## The Facts About Angina Pectoris

Angina pectoris is the typical alarm signal for atherosclerotic deposits in the coronary arteries and decreased blood supply to millions of heart muscle cells. Angina pectoris typically manifests as a sharp pain in the middle of the chest, which frequently radiates into the left arm. Because there are many atypical forms of angina pectoris, I advise you to consult with a physician about any form of unclear chest pain.

These Cellular Health recommendations can help to improve the blood supply to the heart muscle cells by providing oxygen and nutrients, thereby decreasing angina pectoris. Several essential nutrients in this program work together to achieve this aim. The most important mechanisms for increasing blood supply to heart muscle tissue are the following:

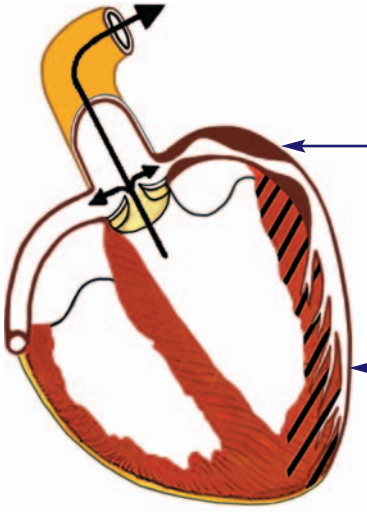
- **Widening of arteries:** An optimum supply of vitamin C and magnesium, as well as the natural amino acid arginine, aid in widening the coronary arteries and increase blood supply through the coronary arteries to the heart muscle cells.

- **Improved blood pumping:** Carnitine, coenzyme Q-10, B vitamins, certain minerals and trace elements improve the performance of the heart muscle cells, the pumping function of the heart, the pressure by which the blood is pumped through the coronary arteries and, thereby, the supply of oxygen and nutrients to the heart muscle cells.

- **Reversal of coronary deposits:** Over a period of many months, vitamin C, lysine and proline initiate the healing process of the artery walls and the decrease of atherosclerotic deposits by the mechanisms described in detail earlier in this book.








| Decreased Artery Wall Tension | Improved Blood Pumping | Reversal of Coronary Deposits |
|---|---|---|
| Nutrients That Help to Improve Blood Flow by Relaxing the Artery Wall | Nutrients That Help to Improve Blood Flow by Increasing Heart Performance | Nutrients That Help to Improve Blood Flow by Reversing Atherosclerosis |
| • Vitamin C<br>• Magnesium<br>• Arginine | • Carnitine<br>• Coenzyme Q-10<br>• B Vitamins<br>• Minerals<br>• Trace Elements | • Vitamin C<br>• Lysine<br>• Proline<br>• Vitamin E |
| Short-Term! | Short-Term! | Long-Term! |

*These Cellular Health recommendations can help decrease and prevent angina pectoris.*

## How These Cellular Health Recommendations Can Help Patients With Angina Pectoris

The following section presents a selection of letters from patients with coronary heart disease and angina pectoris. This book documents the success of these Cellular Health recommendations, which enable angina pectoris patients around the world to take advantage of this medical breakthrough and improve their quality of life.

*Dear Dr. Rath:*

*I am so happy to tell you about the use of your cardiovascular health program and how I feel that it has saved my life. Last September, I had gone to the university to watch a football game and could not make it up the steps in the stadium despite wearing a nitroglycerin patch, and* ***by October last year, I could not walk 100 yards without the pain of angina.***

***I found out about your discovery and took it triple strength four times a day for three weeks and by Thanksgiving, I had forgotten I had a heart problem. Now, in July of this year, I am working without pain and feeling super!***

*Too bad you did not have the patent before I had undergone two bypass surgeries.*

*Thanks for more life,*
*J.G.*





*Dear Dr. Rath:*

*In May 1992, some extraordinary physical exertion on my part brought on pain that was especially noticeable in my left arm and shoulder.* ***By the next morning, the pain had progressed to the middle of my chest and I then recognized the pain as angina.*** *Immediately, I started a series of treatments.*

*During and after the treatments, I started a walking program. Although my walking did not cause any severe angina pain, there was still tightness in my chest and a necessity to slow down my pace because of shortness of breath.*

