FRANKEL CARDIOVASCULAR CENTER
MICHIGAN MEDICINE

Aortoiliac Occlusive Disease (AIOD)

What is Aortoiliac Occlusive Disease?

Your **aorta** is the main blood vessel in your body. It comes out from your heart, down through your chest, and into your belly. Then it branches off into your iliac arteries. Your **iliac arteries** bring blood down to your legs. Aortoiliac Occlusive Disease (AIOD) occurs when the iliac arteries become narrow or blocked. This usually occurs because plaque buildup. **Plaque** is made up of fat, cholesterol, and other substances found in the blood. As plaque builds up, it causes the arteries to narrow and harden, slowing and even stopping blood flow.

What are the symptoms of Aortoiliac Occlusive Disease?

Common AIOD symptoms include:

- Pain, or cramping in the buttocks, thighs, or legs when walking
- Foot pain at rest
- Difficulty achieving and maintaining an erection
- Pain in your feet or toes at rest
- Numbness or loss of sensation in your legs
- Leg or foot ulcers (sores) that heal slowly or won't heal
- Differences between legs in relation to color or warmth
- Slower rate of hair and nail growth in the affected leg

What causes Aortoiliac Occlusive Disease?

The most common cause of aortoiliac disease is atherosclerosis (hardening of the arteries). Hardening of the arteries may be caused by:

- Smoking
- High cholesterol

- High blood pressure
- Family history (genes)
- Obesity

How is Aortoiliac Occlusive Disease diagnosed?

Your doctor will diagnose aortoiliac occlusive disease based on your medical history, a physical exam and test results. The following tests are common for diagnosing aortoiliac occlusive disease:

- **Ankle-brachial index test** – this test determines how well your blood is flowing by comparing the blood pressures in your legs to the blood pressure in your arms. It is the primary test used to diagnose AIOD.
- **Duplex ultrasound**- a test that uses soundwaves to measure the amount of blood flow through your blood vessels.
- **Computer Tomography Angiogram (CTA) –** is a special type of X-ray. For this test, your doctor will inject a substance (called contrast dye) into a vein. The dye travels to your arteries so they show up on X-ray pictures. This test helps determine if plaque buildup has narrowed your arteries.
- **Magnetic Resonance Angiography (MRA)-** this test uses radio waves and a powerful magnet linked to a computer to take pictures of your carotid arteries. This creates detailed pictures of the blood vessels and blood flow inside the body to determine if there is plaque buildup within your arteries. This test may be used if you have an allergy to IV contrast dye.

How is Aortoiliac Occlusive Disease treated?

