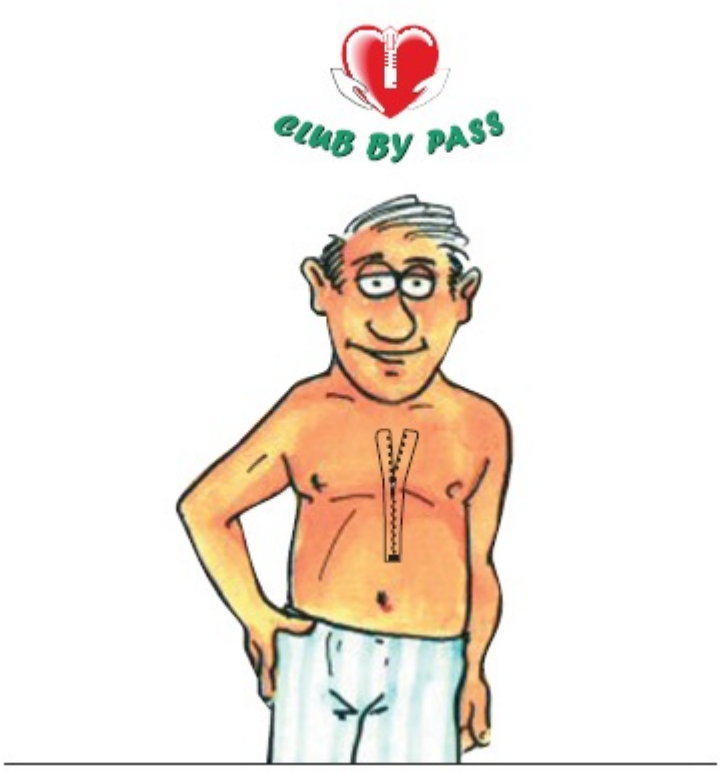
THE SECOND LIFE

WHEN BEGIN TO YOUR SECOND LIFE



WELLCOME TO THE CLUB BYPASS

We hope this booklet will be helpful in your “second life” that is a new beginning for you and your heart. . .

GOD BLESS YOUR HEART

Dear our valuable patient,

To be hospitalized for such a serious surgery may make you upset. This booklet, including summary information, has been prepared to be helpful for you to approach your surgery with confidence. During your stay in the hospital before and after the surgery, practical information is presented to you related to your expectations and concerns. Your well-informed and confident approach for your surgery will help you to recover as soon as possible.

In recent years, there are widely advances in the heart surgery. Approximately, 50.000 heart surgery is performed every year in our country. Despite its high importance and risk, heart surgery has become very successful by advancing of the knowledge of cardiology, anesthesia and intensive care. Patients and their relatives to know enough about why is the surgery needed and the feature and the risk of the surgery will make it easy for the family and patients as well as the job of the physicians and nurses will perform the follow-up.

As the patient and the family it is important for you to know what should you do from the admission to the hospital in order to prevent the mistakes and missing.

It is crucial for you and your family to be completely understood why the surgery is needed and all the related risks. The doctors, medical coordinator, nurses and secretaries in the team of your surgeon will be happy to answer your questions.

Ensure that there is no any question about your surgery in your mind.

YOU CAN ASK EVERYTHING TO THE TEAM CARING FOR YOU.

REQUIRED INFORMATION ABOUT YOUR SURGERY

WHY DO I NEED A HEART SURGERY ?

The reason of the heart surgery recommended to you is the given decision on that treatment of the problem defined as a result of your examination is not seen sufficient or possible with medications or methods such as angioplasty (PTCA). You should know that the heart surgeries are one of the most reliable and best treatment options in today's facilities.

The most performed heart surgery types in the adults:

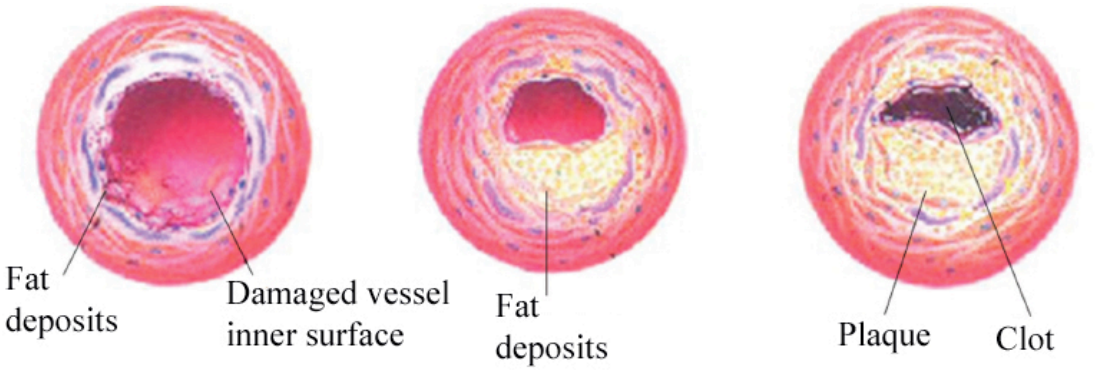
1. "Coronary artery (bridging) surgeries" due to narrowing or blockages in the coronary
   arteries.
2. "Valve surgeries" due to narrowing or failure in the heart valves.
3. "Congenital heart defects" detecting in the advanced ages such as the holes between the atria (atrial septal defect –ASD) or ventricles (ventricular septal defect – VSD)
4. Surgeries due to dilatation (Aneurysm) and rupture (Dissection) of the aorta that is the main vein originating from the heart.

CORONARY VASCULAR DISEASES

Coronary arteries are the vessels supply the heart muscle with oxygen and energy. The plaques occurring following the accumulation of fat (cholesterol) and calcium in the inner wall of the coronary arteries lead to narrowing or blockages.

Location of the narrowing and blockage (main vein, outlet point from the main vein..) as well as the percentage of the narrowing is the factor defining the severity and urgency of the disease.

The patients' complaints may be generally squeezing and burning pain in the chest during exercise or in the rest, as well as there may not be any complaint in patients who required a surgery (silent ischemia). Acute blockages in the coronary arteries can cause to a heart attack (myocardial infarction), leading damage to part of the heart muscle supplied from this vein. This is why the heart surgeons are very happy when they operated the patients before had a heart attack. Coronary artery bypass surgeries are widely-used in the developed countries and constitute 70-75% of the adults' heart surgeries.