***It wasn't until I started following your cardiovascular health recommendations that I experienced a difference. Remarkably, within a month, the discomfort from walking had entirely disappeared. Presently, I am walking 2.5 miles at least 3 days per week at a fast clip with no discomfort whatsoever.***

*I am cognizant that the buildup within my blood vessel walls occurred over a long time period, so I am prepared to continue following your recommendations on a continuous basis. It's a small price to pay for arteries that are free of atherosclerotic deposits.*

*Thanks for your cardiovascular recommendations! I feel that you have made a tremendous scientific breakthrough in the treatment of heart disease.*

*Sincerely,*
*M.L.*

# Cellular Health Recommendations for Patients Who Have Suffered a Heart Attack

## What Are the Consequences of a Heart Attack?

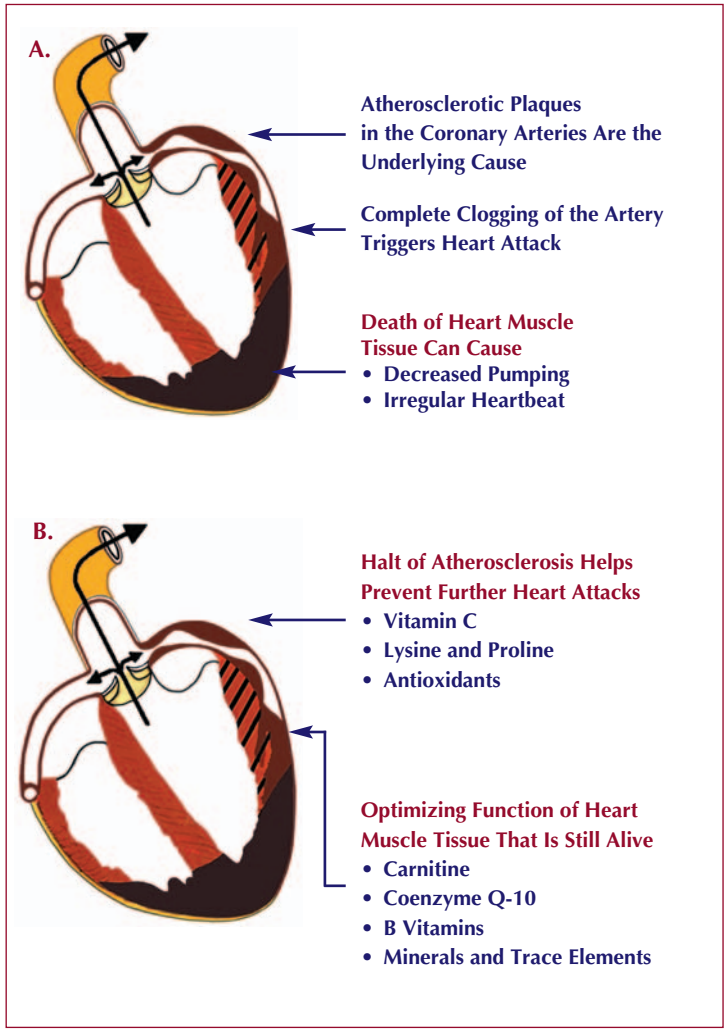
In the previous sections, we have seen how atherosclerotic deposits in the coronary arteries reduce the blood flow, thereby causing the heart muscle to suffocate. A heart attack is caused by the complete clogging of a coronary artery and the total cut off of the heart muscle cells from the oxygen and nutrient supply. Unless medical assistance is available quickly, millions of heart muscle cells, which are cut off from the blood supply, will die. The larger the size of the dead heart muscle area, the greater the complications. Two main complications generally result from a heart attack:

- **Impaired pumping function (heart failure):** The section of the heart muscle that has died impairs the pumping function of the heart. The consequences are impaired circulation, shortness of breath, edema and decreased physical capacity. For example, the effect of the failure of 25% of the heart muscle after a heart attack is like a four-cylinder motor running on three cylinders.

- **Impaired electrical conduction (irregular heartbeat):** In a similar way, the electrical cells of the heart can be affected by a heart attack. This can lead to various forms of irregular heartbeat. Severe forms of arrhythmia are the most frequent causes of death during and after a heart attack.








