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# **Heart to Heart Talk**

With Philip S. Chua, M.D.

## **Coronary Bypass II**

### **Is coronary bypass surgery safe?**

Coronary bypass surgery, in the hands of well-trained cardiac surgeons, is one of the most popular, most common, and safest surgical procedures being performed today in the whole world, including in the Philippines. The medical statistics show that the mortality risk is about 1% to 3% in general, and the more damaged the heart muscles are, the higher the risk.

### **Do you really stop the heart during coronary bypass?**

Yes, we stop the heart during coronary bypass surgery, but circulation and oxygenation of the blood continue, since the patient is connected to a heart-lung machine that temporarily acts as the patients heart and lungs. This is a standard and routine technique used by cardiac surgeons all over the world. Since June of 1999, at Cebu Cardiovascular Center of Cebu Doctors' Hospital, we have been doing OPCAB (Off Pump Coronary Artery Bypass), a less invasive procedure where we do the coronary bypass on a beating heart (without arresting the heart), and without the use of the heart-lung machine. However, not all patients are candidates for this technique.

### **Why stop the heart during the procedure?**

In doing the bypass, we (suture) hook up the graft (the vein or artery to be used as the new channel) to the area of the affected coronary artery beyond and going around the blockage (stenosis), to supply blood through this new channel to the muscles of the heart that was deprived of blood because of the obstruction. The connection (anastomosis) is similar to the sleeve of the shirt "hooked up" to the side of the shirt. Because the coronary arteries are very small (about the size of a round toothpick or the lead in a pencil) the heart is stopped to facilitate the "hook-up" of these two vessels.

### **How is the heart stopped?**

The body temperature is cooled down to 28 degrees Centigrade and injects ice-cold (about 4 degrees Centigrade) potassium chloride solution. This stops (arrests) the heart in a relax state (diastole). This step is done to protect the heart by transforming it into a “hibernating” state. This is one of the advances in cardiac surgery that makes it a lot safer procedure compared to, say, 15 or 20 years ago.

## **How is the heart re-started?**

When all the anastomoses (“hook-ups”) of the grafts to the coronary arteries are completed, the patient is rewarmed to normal temperature, and the heart is perfused (supplied with rewarmed blood) through the new grafts. This invariably restarts the heart. Occasionally, the heart needs to be “shocked” to restart its beating. This “electrical (shock) defibrillation” is not harmful to the heart or the patient.

## **How many bypass grafts could be done?**

Depending on the number of coronary arteries that are blocked, there could be four, five, or even more grafts.

## **Where do the grafts come from?**

One of them is the Internal Mammary Artery that is behind the breastbone. This is used as a graft, and so with veins from the leg. These leg veins are the ones stripped, removed and thrown away, when they are varicosed (engorged and ugly looking leg veins). These same leg veins, when NOT varicosed, are routinely used as vein grafts. Since there are lots of veins in the leg, removing the superficial vein, and using it as a graft, does not cause harm to the leg.

## **After coronary bypass surgery, can the patient live a normal life?**

Generally, yes. More than 95% of patients do lead a normal life. However, modification of life style is part of the treatment in coronary artery disease, like, having low-cholesterol diet (fish, vegetables, fruits, oat and bran cereals), daily physical exercise regimen, stress management, quitting cigarettes, regular medical check-ups. As a matter fact, this modification of life style leads to an overall healthier life style.

## **How soon can patients have sex after coronary bypass surgery?**

Depending on the speed of recovery and general condition of the patient, coronary bypass patients may have safe sex even as early as a month after discharge from the hospital. The advise is for the patient to be the passive partner in the act for at least six

months. Since each person is different in his/her capacity, patients should consult their cardiologist/family physician before indulging in any exertional activities.

## **Is an aspirin a day good for everybody?**

Aspirin is indeed a wonder drug, but it is not for everybody. Aspirin (acetyl salicylic acid) is being taken by patients and physicians alike to thin their blood a little to minimize and slow down the process of hardening of the arteries in the body. It is also known to lower the incidence of colon cancer. The recommended form is the enteric-coated aspirin to minimize gastric (stomach) irritation. However, just like any other drug, aspirin could cause some side effects, like stomach bleeding, especially among those with ulcers. While majority do not experience this side effect, some do develop bleeding which could be serious. So, consult with your physician before taking aspirin for this purpose.

## **Is Vitamin E, B, C and anti-oxidant good for coronary patients?**

Yes. Multivitamins and Vitamin E, B, C and anti-oxidants are good not only for coronary patients but for all of us. Most fruits have anti-oxidants that are good for the human body. Vitamin E also thins the blood a little, thus playing a role in slowing down the process of hardening of our arteries. Vitamin B helps the body cope with stress and Vitamin C fortifies our body's immune system.

## **Are there patients with coronary artery disease without symptoms?**

Yes, many of them do not have symptoms. In some individuals, the first symptom could be sudden death or a massive heart attack. This is the reason why we recommend yearly medical check-up and a stress test among persons who are 40 years and older. For those with high blood pressure and/or a strong family of heart disease, we recommend stress test even at a younger age. The standard EKG alone does not reveal the accurate picture of our heart condition, especially if it turns out to be so called "normal." It is a well-known fact in medicine that some persons who had "normal" EKG succumbed to massive or fatal attack. The best first step is to see your physician regularly, have your blood test and cholesterol level checked, and have a yearly stress test. Your physician will evaluate your health situation and advise you accordingly.

**Remember to take good care of your heart; it's the only one you've got!**

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