Cross-section of a coronary artery began to fall

Cross-section of a coronary artery narrowed and suddenly blocked with a clot

VALVE DISEASES

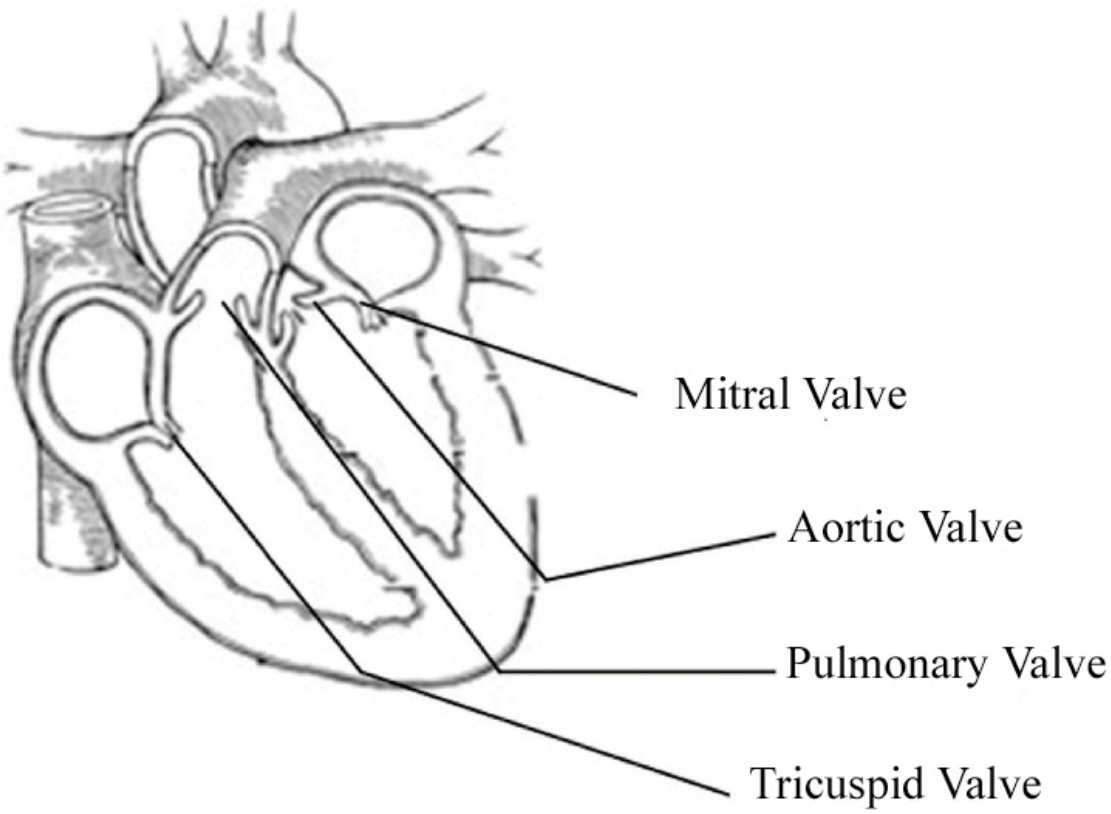
Narrowing or failure detected in one or more heart valves are treated by repair of the valve (plasty) or replacement. Heart is a powerful pump consists of the strong muscles, and it continually pumps the existing blood of 5-7 lt throughout the body. In this system, heart valves are the formations let the blood flow to be in

one direction. There are four valves between the heart chambers: aortic, mitral, tricuspid and pulmonary. Blood flow becomes difficult through a narrowing occurred in a heart valve, while in the failure the blood flow back increases the workload of the heart. In both conditions, heart muscle is forced and heart chambers dilate, causing the heart to enlarge. If this is not intervented, pumping power of the heart decrease and heart failure develops. Valve disease is encountered most in mitral and aortic valves.

Complaints of the valve patients:

Getting tired quickly and shortness of breath, first revealed during the exercises may be seen at the rest also in the advanced stages. When there is no any symptom in some patients, it can reveal by hearing of the murmur during a routine doctor examination. Final diagnosis is established with echocardiography and catheter-angiography examinations.

Sometimes the patient may not have any complaints even in the presence of severe valve disorders requiring surgery. The problem may be in one of the four valves as well as in 2-3 valves at the same time. In the patients with valve and coronary problems existing together, both of the surgeries should be performed at the same time. Sometimes, after the patient narcotized, the valves are re-evaluated with the echocardiography through the esophagus (transesophageal), and the final decision is made.



CONGENITAL HEART DEFECTS

Today, owing to modern cardiology, cognitive heart defects can be diagnosed before the birth (in the mother's womb) or in the childhood and the required surgeries are performed in the early ages. Therefore, cognitive defects are quite rare in the adulthood. The holes detected between two auricles (ASD) or two ventricles (VSD) in the adults are successfully closed using direct suture or patches.

INFORMATION ABOUT THE SURGERIES

WHAT DOES A SURGEON ?

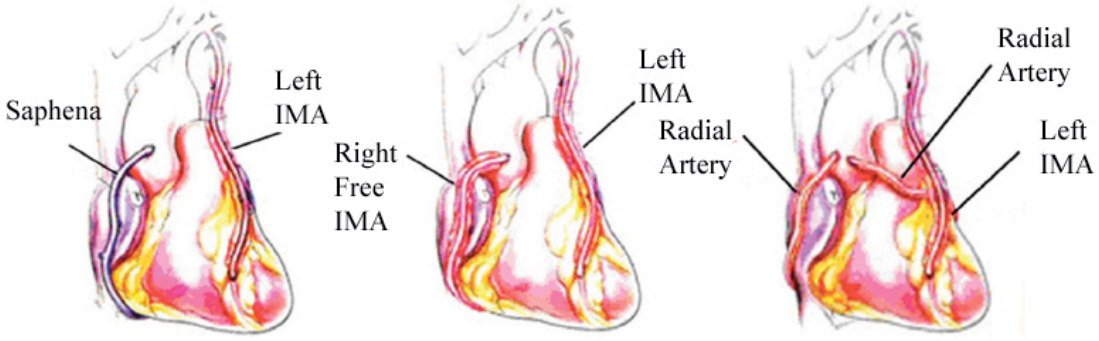
The most conventional way to reach the heart is opening from the middle of the tie shaped breastbone (sternum). Size and location of these incisions differ in some special methods. Some of the valve and coronary bypass surgeries can be performed through an incision (window) of 5-6 cm. First stage of the heart surgeries is to stop the heart by connecting the blood flow between th heart and lung to a pump (heart- lung machine). A part of the heart surgeries can be performed on a beating heart (off- pump).

ADULT HEART SURGERIES

CORONARY ARTERY BYPASS OPERATIONS

The basic principle of the bypass surgeries is to make a bypass-bridge before the blocked or narrowed coronary artery (the blood vessel that feed the heart itself) through a vein taken from the leg (saphenous vein), arm (radial artery) or chest (internal mammary artery). While the blood flow is from the vein to arm at the veins taken from the chest, upper tips of the other free veins (radial artery and saphenous vein) are sutured to the aortic vessel. By this way, flow of the blood supplying energy and oxygen to the heart muscle in the narrowing or blockage region is provided with a new vein (bypass graft). Bypassed vein number during the operation differs between 1 and 6. In general, 2 to 4 veins are bypassed. The veins used by the surgeon in the operation are those don’t lead to a deficiency when they are removed. We prefer internal mammary artery, then the radial

artery from the arm and finally saphenous vein from the leg in order of the precedence for these operations. However, the vein to be used may differ as to the location and severe of the narrowing in the vein to be bypassed. Sometimes, saphenous vein may be the best options for the vein in that target. Sometimes, internal mammary artery could not be used in advanced age, chronic lung disease and overweight patients. Arm vein is not used in the patients with chronic kidney disease and diabetes patients using insulin, unless necessary. Final decision for the vein to be used will be given by the surgeon during the operation.



* IMA: Internal Mammary Artery (Chest vein); Saphena (Leg vein); Radial Artery (Arm Vein)

Coronary artery bypass surgeries provide pain relief in coronary artery patients, and these are the operations performing with a low risk and certainly extending the life.

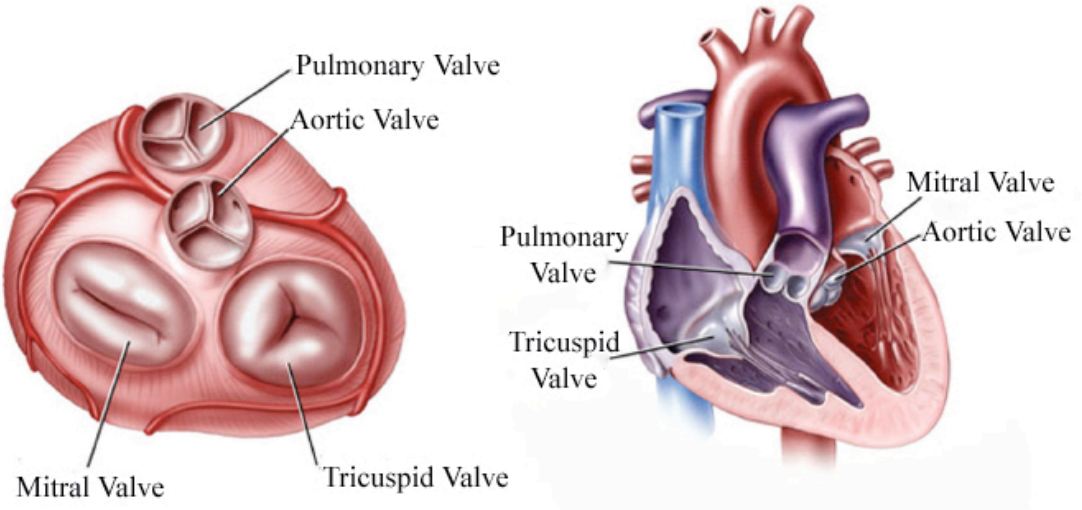
VALVE SURGERIES

To carry out the task of the heart for pumping normally, the valves should be fully open allowing the blood to flow to only one direction, and preventing the back flow of the blood. These valves will cause overwork on the heart if some blood backwards across them or the blood flow is insufficient. Surgical intervention is needed in the valves due to two types of diseases:

Narrowing (stenosis): Narrowing of the valve
Failure : Back flow of the blood from the valve

In the valve operations, the surgeon must stop the heart, connecting the patient to a heart- lung machine in order to open the heart to reach the valve.