*A. The consequences of a heart attack*
*B. How specific nutrients in these Cellular Health recommendations contribute to an improved quality of life after a heart attack*

## How these Cellular Health Recommendations Can Improve Quality of Life After a Heart Attack

Anyone suffering a heart attack should be immediately transported to the nearest hospital. The sooner a patient receives proper medical attention, the greater the chance of limiting lasting damage to the heart muscle cells. If a heart attack occurred some time ago, you should continue to consult regularly with your physician. In addition, these Cellular Health recommendations can help in the following ways to improve your quality of life:

- **Halting the development of atherosclerotic deposits** in the coronary arteries, thereby helping to prevent further heart attacks. The most important components of the nutrient program that contribute to this effect are vitamin C and other antioxidant vitamins, as well as the amino acids lysine and proline.

- **Optimizing the function of heart muscle cells still alive.** This is particularly important in the heart muscle area immediately bordering the dead heart muscle section, where millions of cells are still functioning, but at an impaired level. The most important components of these Cellular Health recommendations that contribute to this effect are the B vitamins, carnitine, coenzyme Q-10, as well as many minerals and trace elements.

Thus, it is not surprising that heart attack patients who start on the nutrient program experience significant health improvements.





## How Patients Can Be Helped By Cellular Health Recommendations After a Heart Attack

The following are letters from patients who benefited from these Cellular Health recommendations after suffering a heart attack. Please share this information with anyone you know with a similar health condition. You may help prevent further heart attacks.

*Dear Dr. Rath:*

*In January of this year, I began experiencing chest pains when exercising. In April, my doctor told me, on the basis of an EKG, that I had suffered a heart attack. He continued prescribing a beta-blocker, which I had been taking for high blood pressure for many years.*

*In May, I started following your cardiovascular vitamin program and also went on a very strict vegetarian, no-fat diet. My chest pain during exercise began to lessen after just two weeks of this regimen. I have now been on a diet and your vitamin program for 2 months, and I now have no chest pain or breathlessness at all, even when cycling or walking energetically for several hours at a time. I also feel better than I have felt for years, with lots of energy and high spirits.*

*My confidence level in my heart condition is so good that I no longer carry nitroglycerin pills with me when setting out on a bicycle ride or a walk. I feel young and bright. Since the only change in my lifestyle has been your cardiovascular health program and diet, I have to say that one or both of these factors have caused this dramatic change in my health. For what it is worth, I tend to think that the combination of both these factors together is what has caused my health to improve.*

*Yours truly,*
*K.P.*

*Dear Dr. Rath:*

***My dad was diagnosed with blockages of the heart in October of last year. He also suffered from angina and arrhythmia.*** *He could not walk a block without concern for his ability to make it home again. My dad was concerned for his life because he had two ischemic events (four years ago). Along with being diabetic and 80 years of age, his medical advisors ruled out an invasive procedure as a remedy.*

*When I was first made aware of your breakthrough non-invasive therapy, I could not believe our good fortune. Immediately, we placed Dad on your cardiovascular vitamin program. Within a day, he reported good results. "I feel good!" was his response after the first day. The second day, he told me that his energy level had increased significantly. "I was able to work in the garage all day today without getting tired."* ***The third day Dad had walked a block and returned without difficulty – no pains, fatigue, or apprehension.***

*The chest pains went away by December. In January, on our way to the cardiologist's office, Dad, having forgotten his essential nutrients for his doctor's inspection and review, ran back into the house to retrieve them. I got so excited by the event that I immediately started calling people on my car phone to share with them what I had just witnessed – a miracle!*

***My dad's heart no longer skips a beat, his angina is gone,*** *and his blood flows freely when he proudly donates blood samples. His doctors are amazed with his newfound state of health. And we are very, very happy. Last week my dad took a 10 block walk without difficulty; he is proud and grateful.*

*Thank you, Dr. Rath. Your research has given my dad back his life.*

*Sincerely,*
*M.T.*



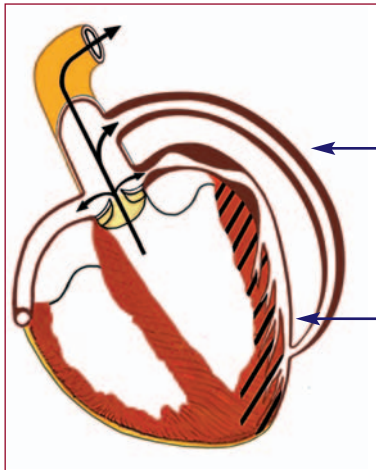


# Cellular Health Recommendations for Patients Undergoing Coronary Bypass Surgery

## What Is a Coronary Bypass Operation?

A coronary bypass operation becomes necessary if one or more coronary arteries have developed severe atherosclerotic deposits that threaten to clog the arteries and cause a heart attack. In order to avoid a heart attack, a coronary bypass operation is frequently performed. Surgically, a bypass is constructed around the atherosclerotic deposits in order to guarantee unrestricted blood flow to all parts of the heart muscle in those areas beyond the coronary deposits.