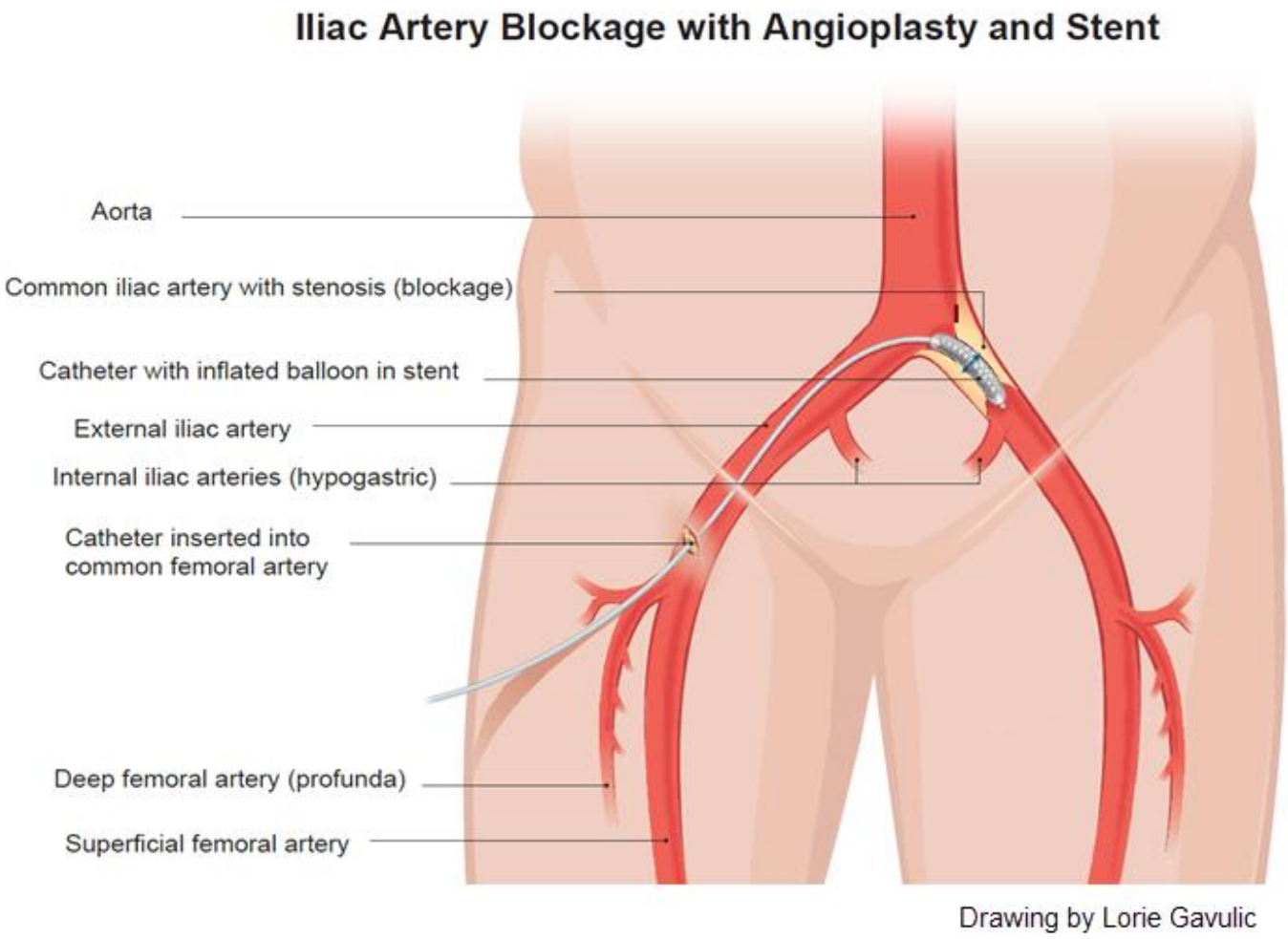
The goal of treatment for aortoiliac occlusive disease is to improve blood flow to your legs. Your doctor will talk to you about treatment options which may include:

- Continuous monitoring program
- Medication management (consider treatment with cilostazol)
- Exercise program (walking)

If your condition does not improve with medication and lifestyle changes, you may need to have one of the procedures below to restore blood flow to your legs.

Angioplasty and stenting

This procedure is used to widen the abdominal aorta or iliac arteries to restore normal blood flow to your legs. Through a small incision in your groin, a thin tube with a deflated balloon on the end (a catheter) is inserted into the narrow artery. The surgeon inflates the balloon to push the plaque against the artery wall. Once the artery is widened, a small wire mesh coil (stent) is then put into the artery to keep the artery open (see image below).