The surgeon can replace the damaged valve with an artificial one (replacement) as well as or repair (plasty) the valve, particularly in mitral and tricuspid valves.



REPAIR OF THE HEART VALVES

Sometimes, the heart valves that each one is a natural wonder, cannot carry out their mechanical tasks due to some diseases. The problem in the heart valves is solved with surgical treatment in these situations. The valves with the most common need to be repaired and providing satisfactory results are the ones between the atrium and the chambers. The valve between the right atrium and right chamber is called “Tricuspid valve” and the valve at the left side is called “Mitral valve”.

Repair possibility in the valve diseases revealed related to rheumatic diseases is limited due to connective tissue increase developed in the valve tissue, thickening and excessive calcification. Successful results are obtained with the repairs performing in the valve failures revealed due to dilatation of the valve ring, prolapse in a part of the valve or extension of the cord (strands holding the valve). In addition to coronary bypass operation, repair of the valve is required in some patients. The durability duration target for the valve repair is 10 years and beyond. Structure and functions of the heart valves can be evaluated in details during and after the surgery through the “Transesophageal Ecocardiography” device inserted in the esophagus. By this way, it can be possible to confirm the performed surgery before the patient gets off the surgery.

When it is possible, and if the valve is considered to provide the physiological conditions for a long time, the repair of the valve is always better than the replacement.

A definite period is needed for the suture tips in the intracardiac region intervened and often for the ring shaped prothesis that called “Ring” which is inserted to support the repair to be covered with the tissue. This duration differs in the range of 3 to 6 months. Anti- clotting Warfarin (Coumadin®, Orfarin®) is used for the prothesis and suture tips not to cause to a clotting formation in this

period. Blood analyses should be carried out in the periods will be defined by the physician and at least once a month to evaluate the effect of this drug. After this period, examination of the cardiologist or echocardiographic control once a year will be enough.

REPLACEMENT OF THE HEART VALVES

The basic principle of the heart surgery is to provide single direction flow in existing physiology. Metal and tissue (bioprosthesis) valves are used for this purpose. Patients carrying metal valves must use the anti-clotting drug, Coumadin for the rest of their life. Whereas 3 months of Coumadin use is enough for the patients carrying tissue valves.

While the metal valves can stand for a long time, tissue valves required to be replaced after 10 years. Another difference of the metallic valves is to give a watch like sound due to their metallic characteristic that can be heard only in a very quiet environment. While this sound can be heard particularly in the early postoperative period, it widely decreases by improving of the tissues surrounding the heart. The metallic valves we choose to use in our hospital are the brands with proven quality and durability for many years all over the world. While the patients very rarely state that they hear such a sound in early period, they report this sound is never in a disturbing level by the time pass over the surgery.

The surgeon will make the decision considering your general condition, age, desire to give birth in the female patients (patients using Coumadin are not allowed to become pregnant) etc. when choosing which type of the valve will be used. If you have a condition that you consider to be definitive for the valve choice (cannot be frequently analyzed, to have a gastric bleeding, etc....) you should inform your doctor before the surgery.

SURGICAL TREATMENT OF THE RHYTHM DEFECTS (ABLATION)

Besides valve function disorders, rhythm defects are also seen with an important incidence. Generally, these rhythm defects are “Atrial Fibrllation” emerging due to dilatation of the heart chambers and “Atrial Flatter” arising from the level of the heart atrium. It is possible to resolve the rhythm defects with an operation known as “Ablation” using radiofrequency, ultrasound or cryablation technologies during the valve surgery. This method in which our team had an experience of 10 years has been successfully performed in hundreds of patients. If the atrial fibrillation is concomitant to a valve disease, some lines (Ablation line) are created to guide the electric current that triggers the contractions in the heart walls. This rhythm defect occasionally can be found in patients without valve disease (0.5%).These ablation lines can be produced from outside of the heart without opening it in this condition.

Success rate after the ablation operation is about 80- 85%. There may be a transient rhythm disorder in the early postoperative period. You will be closely monitored and supported with medications for this condition during your stay in the hospital. Later, your doctor will recommend you to use a drug (Cordarone, Beloc) for rhythm disorder for about three months. If the rhythm had improved after the operation and then impaired again, first the rhythm is tried to be improved with medication. If the medication treatment fails, cardioversion operation may be needed to improve the rhythm.

After elimination of the rhythm defect with ablation operation, very rarely your underlain heart rhythm may be detected to be impaired. A pacemaker may be needed to be implanted to adjust the rhythm of your heart in this situation. The need for a pacemaker is about 1.3% with the method we use in our clinic. Six months are needed to clearly evaluate the success of ablation operation. While in general the rhythm that is proper in early period progresses in the same way,

sometimes the rhythm that initially seems to fail, may improve within 6 months after the operation.

Performance of the heart significantly increases if the ablation operation is successful. We definitely recommend the ablation to be performed in the patients with the rhythm defects, unless an obstacle was not defined by the cardiologist.

AORTIC ANEURYSM

What is the aortic aneurysm ?

Aorta is the main vein originated from the heart and the source of all arterial network of the body. Aorta aneurysm means the dilatation of the aorta diameter. Degeneration of the elastic fibers in the structure of the vessel wall is the most common factor of the aortic aneurysm, and this is associated with a genetic tendency. Aortic aneurysm that seen in 10% of the men older than 65 years old is a serious life threatening health problem. About 80% of the aortic aneurysms emerge due to high blood pressure. When the diameter of vessels may be seen in various regions of the aorta reaches two times of the normal, dangers are often encountered such as rupture of the vessel or dissection of the layers in the vessel walls. Therefore, the patients with aneurysm detected should be closely followed-up and active received active therapy in the case of the vessel diameter doubles or exceeds 5 centimeters.

What are the symptoms of the aortic aneurysm ?

Aortic aneurism usually have not any symptom until ruptures. The diagnosis before rupture is established incidentally or during the scanning. Therefore, it is important for people over a definite age with risk factors to be scanned even they have not any complaint. Saving a life is possible with the definition of an aneurysm with high risk for rupture and the operation performed in time. Mortality

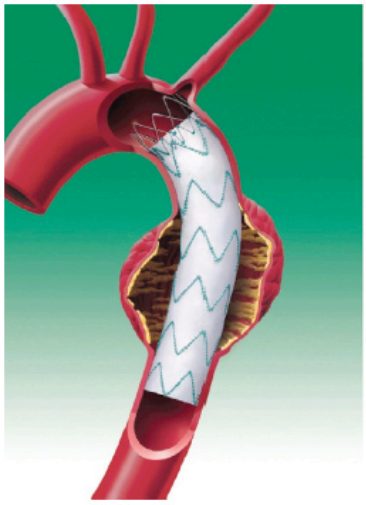
rate due to operation in the cases with aortic aneurism detected before the rupture and required surgery is less than 2% by the hands of experienced vascular surgeons.