During a bypass operation, a vein is generally taken from the leg and re-implanted in the heart as a bypass blood vessel. Normally, one end of the bypass is attached to the aorta and the other end is attached to the coronary artery beyond the location narrowed by atherosclerotic deposits. Other bypass




**The purpose of coronary bypass surgery is to guarantee blood flow to the heart muscle tissue and thus prevent a heart attack.**

*The reason bypass surgery is performed*

surgery procedures use smaller arteries in the vicinity of the heart to construct a bypass and improve blood supply to the heart muscle.

I am often asked whether a coronary bypass operation can be avoided by following these Cellular Health reccommendations. As documented in this book, the operation can, in many cases, be postponed or cancelled. However, in other cases, the atherosclerotic deposits have grown so much that a bypass operation is unavoidable. In any case, the decision can only be made together with your cardiologist. But even if a bypass operation has become inevitable, you should start immediately following the nutrient program to improve the long-term success of this operation and to prevent further damage.

## What Are Problems After a Coronary Bypass Operation?

The overall success of a coronary artery bypass operation is threatened by two main problems:

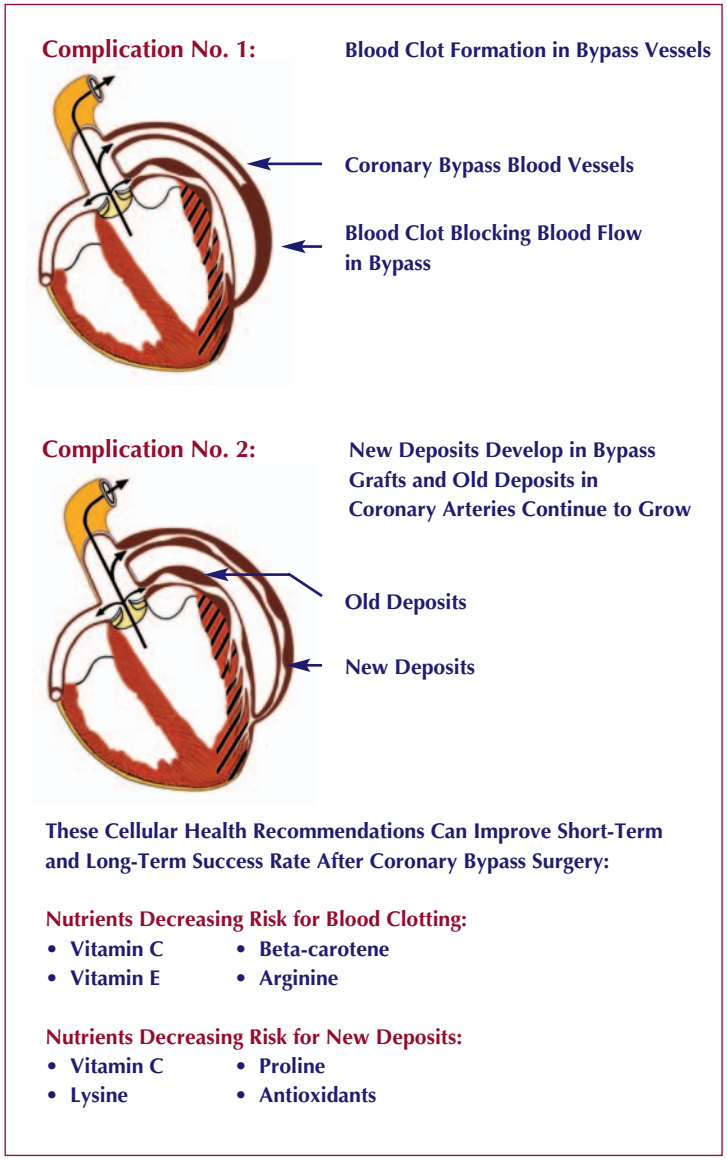
- **Blood clots:** Blood clots can form in the bypass blood vessels, cutting off the blood flow. This complication normally occurs immediately after the operation. If untreated, the blood clot will completely cut off blood flow through the bypass blood vessel and make the previous operation ineffective.

