the parameters of fatness viz. BMI and WHR, significant improvement in hypertension both systolic and diastolic blood pressure and significant improvement in Several lipid profile parameters viz. reduce in entirety cholesterol, triglycerides, LDL, VLDL and rise in HDL in the study group as compared to control group.

## 3. Related work

### 3.1. Control of Risk Factors

Various studies recommend that habitual yoga practices can significantly improve coronary heart disease risk factors. Schmidt et al reported that regular practices of yoga provide a significant improvement in the levels of blood pressure, Low-Density Lipoprotein (LDL) cholesterol and body mass index after 3 months residential training consisting of vegetarian 2 diet and Kriya yoga. In another randomized controlled by similar reductions in the interventional group practicing yoga [7].

### 3.2. Hypertension

Several studies, like controlled and uncontrolled studies have exposed the long term usefulness of yoga in 4-6 the treatment of hypertension. *Shavasana* (Corpse posture) was shown to lower blood pressure 1 considerably in earlier studies. In a randomized test, yoga was found to be equally effective as 5 antihypertensive therapies. One randomized controlled study established that yoga is competent of generating a long term valuable effect in 4 the treatment of hypertension. The method of decrease of blood pressure, has been measured to be 6 reinstatement of bar receptor sensitivity by yoga [8, 9].

### 3.3. Regression of Coronary Atherosclerosis

Utilizing of yoga in coronary angiography has established that yoga performance with low fat vegan diet affect major failure of coronary obstructions in comparison to the standard care control group. In addition the necessity of interventional events was significantly reduced. From the LDL cholesterol, body weight, angina, triglycerides, and exercise pass ischemia were considerably reduced in the yoga groups [10].

### 3.4. Other Benefits of Yoga

With the practice of Yoga, it progress different pulmonary mental and metabolic, cerebral, physiologic functions, generate beneficial possessions on the cardiovascular status. Some of the additional beneficial results include improved breath holding capacity, improved tidal volume and fundamental capacity, enrichment in bodily fitness, decrease in nervousness and improved sugar levels among patients with diabetes [11, 12]. By additionally it produces an association between increased cerebral blood flow and transcendental meditation (TM).

## 4. Materials and Methods

This study evaluated with the adult patient's diagnose with a Coronary arteriovenous fistula (CAVF). CAVF is consists of an abnormal communication between the coronary artery and a cardiac chamber or great vessels. For this experiment we had taken into a two different group male with the age of 40-50 and female with the age of 40-50. Further, it divided into two groups; with drugs and yoga and yogasana, pranayama, satkriys and natural diet. We took the method of Yogasana Pranayama and natural diet is a material's to train the patients.

#### 4.1. Materials

- Yogasana, Pranayama and natural diet is a material's to train the patients.
- There are two types of groups
- Male –Age group 40-50 and Female Age group - 40-50

#### 4.2. Methodology

- Separate selection of male and female groups
- Observed patients flexibility and health condition
- Introduced warm-up exercises, Asana and pranayama

For our experiment we taken the patients and selected into two groups for our research thesis. The first group is purely based on drugs. After the doctor's permission, asana and paranayama administrated to that patients. Weekly once the training program was implemented to the patients to overcome the disease. Some of them are quickly learned, few are very slowly followed the training. Totally 25 patients were involved in the training. Out of 25 patients, female patients are 5 and male patients are 20. After the initial training they were feeling freshness in the body and heart beat rhythm is manage to correct. And the second group is getting training in the yoga center itself. Total 50 patients are involved in the program. But only 40 are continuing, rest of the 10 discontinued. Asana, Pranyama Sat kriyas with Natural Diet is given to patients. Initially 7 weeks they adopted only warm-up exercises. The second schedule added more asana and primary breathing exercises also were implemented to the person. They were repeated the training program in the third schedule also. Some of the patients are felt well in their health condition few of them slight improvement. In the fourth schedule, we introduced the SUN SOLUTATION program in a simple way. Daily 3 set of suriya namskar been practiced by them. Patients do not felt tired or uneasy from that asana's. During this asana we have prescribed naturopathy diet and ask them to avoid the following foods, they were spicy food, salt, Oil items like fried food, junk food, bakery item and dairy products and also other unwanted item such as Alcohol, smoking, Etc....