How is the aortic aneurysm treated ?

Aortic aneurysms have two types of treatment. Open “surgical treatment” and “endovascular treatment” which means in vascular intervention. While endovascular treatment method that had a history of 10 years, first were used with trial purpose in the patients in those open surgery treatment methods were impossible, these methods have become to an advanced point at last 5 years as the first treatment of choice in aortic aneurysm.

ENDOVASCULAR TREATMENT

Large surgical incisions and deep anesthesia are not required in this method. The procedure often can be performed through an incision of 3-4 centimeters in the groin artery region under epidural or local anesthesia. Endovascular treatment of the aortic aneurysms has opened new horizons for treatment of the elderly patient group with contaminant coronary heart disease, high blood pressure, diabetes and various lung diseases. In conventional open surgical methods, the patients should be kept at the best few days in intensive care unit and a week in the hospital for the blood loss to be recovered. On the other hand, when the patient is treated using an endovascular method, often use of blood or blood products is not necessary and after the patient can be discharged after kept 4 to 6 hours in intensive care unit and 2-3 days in the hospital. Furthermore, recovery period of the patients treated with endovascular methods is quite short, and they can return to their normal life within 1 week.



Repair of the thoracic aorta (chest) aneurysm with endovascular stent

Repair of the abdominal aortic aneurysm with endovascular stent

Can endovascular treatment be performed in all patients with aortic aneurysm?

Like all the treatment methods, application of the endovascular treatment depends on certain conditions. First, computed tomography and angiography of the patient with aortic aneurysm are examined. Endovascular treatment method is a simple and reliable method in the patients with the aorta defined to have a proper anatomic structure.

The risks of endovascular method in treatment of aortic aneurysm

The ratio of patients died due to surgery in surgical treatment of the aortic aneurysm is up to 6% for the selected conditions. This rate is quite high in the cases requiring emergency intervention due to ruptured aortic aneurysm (25-75%). Whereas this ratio is reported about 1% for endovascular method in the international medicine literature.

Is the endovascular method a stable treatment?

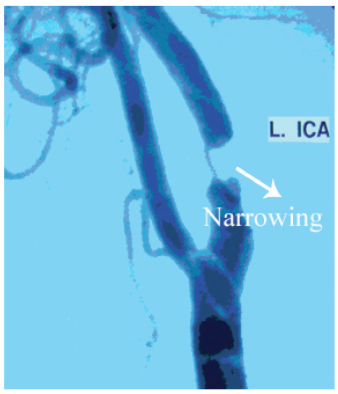
The material using in endovascular treatment and called “stent- graft” give highly satisfactory results when used in proper conditions. The ratio of the endovascular attempt for the second time in our patients with follow-up of 5 years is 2.2%. Surgical attempt after endovascular treatment has been needed in only our few patients with exceptions.

SURGICAL TREATMENT

Tomography, MR and angiography of the patients are examined. Decision for the most appropriate intervention method for the patient is given following a detailed evaluation of location and size of the aneurysm, and anatomic features such as included vessels, distance of the aneurysm to the kidney and brain vessels and narrowing and angulations in the leg veins. Currently, endovascular stent is not performed on the aneurysms located in the beginning of aortic vessels, that is the region of ascending aorta, and the aortic arch region, including the brain vessels. Therefore, the unique option for the aneurysm in these regions is the open surgery. Whereas endovascular stent graft is successfully used in cases with proper anatomy for the aneurysm in descending aorta in the chest. In particular, open surgery in the abdominal region is performed by removing of the damaged part of the vein,replacing am artificial vessel through an incision will be done in the abdomen. There will be inactivity of the stomach and bowel in early period following the surgery. Return to normal activity of the digestive system may take up to 2- 3 days. Therefore, patients are not allowed to orally intake fluid or food in early period. By the increasing of intestinal motility increasing over time, your diet will be gradually arranged by your physician. A probe inserted during the operation through the noise toward the stomach will be stayed in the place to discharge the excessive accumulation of the gas and secretions in the stomach. Whereas the surgical treatment of the aneurysms in descending aorta is more

complicated. The risks for this operation differ in terms of the location and size of the aneurysm. Your doctor will inform you about the risks and later period.

CAROTID ARTERY STENOSIS



Stent and surgery may be considered in severe stenosis of the carotid artery (jugular vein). The proper method will be decided by collaboration of the invasive radiology department and surgical team in terms of the degree and location of the stenosis and clinical symptoms. In case of the operation, interior of the vessel is opened and the plaque causing the stenosis is cleaned (endarterectomy). Following the plaque cleaning, vessel walls are expanded with a patch and closed (patch plasty). Stent implantation is applied by the team performed the angiography.

SURGERY PREPARATIONS

WHILE WAITING THE DAY of SURGERY

Smoking:

If you smoke, you must quit it immediately. If you are a smoker patient, talk to your doctor sincerely and honestly. In this situation, first you may need to be examined and treated by a chest disease specialist to carefully evaluate your pulmonary functions. Up to today, you had been informed by each doctor you talk, about how harmful is smoking for your health. Even if you receive treatment to reduce the damage of smoking to your lungs, your risk for experiencing problems in your lung is higher than a non-smoker patient. Hence, your period of stay in intensive care unit may be prolonged. Keep in mind that each time you

smoke your coronary arteries narrow a little more and the risk of blockage increases. Furthermore, the destruction occurring in your lungs affects your general health in the future. Especially the patients who are still smoking, experience serious lung problems post operation. Please try to get rid of the effects caused by smoking by quit it as soon as possible at least in the period until your surgery.

This period is the last chance for you to quit smoking.

Weight Control

If you are overweight, you should lose weight as much as possible before your surgery by diet. The risk for complications after the surgery in overweight patients is more than in the normal weight patients. The dietitian staff existing in the our hospital is ready to help you for weight lost and to drop to a sufficient weight until your surgery. You will see many benefits from lose weight under a dietitian control to be healthier in your new life. Improving of the breastbone may be delayed after the surgery in our overweight patients as well as some complications may be revealed such as flix and leakage from the surgery site.

ANTICOAGULANT DRUGS

When your surgery date is decided, you will be informed by the cardiovascular surgery coordinator about when to leave your anticoagulant drugs (Plavix, Pingel, Karum, Diloxol, Opirel, Klopis, Planor, Clopra, Coumadin, Dispril, Aspirin, Coraspin, Ecopirin, etc.). If you are not sure whether your drugs are anticoagulant or not, please show them to the doctor or coordinator to avoid any problems.

Some drugs must be left at least 3 days before the surgery.

Surgery Preparations:

After all of your examinations finished and the surgery is recommended, preparations of your surgery will begin. Surgery coordinator will record your name to the surgery list considering urgency of your situation. The emergency hospitalization for heart surgery is not needed in most patients. However, don't hesitate to inform your surgeon or coordinator about the changes in your condition (such as chest pain or increasing of the shortness of breath) while waiting for your surgery order.

The surgery appointment given you may be postponed for few days as to interceded emergency patients and to the bed condition in the intensive care unit, don't worry.

You will be hospitalized one day before the planned surgery date except the special situations. In the days before hospitalization and just after the admission, your cardiologist and many doctors from the surgery team will investigate your examinations and complete the missing points. Your cardiologist may order echocardiogram if you had not previously.

In some particular conditions, some consultations may be needed such as neurology, nephrology (kidney), diabetes and pulmonary diseases.

Infection in your gums and decayed teeth are crucial due to may cause a general infection postoperation. You must be examined by a dentist definitely before the valve surgeries and if deemed necessary by the surgical team before the coronary bypass operations.