- **Atherosclerotic deposits:** The greatest threat to the long-term success of a coronary bypass operation is the development of atherosclerotic deposits in the newly implanted bypass blood vessels. Even though the bypass blood vessel is generally a vein, the same lesions and cracks can develop as in the arteries if they are not protected by an optimum intake of vitamins and other essential nutrients. This triggers atherosclerotic deposits similar to those in the coronary arteries and, after several years, can require a second bypass operation.

On the following pages, I have summarized the recent progress in the field of Cellular Medicine.








*Obstacles to the long-term success of coronary bypass surgery and how these Cellular Health recommendations help to prevent them*

*The average time that passes between the first bypass operation of a patient and the second bypass surgery is about 10 years. The fact that a second bypass is the rule, and not the exception, shows that the causes of bypass atherosclerosis are insufficiently understood by conventional medicine.*

## How these Cellular Health Recommendations Improve the Long-Term Success of Coronary Bypass Surgery

There are several ways in which nutritional supplements help to maintain healthy bypass blood vessels and improve the quality of life after bypass surgery.

- **Preventing blood clot formation in bypass blood vessels:** Vitamin C, vitamin E and beta-carotene have all been shown to help prevent the formation of blood clots. Vitamin C has also been shown to help dissolve already existing blood clots. Patients on "Coumadin" and other blood thinners should inform their doctors when starting my program so that additional tests for blood coagulation can be done and less blood-thinning medication can be prescribed.

- **Preventing atherosclerotic deposits in bypass blood vessels:** The vitamins and other essential nutrients recommended for the prevention and adjunct reversal of atherosclerotic deposits in coronary arteries are also beneficial for preventing the development of atherosclerotic deposits in bypass blood vessels. The most important among these essential nutrients are vitamin C, vitamin E and the amino acids lysine and proline.

If you are scheduled for a bypass operation, I recommend that you start with these Cellular Health recommendations as soon as possible. In this way, you can make sure that the cells of your heart, blood vessels and other body tissues already hold an optimum level of vitamins and other bioenergy molecules during and immediately after the operation. This is the best natural way to optimize the healing process.





The following is a testimonial from a patient who supplemented with these Cellular Health recommendations after coronary bypass surgery:

*Dear Dr. Rath:*

***I read your book about a year ago after I was told I had severe blockage of the coronary arteries, and I had a triple bypass operation. At that time, I started following your cardiovascular vitamin program.***

***All of my check-ups since my surgery have been outstanding. I attribute much of the good news to your program.***

*For a long time, I have maintained an opinion that there was a better answer to heart disease than the standard American Medical Association medical approach. Thank you for finding the answer and making it available to all of us who need it.*

*Sincerely,*
*C.S.*

You will find many more letters from coronary heart disease patients in the chapters on cardiovascular disease, angina pectoris and heart attacks.