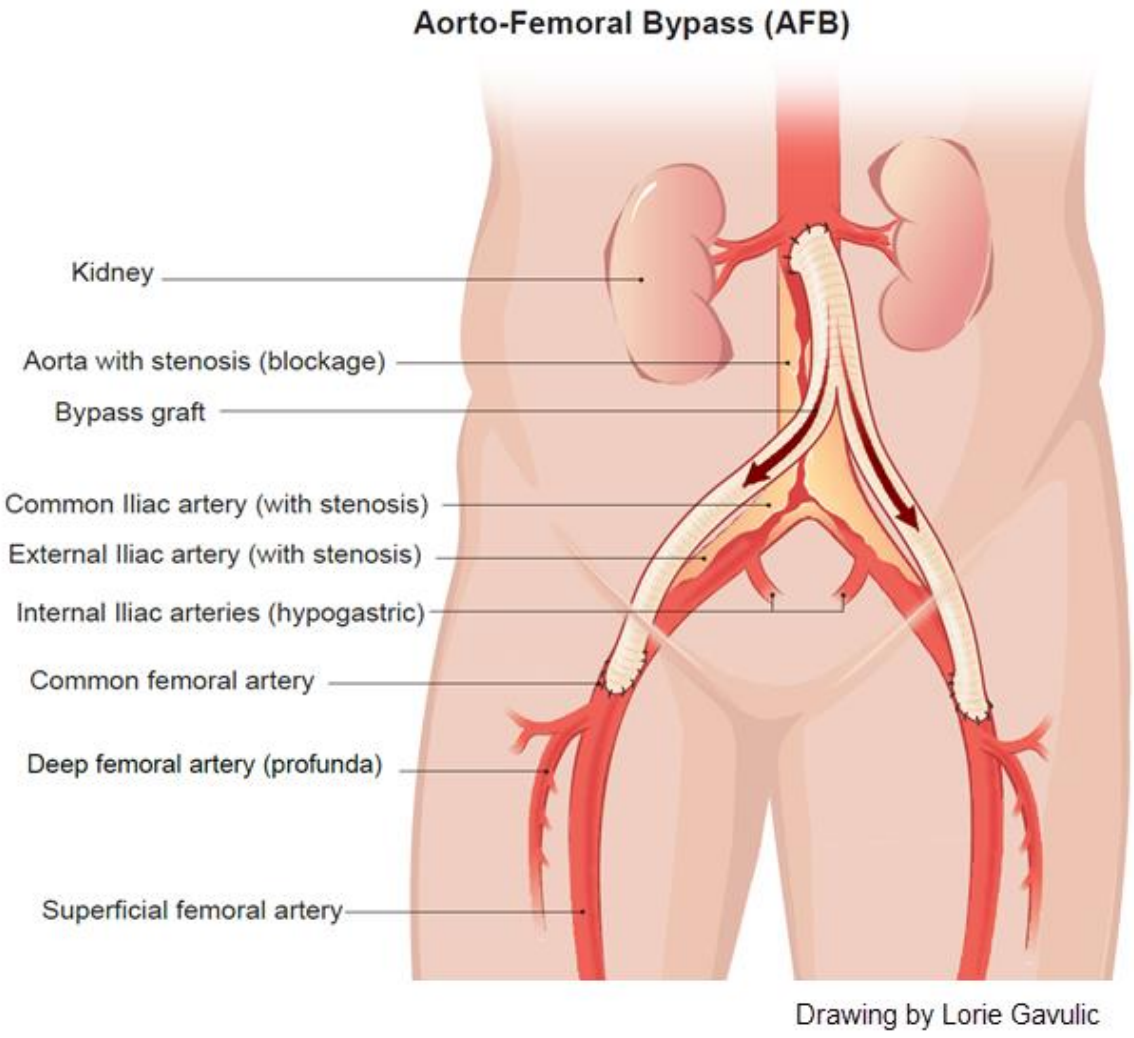


Bypass Surgery

This type of surgery creates a bypass to go around the blockage in your abdominal aorta or iliac arteries to increase blood flow to your legs. To create a new path for blood to flow, a flexible tube (known as a graft) is sewn in above and below the blocked area.

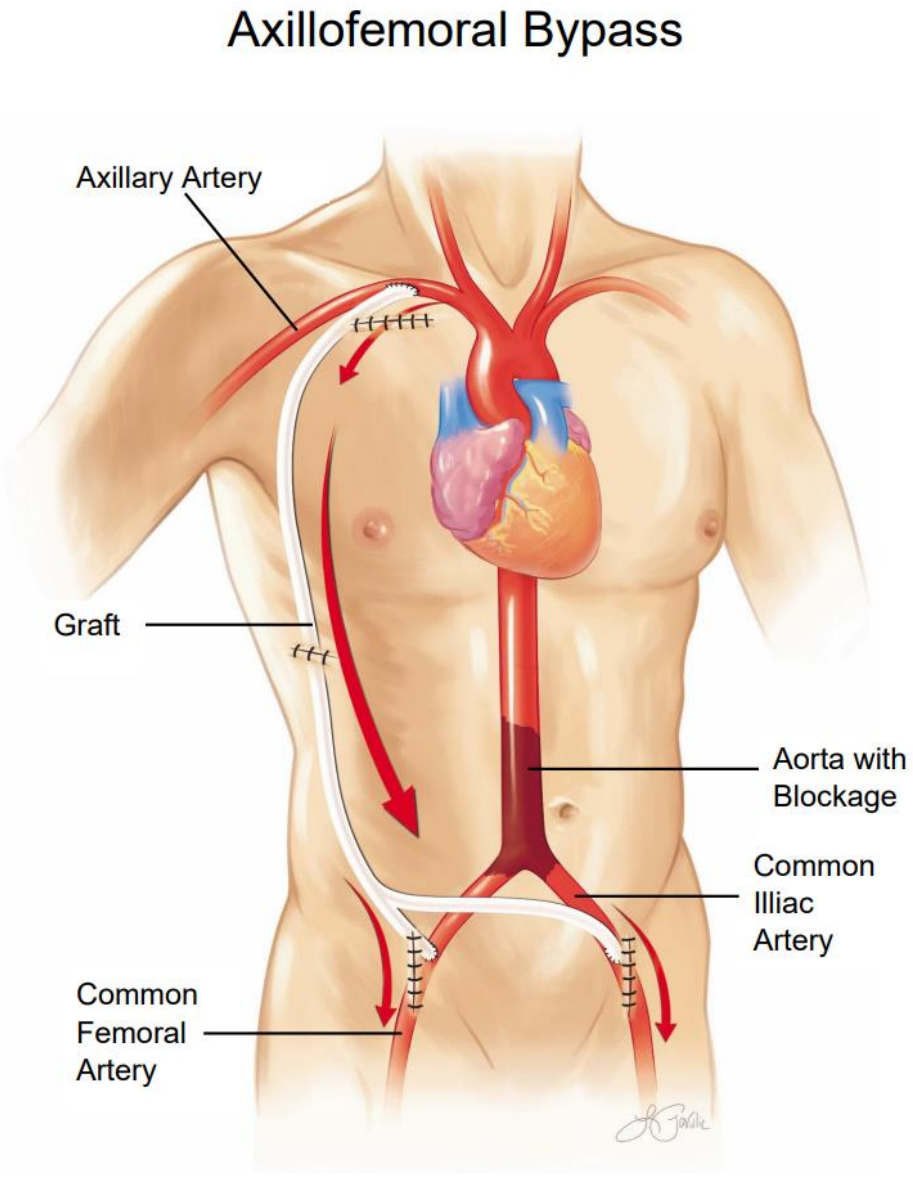
Surgical bypass options include:

- **Aorto-femoral bypass**
  Your surgeon makes incisions (cuts) in your abdomen (stomach area) and in your groin area. A flexible Y-shaped tube (graft) is then inserted in the abdomen. The single end of the Y is sewn into the aorta. Using tiny stitches, the two split ends are sewn below the femoral artery, to go around (bypass) the section that is narrow or blocked (see image below).



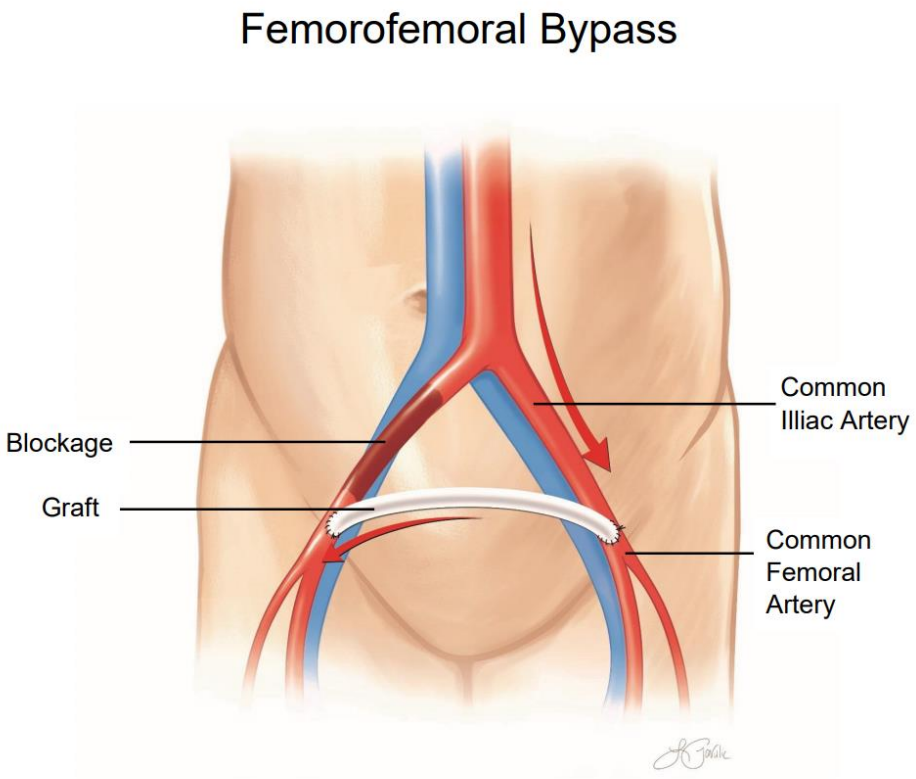
- **Axillo-femoral bypass**

  The surgeon makes an incision (cut) below the collarbone and in one or both of the groins. A flexible tube (graft), is inserted, which connects the axillary artery to the femoral arteries in your legs. This allows the blood to flow through the graft, and go around (bypass) the blocked section of the artery (see image below).



- **Femoro-femoral bypass**

  Your surgeon makes an incision in both sides of your groin. A flexible tube (graft) is inserted to carry blood from the main artery going to your good leg to the main artery in your bad leg to go around (bypass) the blocked artery. The artery going to your good leg will supply both legs with blood.



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