CAROTID DOPPLER

Carotid doppler examination should be done before the surgery to check the condition of your blood vessels to the brain (carotid arteries). The appointment time for this procedure will be getting by your coordinator, and the procedure will be performed in the radiology department. As to the result of this process, if a critical stenosis is detected in your neck veins, sometimes these veins may be required to be operated. In this case, your heart surgery will be performed only after these carotid stenoses were opened. Your doctors will inform you on this subject.

THINGS YOU HAVE TO BRING WITH YOU WHEN HOSPITALIZED FOR THE SURGERY

- All documents related to your previous medical history
- X- Rays
- Angiography CD and report
- Laboratory outcomes
- Carotid Doppler reports
- Echocardiography reports
- All epicrisis and operation reports, if you had previously operated for heart or veins
- Dental examination reports
- Pulmonary function test results
- A list of drugs you use or the drugs themselves
- Dentures, eyeglasses, hearing aids that you use (will stay with you during the surgery period)
- Breathing support device in the patients with sleep apnea to be used in the postoperative period

THE TEAM WILL INTEREST IN YOU DURING YOUR SURGERY

Surgical Team:

The surgeon and assistants who will operate you, will visit and inform you about your surgery in the evening before the operation. Don’t hesitate to ask everything you want to learn (risk of the operation, type of the valve to be used, number of bypass to be performed, type of the vein to be used, etc.) about your surgery. The team performed the surgery will follow your surgical problems also after the operation and will be constantly in contact with your cardiologist, coordinator, physiotherapist, training nurse and service nurse.

The condition of surgery incisions in the chest, arms and legs, drains, pace wires that inserted during the surgery and stability of the breastbone will be followed up by the surgical team.

Intensive Care:

You will spend the night following the surgery in intensive care unit. Your follow-up here will be done by intensive care specialist physician and specially trained nurses. Anesthesia and surgical team will also help in this follow-up. Intensive care unit period may be more than one day.

Cardiologist:

Your preparations before the surgery and the treatment after transferring from the intensive care unit to the service will be arranged by your cardiologist. Your cardiologist and surgical team will be in contact during this period.

Anesthetist:

A doctor from the team will narcotize you during the operation will visit you before the surgery and inform you about the anesthesia and intensive care. In addition, he will request to learn about the drugs you had previously used, your allergies and all information related to the operations you had previously undergone and your health.

Physiotherapist:

Physiotherapy specialist will teach you the breathing and cough techniques as to your clinical condition that have a great importance in the day before your surgery or later when you are yet in the intensive care unit.

In the postoperative period, most of the patients restrict themselves due to the deep breathing and coughing may be painful. If you cannot do the exercises good enough because of the pain, you must inform your nurse on this topic. Your pain will be relieved by painkillers, and you will provide to do very important – exercises regularly and effective. You will learn the easy cough and deeply breathing, and you will pass these troubled days. In particular, the persons smoking before the surgery should receive intensive respiratory physiotherapy before and after the surgery.

Nurse:

You will be followed-up by the specially trained nurse staff in the service before and after the surgery and during your stay in intensive care unit just after the operation. These nurses have the experience under the supervision of a responsible nurse to meet all care of the heart surgery patients. You can share with them sincerely all the problems you have encountered. The purpose of this team is to accelerate your improvement to send you home as soon as possible. Your service nurse will apply the treatment arranged by your cardiologist and will follow-up your dressing under the supervision of your surgeon. In this period, all information transfer between your cardiologist and surgeon will be provided by the service responsible nurse and coordinator nurse.

Training nurse:

The training nurse who will inform you about the operating room and intensive care before the surgery and about the care at home after the operation, will visit you everyday after the surgery and will complete your daily training program.

YOUR PREPARATIONS FOR THE SURGERY

Shaving:

The body parts of the male patients related to the surgery will be shaved by the hospital barber in the evening before the surgery. In order to prevent the small cuts, don’t do this yourself. Definitely don’t shave before that.

Bath:

You will definitely take a bath in the evening before the surgery to reduce the infection risk. Some special antiseptic solutions will be given you to use during your bath.

Fasting:

Absolute fasting is necessary for 6 hours before the surgery because of anesthesia would be inconvenient on a full stomach. If your surgery had been planned in early morning, don't eat and drink anything from 24:00. If your surgery is in the afternoon, a light breakfast can be allowed within your doctor's knowledge. Your nurse will give you a special drink while waiting.

Enema:

A simple enema in the night before the surgery is necessary for you to be comfortable postoperation.

Sleep:

A drug will be administered you to sleep comfortably in the night before the surgery.

Going to the operating room:

A drug given you just before being taken to the operating room will be providing you well comfort. When the operation room team is ready, they will take you to the room with a stretcher accompanying by a nurse. You will be met by the anesthesia team and operating room nurses. Anesthesia specialists will first give

you oxygen with a mask and then will prepare you to the surgery by inserting serum and administering a soporific.

WHILE YOUR PATIENT IS IN THE SURGERY

You will be called by the surgical team and informed about the surgery.

INTENSIVE CARE UNIT

After your operation, when you come to the intensive care unit, you will be monitored by special trained experienced intensive care physicians and nurses. There is a nurse in each bedside of one patient in this unit. The length of stay in intensive care unit usually differs between 1 and 3 days. There may be some conditions prolonging this time. In this case, your family can get the information from the surgical team, coordinator, intensive care responsible physician and the nurse caring you.

Intensive care responsible nurse or the coordinator will call and inform your family by phone twice a day (10:00 and 22:00). During your stay in intensive care unit, your relatives are not taken to the unit to visit you. Your relatives will be able to watch you through a camera system in the cardiovascular surgery polyclinic and speak with you on the phone.

Therefore, as the time you are in the intensive care unit, your relatives should not wait in the hospital and frequently call (unless a special condition).

EQUIPMENT IN THE INTENSIVE CARE UNIT

Respiratory device:

You will be narcotized for a while to not have pain after you came to the intensive care unit. This duration may be few hours as well as up to the next morning of your surgery. You will be connected to a respiratory device through a hose in your mouth during your sleep. You will not be able to speak as long as the hose stays in your mouth, there is no need to panic.

In due course, you will be slowly waked up and normally breath pulling away the respiratory device. Then a moistened oxygen mask will be inserted as to cover your moth and noise to ensure you breathe easily. Your nurse will often warn you to take a breath in this period. A physiotherapist will encourage you to take a deep breath for discharging of the secretion in your lungs by coughing. This secretion is pretty much in the smoker patients.

After few hours of pulling away from the respiratory device, you will be guided to sit in the bedside for few minutes. It may be a sensation of excessive thirst after wake up. Your nurse will give you moderate water in first hours and then will increase it.

Monitor:

You can be surprised to see the number of monitors around your bed when you completely waking up.Your heart beat, blood pressure and other important informations are monitored through these monitors. These monitors give an alarm signal when the values on them exceed the limits previously defined. There is no need to panic. There is certainly a staff that will response and act to those warning signals from the monitors you and the other patients connected.

These monitors are existed to ensure your followed values are in the normal range, and they are intented to provide early warning. Although distributing, they are necessary, and often they don't mean a serious condition.

Serums:

Fluid and blood are administered to you through the catheters entering into your arm and neck.

The catheters existing in your neck are used for the period of your surgery and intensive care unit. They are usually removed in the 3rd day.

Drains:

When you wake up after the anesthesia, you will notice two or three hoses outgoing from your chest. These are special drains inserted to discharge the blood accumulated in the surgery site (around the heart), and probably they will be removed in the day after surgery.

Pace wire:

One or two pace wires are inserted on the heart during the surgery to connect to a pace maker in the case of irregularity in the heart beat after the operation. Simply, these wires are thin cables touching the heart slightly. If there is not any rhythm problem occurred for 3-4 days, these wires are removed at bed by the cardiac surgery specialist.

Urinary catheter:

There is a urinary catheter in each patient to monitor the amount of urine after surgery. Sometimes you can feel by the catheter signal that you could not urine, don't worry.