# Cellular Health Recommendations for Patients Undergoing Coronary Angioplasty

## What Is a Coronary Angioplasty?

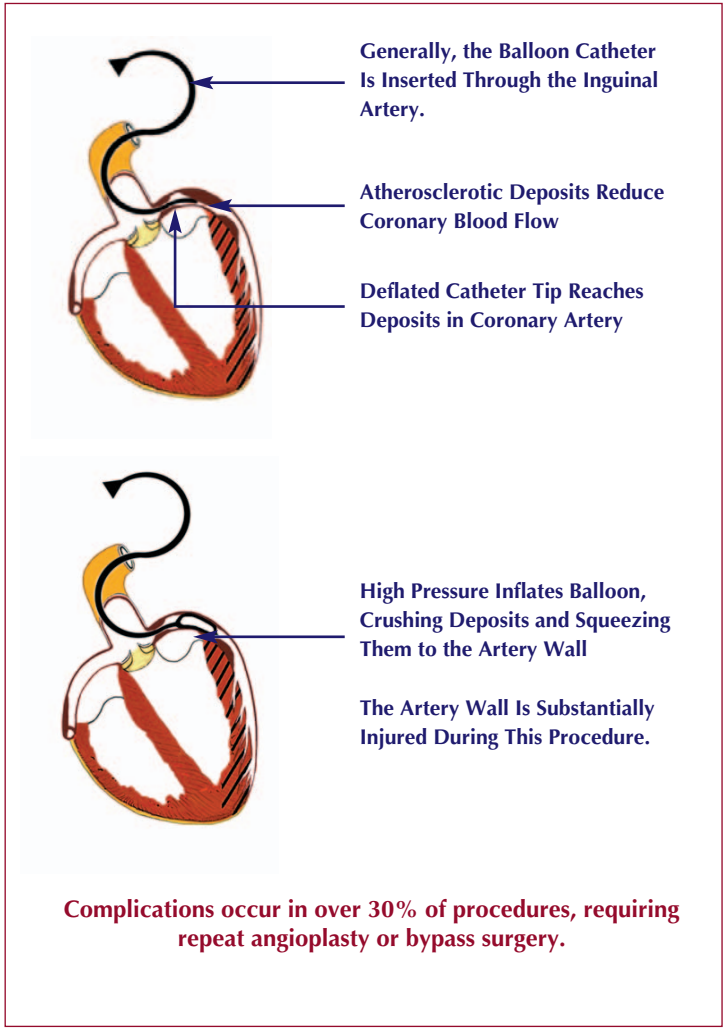
In contrast to coronary bypass surgery, coronary angioplasty is the "rotor-rooter" approach to removing atherosclerotic deposits mechanically. This approach generally involves an inflatable balloon or, more recently, laser or scraping methods. Generally, a catheter is inserted into the leg artery and moved forward through the aorta until the catheter tip reaches the coronary artery close to the deposits. At this point, a balloon at the tip of the catheter is inflated with high pressure and squeezes the atherosclerotic deposits flat against the wall of the arteries. In many cases, the blood flow through the coronary artery can be improved by this procedure.

All angioplasty procedures damage the inside of the coronary arteries, sometimes over a distance of several inches. It is, therefore, not surprising that the rate of complications of this procedure is sobering. In more than 30% of cases a restenosis occurs, leading to the clogging of the coronary artery within a time as short as six months.

The most serious complication during the procedure is the rupturing of the wall of the coronary artery, requiring immediate bypass surgery. Following the procedure, blood clots and small pieces of artery wall tissue can lead to a clogging of the coronary artery. Long-term complications include the overgrowth of scar tissue inside the coronary artery and the continued development of atherosclerotic deposits.








*Angioplasty inevitably causes substantial damage to the artery wall.*

## How these Cellular Health Recommendations Can Help to Improve the Success Rate of Angioplasty

These Cellular Health recommendations can help patients scheduled for coronary angioplasty in different ways. In some cases, they can help decrease angina pectoris and other signs of coronary heart disease to an extent that your doctor will suggest postponement of the angioplasty procedure. In other cases, your doctor will advise you to have the procedure to minimize your risk of a heart attack. In any case, you should follow the advice of your doctor. At the same time, I recommend that you start these Cellular Health recommendations as soon as possible and inform your doctor about it. If you have already undergone coronary angioplasty, these recommendations can help you to improve the long-term success of this procedure.

- **Vitamin C** accelerates healing of the wounds in the coronary arteries caused by the angioplasty procedure.
- **Lysine and proline** also help restore the artery wall structure and, at the same time, decrease the risk of fatty deposit formation.
- **Vitamin E and vitamin C** help control the overshooting formation of scar tissue from the uncontrolled growth of arterial wall muscle cells.
- **Vitamin C, vitamin E and beta-carotene** decrease the risk of blood clot formation and provide important antioxidant protection.

## Further Health Information Related to the Cellular Health Recommendations and Angioplasty

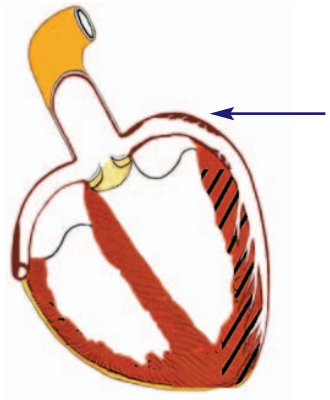
Research and clinical studies have confirmed the important role of different components of the Cellular Health recommendations in decreasing the risk of the clogging of coronary arteries after angioplasty:





Dr. Samuel DeMaio, while at Emory University in Atlanta, Georgia, studied patients with coronary heart disease who had undergone coronary angioplasty. After this procedure, one group of patients received 1,200 International Units of vitamin E as a nutritional supplement. The control group received no additional vitamin E. After four months, the patients who had received vitamin E showed a 15% decrease in the rate of coronary restenosis, compared to those patients without vitamin E supplementation.