#### 5. Results & Discussion

From the above experiments we achieve a best result for curing the disease. We had taken totally 18 months to cure this disease. For this we decided to provide a training to the patients in various methods with the group of drugs and yoga it provides a less result when compared to the yogasana pranayama, satkriys and a natural diet. For the second category group it cured the disease from our allotted month. While practicing our asana, within 7 months the patients are felt getting relief and some patients are not recovered. After getting this result, we do not drop that we continue than asana for fully cured from that disease. The table shows the achieved result from the asana

Training Periods	1 <sup>st</sup> Group	2 <sup>nd</sup> Group
Day 1	100	100
1 <sup>st</sup> WEEK	97	98
3 <sup>rd</sup> WEEK	89	91
7 <sup>th</sup> WEEK	79	80
3 <sup>rd</sup> MONTH	55	70
6 <sup>th</sup> MONTH	40	62
12 <sup>th</sup> MONTH	30	40
18 <sup>th</sup> MONTH	0	10

Table 1: Training Periodical table

Above table mentioned the periodical form of practical section improvements from the week wise and month wise calculation. We have divided into a two groups to check the result with those two categories. From the first groups consists of yogasana pranayama, satkriys and natural diet and the second group category consists of drugs and yoga. In the first day session both the categories were equal level because we selected the person in that balanced manner. After a week we take a test and analyze it from those groups. Both groups were improved in slight changes. We routine that asana and taken a test after a 3<sup>rd</sup> week. From that we get increased level in 1<sup>st</sup> group category and in the second group it is decreased level from the first group category. And we regulate the practice after the 18<sup>th</sup> month we take the result in the 1<sup>st</sup> group category they fully cured and in the second group does not fully cured and now we conduct the asana's to those people to fully cure from the disease.

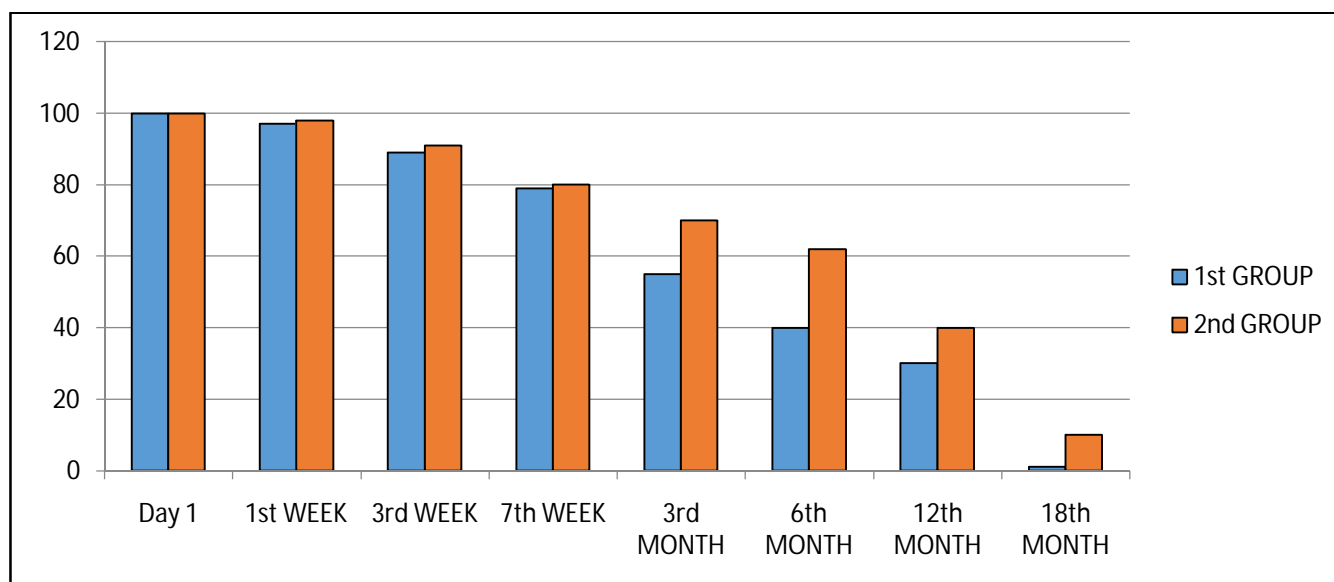


Figure 1: Training Periodical chart of two different groups

The Figure shows the clear diagram representational of our training program. It is an easiest method to provide the result and get the immediate knowledge from the diagram representation. From our experimental result, we achieve a better result. The patients are observed by the way of movements and their lifestyle. Having been advised and explained the life style modification. Now, improvements are showing in their life. They have corrected their food habit and resting technique.

## 6. Conclusion

Today people living in this rushed world, having the problem of stress that comes from the office, environment, neighbor, friends, family, etc. it leads to a health problem. That may cause CAD, and the knowledge of CAD is very poor. Then it may direct to heavy cause to the people. For this issue we practice the yoga to those affected people and proved the recovery of the disease. For this we taken a patients for experimental and it cured fully and they feeling freshness in the body and heart beat rhythm is manage to correct. We conclude that yogic practices combined with Yogasana, Pranayama and natural diet were produce effective result to the patients who were affected from the disease. With the practice or implementation of this asana most of the people were cured from the CAD disease and they regulate our asana for their mind relax and protect the body for their entire lifetime.

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