

AORTIC SURGERY



The Surgical Clinic, P.L.L.C.

General, Vascular, Thoracic & Laparoscopic Surgery
Critical Care & Surgical Oncology

Patient's Name _____

Introduction

This booklet is designed for patients who need surgery for aortic occlusive disease (blocked arteries in the abdomen). It gives a basic explanation of the blood vessel system and discusses the risk factors, symptoms of artery disease and types of surgery. In addition, a description of your care before and after surgery and after you get home is included. If after reading this booklet, you have additional questions, please feel free to call your doctor's office.

The Vascular System

Another name for this system might be the transportation system, as it transports oxygen and nutrients to all parts of the body. The vascular system is made up of the heart and blood vessels, which provide circulation to our bodies. The primary purpose of this system is to transport food and oxygen to the body's cells and organs. The heart pumps the blood through a large, continuous system of blood vessels that act as rivers and streams of the body.

The vessels are divided into two types, arteries and veins. The arteries carry the blood (with oxygen already in it) away from the heart to the body's tissues. The arteries have strong walls made up of three layers. The veins return the blood to the heart for a fresh supply of oxygen. This "double circuit," when free of disease, provides a continuous blood supply to all parts of the body to keep us healthy.

As you can see from the picture, all arteries have their beginning at the heart. The largest artery in the body is the aorta. It begins at the heart and continues down to the abdominal area where it divides into a right and left branch (in the lower abdomen). The branches continue down the right and left legs until they reach the feet. This booklet discusses disease in the arteries that supply blood to the abdomen and legs.

What is Artery Disease?

Definition: When arteries in the abdomen or legs become blocked or narrowed, the amount of blood flowing to the legs or feet is decreased. This causes various problems depending on the amount of blockage and the length of time the blockage has been present.

The main cause of blocked arteries is atherosclerosis or “hardening of the arteries.” Normally, the inner lining of an artery is smooth allowing the continuous passage of blood. However, over the years, the inner lining of arteries in some people becomes thickened and rough by a buildup of fatty substances or cholesterol. This buildup, called plaque, may be compared with rust in a pipe. It may cause the artery to become smaller in diameter, or in some cases, to close off completely. Atherosclerosis may occur in any artery, but it is more often found in the arteries of the heart, neck and legs.

What Causes Blockages?

Most experts believe that atherosclerosis is caused or influenced by several different factors. These include:

1. **Smoking** - smoking constricts (narrows) your blood vessels. It also makes the blood more prone to clot formation. If you smoke, it is very important that you attempt to quit smoking.
2. **Diabetes** - Disease of the smaller arteries is frequently seen in patients who have diabetes.
3. **Heredity** - People who have a family history of high blood pressure, stroke, heart disease, etc. are more likely to experience these problems than people without a family history.
4. **High cholesterol levels** - People who have high lipid and cholesterol levels in the blood are more likely to have artery disease. This is often related to one’s diet.
5. **Hypertension** - High blood pressure can speed up the development of blocked arteries.
6. **Stress** - People who are in stressful situations or who have inadequate means of coping with stress are more likely to have artery disease.

Signs and Symptoms of Artery Disease

1. Claudication: cramping in the legs or hips that occurs when walking and is relieved with rest.
2. Changes in skin color or temperature of the legs or feet.
3. Sores that fail to heal on the legs or feet.
4. Leg pain that begins suddenly or occurs at rest.
5. Impotence.
6. Weak or absent pulse in groin, legs or feet.

Surgical Procedures

The most common vascular procedures for blockages in the abdominal aorta are:

- ◆ **Aortoiliac, aortofemoral bypass**
A synthetic (artificial) artery is sewn to your own artery in the abdominal area to bypass the diseased portion of the artery. It may extend to the iliac arteries requiring only an abdominal incision or to the femoral arteries necessitating incisions in each groin (see “What Happens in Surgery”).

Other procedures that may be recommended are:

- ◆ **Femoral-femoral bypass graft**
A graft is placed from one groin artery across to the other groin artery. This graft may be synthetic or may be a vein taken from one of your legs.
- ◆ **Axillofemoral bypass**
A synthetic graft is placed from one axillary artery (under the arm) down to the femoral (groin) artery on the same side.

Risks

The most common risks include:

- ◆ Bleeding, possibly leading to blood transfusion
- ◆ Blood clots
- ◆ Death
- ◆ Limb loss
- ◆ Heart problems or stroke
- ◆ Paralysis
- ◆ Infection
- ◆ Problems with anesthesia
- ◆ Loss of circulation to kidneys or intestines

Also, some men may experience sexual problems such as difficulty having an erection or retrograde ejaculation after their operation. Retrograde ejaculation occurs when the sperm are expelled into the bladder rather than out the urethra as would normally occur. This is neither a harmful problem nor a correctable one. A man who experiences retrograde ejaculation after surgery will no longer be able to father children, but could still enjoy sexual activity.