My colleague Dr. Aleksandra Niedzwiecki and her collaborators showed that vitamin C decreases the overgrowth of the smooth muscle cells of the artery wall and helps to control one of the most frequent factors responsible for the failure of angioplasty procedures. Animal experiments conducted with vitamin C and vitamin E by Dr. Gilberto Nunes and his colleagues confirmed these observations.



- **Nutrients Help to Prevent the Formation of Blood Clots at the Site of the Injured Artery.**
- **Nutrients Promote the Healing of the Injured Artery Wall After Angioplasty.**

**The Following Essential Nutrients Can Improve the Long-Term Success of Coronary Angioplasty**

- **Vitamin C**
- **Vitamin E**
- **Lysine**
- **Proline**

*These Cellular Health recommendations can improve the success rate of coronary angioplasty.*

These Cellular Health recommendations include a selection of essential nutrients that work synergistically in helping to improve the long-term success of coronary angioplasty. Of course, you can increase the amounts of specific vitamins, such as vitamin C and vitamin E, to further enhance this effect.

The following is a letter from a patient who supplemented with these Cellular Health recommendations after having coronary angioplasty. More letters from coronary heart disease patients are documented in previous chapters.

*Dear Dr. Rath:*

***Your vitamin program has done so much to improve the quality of my life healthwise that I would like to share it with others.*** *I was 83 years old last February. I was having so much angina pain that my family doctor sent me to a cardiologist, who did an angioplasty. In the meantime, my 78-year-old husband had a triple bypass followed by a stroke. I had to get better to take care of him, but I continued to have the same pains.* ***A second cardiologist did angioplasty in August last year, which did not help, so in September I had a double bypass and needed a third.***

*My son started me on your cellular nutrient program. In January of this year, I was still having angina due to an artery they were unable to bypass.* ***After 3 months, I quit having pains due to stress or strain or excitement and now, after six months, I feel great and do almost as much physically as I did 5 or 10 years ago.***

*My husband, although hampered by his stroke, also enjoys better health with your cardiovascular health program.*

*Sincerely,*
*L.W.*





## Clinical Studies With Cellular Nutrients in Angina Pectoris Patients

Additional reports from patients with angina pectoris about health improvements with selected components of these Cellular Health recommendations are documented in Chapter Two of this book.

The following table lists additional clinical studies documenting the health benefits of cellular nutrients in patients with coronary heart disease and angina pectoris:

| Cellular Nutrients Tested | References |
|---|---|
| Vitamin C and Vitamin E | Riemersma |
| Beta-carotene | Riemersma |
| Carnitine | Ferrari and Opie |
| Coenzyme Q-10 | Folkers and Kamikawa |
| Magnesium | Iseri and Teo |

*Dear Dr. Rath:*

*I started following your cardiovascular nutrient program last August after I was diagnosed as having severe heart disease.* ***I had angina for 8 years. Now, nearly a year later, I feel fine and have very slight angina infrequently, plus I walk 3.6 miles daily and don't have any restrictions.***

*Sincerely,*
*M.B.*

*Dear Dr. Rath:*

***Since following your vitamin program, I have noticed a significant increase in my physical and mental health. I have no present indications of angina, and my ability to walk vigorously around the hills that are in my neighborhood is most encouraging. No huffing and puffing and pausing to catch my breath, as before.***

*I am able to walk around my neighborhood hills without interrupting the rhythm and flow of my conversation. I also pursue a very modest weight loss program, eating much less than before — with no loss of energy.*

*I feel that your program is most significant in all of this.*

*Sincerely yours,*
*R.A.*

*Dear Dr. Rath:*

*I had been having chest pain (angina pectoris) for several years on the average of about every three weeks.* ***Since I started your vitamin program over 90 days ago, I have only had chest pain one time, which was about three weeks after starting your program.***

*I feel that proper nutrition can prevent 80% of our health problems.*

*Sincerely,*
*B.T.*