BACK TO THE SERVICE

When you are transferred from the intensive care unit to the service, your drains will be removed, your serums will be decreased or cut and the catheter in your neck will stay in place to be used for your medical treatment in the service. This catheter also will be removed in the $^{3\text{-}4th}$ day of the surgery and one catheter will be inserted on your hand to be used at your treatment. The first day you came to service would be useful to get a continuous oxygen. Then you may receive oxygen treatment as needed. Your urinary catheter will be removed in 2^{nd} or 3^{rd} day as to the situation.

Physiotherapy

Secretion (phlegm) should be discharged occurs in the lungs of almost all patients. This will be more prominent, particularly in preoperative smoker patients. Therefore, although painful, you should take a deep breath as thought by the physiotherapist and suppress on your breast with a small pillow. Please don't be afraid to take deep breaths or cough because of your pain, analgesics will be given as you need.

Nutrition

First you will drink plenty of water and liquid foods (tea, linden, buttermilk, kephir, composte, soup etc.) and then you should gradually switch to a normal diet. You may have to eat less salty in the first few days with your doctor's request. Despite

usually the absence of your enjoyment and appetite, you should exert yourself to eat and drink in order to accelerate your recovery. As long as you are sure they are in compliance with your diet and prepared in hygienic conditions, your favorite foods from home may be allowed by consulting your doctor. Your dietitian will request from you to consume one boiled egg a day and a bottle of kephir in order your immune system to strengthen and to intake enough calorie, accelerating your improvement.

Toilet Routine:

If you cannot defecate for two days after you returned to the service, inform your service nurse. Your bowel movements may be slowdown due to effects of anesthesia and analgesics. You have to stick your diet, do your exercises and consume the specified amount of liquid in order your bowels to regain their normal function. Small walks you do by getting out of the bed also will be helpful to increase your bowel movements.

Personal hygiene:

You will be able to do your personal cleaning (teeth brushing, face washing, etc.) by yourself in the days after you came to the service. There is not any drawback to take a shower after 3-4th day of the surgery if your wound is convenient. You can also take a bath sitting with help of your nurses or relatives.

Your exercises:

You should get out of the bed and be active as soon as possible. You will be asked to sit 15-20 minutes on chair 3-4 times a day and allowed to go to the toilet the day after you come to the service. Walk for 5-10 minutes in the service at 2nd day of the surgery and frequently walk for 5-15 minutes in the service at 3rd day of the surgery.

Your lying positions

Even immediately after the surgery you will be able to lie on your right or left side. Supporting of your back with a pillow will comfort you. The physiotherapists and nurses will help you to increase your activity day by day. You can be sure that early activation will accelerate your recovery. Duration of your walks little by little will gradually prolonged and you will be able to get up and climb up and down the stairs by yourself before you allowed to back home. You may feel pain on your shoulder, back and chest and a general weakness during your walks. This is completely normal, don't worry. Furthermore swelling may be seen in legs and ankles of the patients with vein taken from the leg. Varicose socks you use are for prevention of the leg from swelling and thrombophlebitis occurrence by increasing the blood circulation in your legs. You can take of your varicose socks when sleeping in the night. Pull and extend your feet from the ankles in the bed to increase the circulation in the legs. Our patients, particularly those using diuretics will be weighed and closely monitored for the weight by the nurse in the service every day.

POSTOPERATIVE CARE IN THE HOSPITAL AND HOME

Being Back At Home:

Being at home again after a successful surgery and recovery period will be a very nice feeling. However some concern and anxiety may develop when you left the hospital where you were nursing carefully and came to home. It is unnecessary for you and your family to worry about this situation. Excitement and stress of your heart surgery may cause you give such a reaction. Psychologists

of our hospital will help you in this depressive period. Day by day, you will be able to assess your improvement and gradually increase your activities and responsibilities.

Many of the patients report their complete healing took 3 to 6 weeks. Age, weight, other organ problems and features of the performed heart surgery also cause to differences in the recovery period. Patients with advanced age normally need to a longer recovery period than young ones.

Inevitable excitement from returning to home will definitely pass within 2-3 days. Try to do the exercises in a way recommended by your physiotherapist in the home, allowing a sufficient time for a rest. Extend your feet on a stool when sitting. Following, you will find information about those you have to pay attention at home.

Pillow use and usage time:

No matter how well your breast bone was fixed in the surgery, you must pay attention to protect your breast bone for 6 to 8 weeks. A breast pad will be given you at the first day you transfer to the service, and you will be informed by your service nurse on how and when (when coughing, sneezing and walking around) should you use it. You have not to use it for a long time. You can use the pad to support the breast bone in the first days of discharging from the hospital, and then you can use your both hands for this at the later period.

Breast supporting corset:

Bone structure of the persons (age, weight, diabetes, female patient) presents different recovery processes. You may be recommended to wear a breast corset as an additional support in the intensive care unit and service period on the assessment of your bone structure by the heart surgery physicians. It is

important your breast corset to always be worn. Heart surgery physicians will re-assess your breast bone in your first appointment and will inform you about how long more you must use it.

Arm movements you should not do:

You must avoid doing some movements for 6-8-week periods of the breast bone joining duration.

1) Raising your arms upward stretched.
2) Stretching backward
3) Putting your hands under your head
4) Pulling yourself upward in the bed by supporting of your hands. A belt will be tied at the foot of your bed in the service for this purpose. You can hold this belt when sitting and getting up. You can tie a belt in a similar way to the foot of your bed at home. Please don't pull yourself with a single arm when using this belt. Since the breast bone will be asymmetrically forced with the single arm loading, you may cause to move of the bone. Therefore, it is usually helpful to get support from the others for the first two weeks. Don't hesitate to ask help of the staff in the hospital and your family at home.

Weight lifting:

Weight lifting over first two months of the surgery is not proper for you. The purpose here is not to force your breast bone. You can lift weights up to 4-5 kg after one month. If you share the load using both hands, the weight will be distributed on your breast bone in a balanced way. There is not any drawback to lift a weight after two months, that is after your breast bone completely joined. However, we don't recommend you to lift weights that will force and make you tired.

Lying Positions:

You can experience sleep problems after the surgery. Lying on your back may cause to back ache.

There is not drawback to lie on your side from the first day you go to service. You are recommended to lay down and get up in the way shown at the picture. You can get up by yourself without applying much pressure on your arms by lying on your side and hanging your feet down.

You can slightly lie on your side and support your back with a pillow in first days. Then you can fully lie on your sides on the next days. Your bed at home is not from the beds in the hospital with a head side can be elevated. You will define how to lie down and get up in your bed at home by yourself.

Recommendations for sleep problems you may experience postoperation:

- Naps during the day affect the night sleep, therefore, decrease the nap as soon as possible.
- Increase your physical activities during the day
- Arrange your sleeping/waking hours in the hospital and home
- Medical support may be needed in advanced sleep disorder.
- Psychiatrist in our hospital can be quite helpful for this subject.

Varicose sock use:

Socks with the anti-embolic features will dress up to you in order to regulate the blood circulation in your legs. You must wear these socks during your rest period at home for a while.

You have to wear these socks for 1 month if the vein was taken from your leg and 2 weeks if was not taken. These socks dress up to you to regulate the circulation and to prevent the edema that may occur in your legs. Therefore, it is important to wear your socks after rest your legs in the supine position. It is recommended to wear them before getting up from the bed in the morning.

Varicose socks must be definitely worn during the day. You can take of them when going to sleep.

Exercise Program:

Regular exercise must be a part of your life. Regularly, maintenance of doing exercise will enable to protect you ideal body weight and will keep you away from the stress. You must have an exercise program of 20-45 minutes for three days a week. You can set this exercise program as to consists of walking and aerobic.

You are recommended to stay at home and not go out in the first week of discharge. It is important to begin with 5-10 minutes in the first day after that week and to increase gradually. There must be someone with you during your first walking. Walk on a straight path. Arrange you walks as to be at least after one hour rest following the meal. Choose comfortable wearing and shoes for walking.