Before Surgery

1. The doctor that will perform the surgery will explain your test results, surgical procedure, general routine and risks. If you have questions about your surgery, you should ask them at this time.
2. You will receive a visit from an anesthesiologist, the doctor who will put you to sleep before your operation.
3. You may have a clear liquid supper, however, you will have nothing to eat or drink from midnight until after your surgery.
4. You will be asked to sign a consent form for the operation. This is a routine procedure and gives permission for the doctors to perform your surgery.
5. A nurse will ask you to remove all jewelry, dentures, and personal items before going to surgery.

What Happens in Surgery?

1. The anesthesiologist gives medicine into your IV that allows you to sleep.
2. After you are asleep, several tubes or lines are inserted including:
 - ◆ A breathing tube placed down your throat and connected to a ventilator, or breathing machine. This is usually removed in the recovery room.
 - ◆ A smaller tube inserted through your nose into your stomach. This tube allows your stomach to rest while you recuperate from surgery.
 - ◆ A special IV placed into your neck to allow monitoring of your body's fluid levels.

 - ◆ A small IV catheter placed into your lower arm to monitor your blood pressure.
 - ◆ A small catheter placed into your back to give continuous pain medicine.
 - ◆ A Foley catheter inserted into your bladder to measure urine at frequent intervals.
3. After the appropriate tubes are inserted, an incision is made in your abdomen.
4. The abdominal aorta is exposed and clamps are placed just above and below the area of the blockage. An incision is made across the upper aorta (below the renal arteries), and an artificial artery (graft) is sewn to your real artery. The lower end of the artificial artery is sewn to your own artery in the lower abdomen or groin. Clamps are removed and the abdominal incision is closed. The outer layer of skin is usually closed with staples and a large dressing is applied to the entire area.
5. You are taken to the recovery room where you will stay for several hours.
6. After a period of time in the recovery room, your doctors will decide which area you should transfer to. Some patients will spend a night in one of the intensive care units. However, occasionally a patient may not require intensive care and may go directly to a surgical unit after the recovery room.

After Surgery

1. After surgery, your blood pressure, heart rate, and respirations will be closely monitored for several hours.
2. When the anesthesia has worn off and your body's oxygen level is adequate, the breathing tube and machine will be removed and replaced with an oxygen mask.
3. The tube in your nose will be removed in 1-2 days, at which time you will be allowed liquids to drink. You will be advanced to a regular diet as you improve.
4. The Foley catheter will be removed in 2-3 days.
5. You may be out of bed sitting in a chair the day after the surgery. Each day, your activity will increase until you are able to walk in the hallway with assistance.
6. Most patients are ready for discharge 5-7 days after surgery. During this time, you may experience some pain in the incision. If you feel the need for pain medication, ask your nurse for a pain pill.
7. At the time of discharge, your doctor will tell you when to return for an office visit. Call the office and make an appointment.

After You Go Home

1. **Activity** - Physical exercise is very important. You should walk every day in your home, yard, mall, etc., gradually increasing the distance you cover. Do not lift anything heavy (over 15 lbs) until you return to the doctor. You should wait 1-2 weeks to drive until the soreness has subsided.
2. **Bathing** - You may shower with soap and water. Wash incisions gently. Don't apply creams, etc., to incisions. Do not soak in a tub until your staples are removed. If mild drainage occurs, use hydrogen peroxide to cleanse one to two times per day. If there are Steri-Strips on your incision, they may be removed in 3-4 weeks or when the edges loosen.
3. **Diet** - There are numerous theories about the relationship between diet and "plaque" buildup in arteries. If you would like more information on this subject, please ask your doctor.
4. **Medication** - Unless otherwise directed, continue the same medications you were taking before coming into the hospital. Do not drive while taking prescription pain medication. You may take Tylenol as directed for mild pain.
5. **Sexual activity** - You may engage in sexual activity when you are ready.
6. **Alcohol** - Alcoholic beverage may be used in moderation. Do not drink alcohol while taking pain medication.
7. **Tobacco** - Tobacco use should be stopped. If you need help with this, check with your doctor.
8. **Don't worry about:**
 - ◆ Numbness around the incision
 - ◆ Mild swelling or bruising around the incision
 - ◆ Incisional pain or soreness
 - ◆ Decreased appetite for a few days or weeks
 - ◆ Changes in bowel habits for a few weeks
 - ◆ Swelling in legs – if this occurs, elevate legs
9. **Call your doctor if these develop**
 - ◆ Excessive drainage from incision
 - ◆ Fever
 - ◆ Severe pain, color changes or loss of pulse in foot or leg

General

We want you to obtain the best possible results from your recent surgery. Remember, as you attempt to resume your daily activities at home, you may feel weaker and tire more easily than you did in the hospital. This is normal. You have had a major operation, and it takes several weeks, even months, before you begin to feel really good again.

Also, your appetite may not be as good as it was before surgery. This is not uncommon after this type of surgery. Eat what you feel like eating and gradually your appetite will return.

In addition, you may not sleep well and may become depressed thinking that your progress is too slow. This, also, takes time and will correct itself as you get better.

Well meaning friends and relatives, or even other patients, may tell you things which can be alarming and often inaccurate. Be sensible about this and get your advice from your doctor/nurse.

Date of Surgery _____

Name of Surgery _____

Specifics _____
