AORTA: Aortofemoral Bypass

△ GENERAL INFORMATION

The aorta is the large artery (about the size of a broomstick) that comes off the heart and goes down through the chest and into the abdomen, giving off branches along the way. At about the level of the umbilicus, it divides into two arteries that supply blood to the organs in the pelvis and to the legs (Fig. 1).

Sometimes the aorta becomes narrow because of cholesterol deposits (atheromas) on its wall (called atherosclerosis). This narrowing prevents enough blood from getting to the organs in the pelvis and, finally, the legs.

This condition affects mostly men between the ages of 45 and 60 years.

COMMON SIGNS AND SYMPTOMS

- There is extreme tiredness of the legs and painful buttocks.
- There can be some thinning of the legs, loss of hair, or breakdown of the skin.
- The legs and feet are pale.
- Sometimes a man cannot maintain an erection of the penis during sexual intercourse.
- The pulses in the legs are weak.

DIAGNOSIS

- Usually, the diagnosis can be made by taking a detailed history, doing a thorough physical examination, and considering the laboratory report.
- Ultrasound: Harmless sound waves are aimed at the area of your abdominal aorta and its branches. The sound waves bouncing back (the echoes) from this area are seen as a picture on a screen. Ultrasound is a quick, easy, and harmless way to examine the arteries in this area of your body.
- The pressures of the arm arteries will be compared with those of the ankle arteries. Normally, they are equal. Usually, with the problem you have, the ankle pressures are lower.
- Arteriography: Contrast dye is injected into the aorta, and x-ray pictures are taken of it as it travels through the abdominal aorta and its branches to your legs. This makes it possible to see the location of the blockage and how serious it may be and to determine where to connect the artificial artery (the graft) to get the best results.

○ TREATMENT

- This condition usually does not come on suddenly. It may take 5 to 10 years to reach the point described above.
- When a person’s condition reaches a certain point, however, a new connection needs to be made to get blood to the legs and to relieve pain.

PREOPERATIVE PREPARATION

- Your blood, urine, heart (EKG), lungs (chest x-ray), and arteries to the brain will be examined with special care.
- Do not eat or drink anything for 8 hours before the operation.
- You may be asked to take a cathartic to clean out your bowels the day before the operation.
- Shower (and shave) as usual on the morning of the operation.
- You will be given medicine that will make you feel drowsy before you are brought to the operating room.

■ OPERATION

- All of your abdomen and both of your legs will be painted with an antiseptic solution and covered with sterile drapes.
- The abdomen will be opened and the aorta examined to locate a spot on it that is above the blockage.
- An incision will be made over the femoral artery in both groins to locate a spot past the blocked area.
- When the spots on the aorta and the femoral artery are found, a synthetic tube (a graft) will be used to make a new connection from the aorta to the femoral arteries. In this way, the flow of blood to the pelvis and the legs will be improved (Fig. 2). Occasionally, both femoral arteries may be narrowed and need to have more blood brought to them.
- You will not receive a blood transfusion unless it is absolutely necessary.
- The operation generally takes about 3 hours.

POSTOPERATIVE CARE

- You will be taken to the Surgical Care Unit, where the doctors and nurses are very experienced in taking

![Figure 1. Arrow indicates a common site of blockage of the aorta.](image-url)
There are a number of ways to bypass a blocked area in the artery to get better blood flow to the leg. A common method is shown. A, normal aorta; B, blocked aorta; C, blockage bypassed with a graft.

- After you dry yourself, replace any dressings with clean, dry ones.
- You may eat as you did before the operation.
- Be careful that you do not become constipated.
- Include enough roughage and liquids in your diet.
- You may need a mild laxative (example: milk of magnesia).
- Your incision and the muscles of the abdomen may ache, especially at the end of the day and after you have been standing for a long period. You can support them by wearing a girdle or similar garment. Pain can be controlled with medicine. The nurse will give it to you, or you can give yourself a preset amount of pain medicine when you feel you need it. This is done using patient-controlled analgesia (PCA) that is connected to the tubing giving you intravenous fluids.
- That evening you will be helped to sit up in bed and on the next day to get out of bed.
- You may be given an incentive spirometer. Breathing into this as you are instructed will help expand your lungs and reduce the risk of developing pneumonia.
- You should be able to go home in about 5 to 7 days.
- As with any operation, complications are always possible. With your type of operation, they can include wound infection, blood clots, pneumonia, and clot forming in the graft, among others.
- Arrangements will be made for your medicine, follow-up office visit, and stitch or clip removal.

**HOME CARE**

- Continue with the program started while you were in the hospital.
- You may walk about as you wish, even climb stairs, but don’t overdo things.
- Don’t lift anything. Ask someone to do it for you.
- You may shower as you wish and with any dressings on or off.
- There may be narrow strips of tape across the incision. It’s all right if they get wet. They will be removed in the doctor’s office.
- You may return to work when you are certain you are up to it. This should not be before 1 month, and you should begin on a part-time basis.
- You may resume sexual activity whenever you choose.
- The “graft” that was placed is durable, and you can expect it to be safe for the rest of your life.

**CALL OUR OFFICE IF**

- You develop severe pain in your legs.
- The incisions become red or swollen, or there is drainage from them.
- You develop a temperature higher than 100°F.
- You have any questions.