If you have complaints such as over fatigue, intermittent breathing, pain and burn in the chest more than 20 minutes, you must inform your doctor as soon as possible.

You can join after 3-4 weeks of the surgery to “Heart Yoga” program, which was organized as a social responsibility project of our hospital.

Heart Yoga program is held as free of charge in the conference hall of our hospital on Tuesdays and Fridays between 19:00 and 20:00 by management of Yoga Master Dr Neslihan İskit.

Breathing exercises:

If you don't discharge the phlegm accumulating in your lungs, your exercise capacity will decrease and the work load to your heart will increase due to insufficient oxygen intake. Therefore, continue to do the breathing exercises in the hospital and home for a while. What to consider after discharge from the hospital is to prevent the regression of lung capacity you have gained in the accompanying the breathing physiotherapists. You have to do at home some of the breathing exercises you have done in the hospital for this purpose.

The visitors:

Since the immune system of your patient has weakened after the surgery, accept a minimal number of visitors during the stay in the hospital. The visitors may be very distributing particularly in depressive period of the young patients. Visitors are not accepted to the intensive care unit. If you have any visitor despite the restrictions, we recommend them not to stay there more than 5 minutes. Avoiding close contact with your visitors is important for your health.

Taking bath:

It is important for you to pay attention to your personal hygiene after discharging from the hospital. Taking bath and wearing clean clothes will protect your wounds from infection. If you are not used to take a bath every day, make sure to take a bath every other day.

Take your bath with warm water as to not last more than 10-15 minutes. There is not any special preference for the soap and shampoo you will use. If you had some habits in the preoperative period like entering to a tub filled with hot water or going to sauna and hammam, these are not recommended you after the surgery because of they can cause shortness of breath. You must definitely consult to your doctors for going to thermal.

Travels and Driving:

It is recommended you to sit at the back seat with supporting of your chest with a pillow at the car trips. You can drive by yourself after 8 weeks of the surgery. You can fly after 10 days after the surgery. In the airport, definitely state that you had undergone a heart surgery and keep a report with you in which written the statement of “There is not any drawback to travel by plane”. Sit on the aisle side at the long flights and make a short walk down the aisle hourly.

If you drive to home, it is recommended you to stop the car in 2-3 hours intervals and go on your travel after walking around the resting place for 5 minutes at the long trips for regulation of the circulation in legs.

Working life:

After 2 weeks of returning home, you can make short visits to your office and turn back to home. But don’t make yourself much tired during these visits. You can increase this duration every day. Housewives can start to do light house works after 1 month of the surgery.

Sexual life:

You should organize your sexual relationships leisurely. It mostly recommended to wait 4 weeks after the surgery. You have to find the most appropriate position that will not force your chest and lead to any trouble. You must not be sorry for

failed or forcing early attempts. It is crucial to inform your doctor about the use of Viagra like drugs after the operation.

Praying:

Praying in the normal prostrate position in early postoperative periods may force your chest and cause to pain. You can pray sitting in the first days and in a normal way after 6 to 8 weeks of the surgery.

Fasting:

The patients undergone heart surgery are not recommended to fast because of the drugs cannot be used regularly, long term thirst and overload during the fast break.

Smoking and drinking:

Don’t smoke and don’t stay in the smoking environments !!!

Alcohol:

Alcohol may interact with the drugs you use. Specially, if you use Coumadin, it may cause to deterioration of dose adjustment. Please consult to you doctor about using alcohol.

FOLLOW-UP OF YOUR WOUNDS

A little yellow and bloody leak in your leg and chest wounds is quite normal. Very rarely you may need to continue to dressings at your home. In this case, both your doctor and the service nurse will inform you. Normally, your wounds can

stay open for 3 days after the operation. You can come to the hospital for the dressings or a team can be sent to your home for this.

Removing of your sutures:

Your wounds are usually sutured as much as possible aesthetically using hidden suture method absorbable by the body. It is not necessary to remove your sutures in this case. Only when non-absorbable sutures are used (drain suture, metal clips), they are removed at 8^{th} or 9^{th} day of the operation. If you had recognized after your previous operations your scars healed obviously with excessive scar tissue or if such a non-aesthetic scar draws your attention postoperation, inform your surgeon about this. A special cream may be recommended you to be used in such cases.

Prescription and using of the drags:

Your service nurse will give you the drugs you have to continue using at home. In addition, your doctor will give you a prescription and a description on how to use the drugs. Necessarily, you should obtain spare of the drugs you requested to use continuously. Don't cut any of your drugs without informing your doctor. If you will not continue to use your previous drugs at home, you have to take only the drugs at the last list given you as recommended. If you have any question or hesitate related to your medicines, definitely talk to your doctor or nurse to make it clear. Remember that you have to use these drugs during the rest of your life.

Your psychological status:

Some patients can experience a depressive period at the days just after the operation and feel they had not recovered. This situation can worry your family unnecessarily. You should be sure that such psychological problems following such a serious operation are normal. Don't hesitate to share your problems with

your service doctor or service nurse when you feel bad. When deemed necessary, a psychiatrist experienced in the sleep disorders, and depression will see you and set an adjunctive therapy for the early period. You will return to home within about one week, and you will see that how quick is the recovery and how pleasing is this situation for all the team and your family.

Follow-ups:

You will be informed by your doctor on the day you will be discharged about when will be your first follow-up. Your first follow-up will be organized notified to you by the patient counselor of your service. Your appointment will be with your cardiologist and surgeon after one week of the discharging. The cardiologist will examine you and control your drugs, and the surgeon will remove your sutures if necessary and check the surgery sites. On this follow-up, electrocardiogram (ECG) and lung x-ray will be taken and if necessary, blood count, urea and glucose controls will be done. The patients who had valve surgery have to check their prothrombin time also, giving blood. Form of the test which these patients have to do on the first follow-up will be given to them when discharging.

It is important for you to come about 1 hour early to give blood and to not be delayed for your appointment. These appointments which enable your doctor to evaluate your recovery and re-plan your medicines are very important. Take notes the questions you want to ask before coming to the doctor. At this meeting, you can also discuss with your doctor the time for returning to your work.

HEART YOGA

Heart yoga is implemented since 5000 years, and it has begun to take the place it deserved beside the conventional medicine. Willing to help our patients on their dealings with the troubles to return their normal life and to fight with the depression signs affecting their life and productivity, to discipline their lives and to soften their types of behavior introduced as with the heart yoga.

We observe that blood fat and glucose of our patients who joined to the heart yoga program are more easily taken under the control, and these patients need fewer drugs for blood pressure and rhythm regulation. We obtain excellent results in terms of the most important values for our patients such as re-embracing the life, adaptation to the social life and staying away from unnecessary stress.

HEART YOGA PROGRAM

Heart yoga program that begins after 3-4 weeks of the surgery is applied as 1 hour, two days a week. In the 3 months program, basic principles of the yoga are taught and the patient can continue to these works in another yoga club or at home. This program has aimed to decrease the blood pressure and pulse numbers of the patients who had undergone heart surgery, and to teach the stress management with deep relaxation method.

The program is performed free of charge on Tuesdays and Fridays between 19:00 and 20:00 in the conference hall of our hospital.

THE IMPORTANT SYMPTOMS YOU HAVE TO CONSİDER IN THE RECOVERY PERIOD

In the recovery period, you should immediately speak to your cardiologist or surgeon, taking seriously following symptoms except the pains relieved with simple analgesics:

1- Irregular and rapid heart beats,
2- Hard, frequent and interrupted breathing,
3- Excessive sweating and fever,
4- Sudden confusion in vision and dizziness,
5- Faint feeling with simple efforts,
6- Sudden leak from your wound

If you cannot reach to the secretary of department, you can refer to the emergency department.

Things to do during the long follow-up period

The patients who had coronary artery bypass surgery:

Check your blood fat and blood glucose once a 6 months and have an electrocardiography (ECG).
Have an effort test, Echocardiogram (ECHO) and lung x-ray each year.

Except these yearly controls, we recommended to all our patients who had coronary artery bypass surgery to definitely have a control angiography if 5 years had pasted over the operation. Angiography with Multi-slice Computed Tomography (virtual angiography) also can be performed in the patients who do not want to have normal angiography. However, if an abnormal evidence reveals

on the tomographic angiography, conventional angiography will be required. Please speak to your doctors on this issue.

The patients who had valve surgery:

Check your prothrombin time (PTT – INR) each month for your cardiologist to adjust the Coumadin dose.

Have echocardiography (ECHO), ECG and lung x-ray every year. If you will have a bleeding surgical operation, inform your physician about your Coumadin use. You have to use antibiotics in such a case to protect from the valve infection (endocarditis prophylaxis). Provide the doctor will operate you to discuss with your cardiologist about Coumadin adjustment and antibiotics.

NUTRITION AFTER THE HEART SURGERY

FIRST MONTH:

You will need plenty of energy and protein on the days after the surgery to accelerate your recovery. There for it is not necessary for you to make a diet during the first month period. You can eat everything you want providing low-salt. If you have the diagnosis for a metabolic disease such as diabetes or kidney, liver and gastric diseases, your diet must be set by your dietitian. However, in this one month period of without any limitations, foods that known by everyone to be harmful such as frying, roast, fatty foods (meat, cheese), saturated fats (butter, tallow) etc. must not be in your life. Broiling, boiling, baking and steaming must be used as cooking methods. Deep fat frying should be avoided. It is

appropriate for you to consume all food groups balanced and sufficient in this period which your calorie need increases.

WHAT SHOULD YOU CONSİDER AFTER ONE MONTH PERIOD ?

- Prefer lean red meat maximum 1-2 times a week (about 2 meatballs in size) and white meats such as poultry and fish (about 4 meatballs in size) on the other days in order to protect the health of your heart.
- High levels of the cholesterol in the blood are directly proportional to the type and quantity of consumed fats. Levels of your blood fats must be definitely low after the surgery. Therefore, you should already now remove the saturated fats from your life and use the oils (olive oil, hazelnut oil, sunflower oil, corn oil or soybean oil) diversifying. Your daily fat consumption should not exceed 3 tablespoons.
- You can consume 5 olives instead of one dessertspoon fat.
- You can consume 2-3 walnuts or 10 hazelnuts or 5-6 almonds daily.
- Increasing the consumption of fiber foods in your diet will be helpful to regulate your levels of blood cholesterol. To provide this:
- Prefer whole wheat, black and oat breads instead of white bread.
- Prefer pilaf with bulgur instead of pilaf with rice.
- Eat the legume meals (dry bean, chickpea, lentil) at least 1-3 times once a week.
- Eat the fruits shelled as much as possible.
- Increase your consumption of fruits, vegetables and salad (lowfat), try to eat at least 2-4 servings a day. Stay away from the carrots in salad.
- Eat fruits with high fiber content instead of fruit juices.
- Since milk and diary products are animal origined foods, their consumption quantity and frequency are important for us. Your daily consumption of milk and yoghourt should not exceed totally 3 glasses, and fat-free white cheese should not exceed totally 2 matchboxes in size (about 60 gr).

- You can eat sugar and sugary foods if you are not a diabetic, but you have to limit your daily intake with 6-8 dessert spoon, because over consumption of the sugary foods will increase your blood fats and weight. If you are a diabetic, you should remove the simple sugars from your life. You can use the sweeteners instead of the sugar.
- You can eat an egg every other day.

HEART FRIENDLY FOODS ☺

Garlic: It decreases the risk for coronary heart diseases, preventing the clotting and reducing the cholesterol due to food components in it. One clove of garlic can be eaten daily.

Fish and fish oil: prolong the bleeding time and are effective on reducing the intravenous blockages. Omega-3 fat acids in the contents are of a high antioxidant feature. We recommend fish consumption 2-3 times a week. Salmon, mackerel, tuna and sardines are the fish rich in omega-3 fat acids.

Walnuts, hazelnuts: They include omega-3 with high antioxidant feature and vitamin E as well as magnesium and dietary fiber. You can consume 10 hazelnuts or 2-3 walnuts daily.

Oats, rye and whole wheat flour: They have heart disease preventing features due to Vitamin B and E contents. You can increase consumption of oat flakes, whole wheat bread, whole wheat pasta, rice and bulgur.

Green tea: Polyphenols in it are effective on prevention of the heart disease due to antioxidant features. We recommend herbal teas such as green tea, sage tea, camomile tea and fennel tea instead of black tea or coffee.

Concord Grape: It has a positive effect on the heart diseases due to its high antioxidant content. Specially consume seed bearing rasin with its seed.

Tomato – water melon: In the conducted studies, they have shown to reduce the risk for heart diseases, since they include a high level of lycopene.

Soya: It is effective on prevention of the heart diseases owing to its contents of high protein as well as B1, iron, zinc, phosphorus and magnesium. In the conducted studies, soya consumption of 25 gr daily has been shown to reduce the risk for heart diseases.

Flaxseed: It includes unsaturated fat acids, potasium, vitamin E and omega-3. Thus, it has protective effects against the heart diseases. You can consume 1 tablespoon of flaxseed daily by adding to the foods like yogurt, soup and vegetable dish.

PROHIBITIONS

- Tail fat, tallow fat, butter, margarine and solid fats,
- Clotted cream, cream, densified milk powder,
- Sea foods such as shrimp, caviar and calamary,
- Duck, goose meat, game animals and chicken skin,
- Foods such as excessive fat pastry, cakes, years cake, muffin and cookies,
- Smoking and alcohol,
- Coffee or Nescafe more than 1 cup a day,
- Prepared foods you don’t know the contents,
- Fried and roasted foods (meat, pastry, vegetables),
- Speciality meats (liver, kidney, tongue, spleen, brain) and meat products; sausage, bacon, ham, etc.,
- Colored, sweetened soft drinks,

- All kinds of fast food.

Note: If you have high blood pressure, decrease salt intake and stay away from pickle, brine foods, soda, prepared foods and soft drinks.

FOOD NOT TO CONSUME BY DIABETIC PATIENTS

- Sugar and sugary desserts (honey, jam, syrup, marmalade, molasses),
- Sweetened biscuits, cakes, cookies, chocolate,
- Soft drinks, alcoholic beverages (cola, soda, ready fruit juices)

SNACK LIST FOR DIABETIC PATIENTS

- 1 slice of white cheese
- 1 slice of whole wheat bread or 3 pieces of whole wheat Grissini
- Sugar free herbal tea
- 1 serving fruit
- Half bowl of low-fat yogurt
- 1 serving fruit
- 1 tea cup of low-fat milk
- 1 serving fruit
- 3 pieces of whole wheat Grissini or 1 slice of whole wheat bread
- 1 serving fruit
- 1 slice of white cheese
- Fat-free whole wheat toast
- 1 glass of buttermilk
- 1 probiotic yogurt
- Diabetic pudding
- Herbal tea (sugar free)

- Whole wheat sandwich
- 1 glass of milk
- 2-3 pieces whole wheat Grissini
- 1 slice of low-salt cheese
- Sugar free herbal tea
- ½ diluted, fresh squeezed or 100% natural fruid juice.
- Whole wheat sandwich or toast
- 2 walnuts or 10 hazelnuts

CONTACT NUMBERS:

In working hours **0 (212) 314 66 66 / 2230**
Emergency Clinic (24 Hours): **0 (212) 314 66 66 / 1966**
Call Center: **444 7 888**
(for appointment)

EXPLANATION

This booklet has been prepared by Memorial Hospital, Departments of Cardiovascular and Nursery Services Coordinatorship, Department of Educational Development to inform the patients who will undergo a heart surgery on preparations before the surgery and care at home.

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