Do you experience leg pain or constant cramping in your calf muscles after even a short walk? As many people get older, their legs don’t get an adequate blood supply because hardened or blocked blood vessels can restrict the flow of blood. You may have a condition called claudication.

**WHAT IS CLAUDICATION?**

Claudication is pain and/or cramping in the lower leg due to inadequate blood flow to the muscles. Claudication is typically felt while walking and can cause a limp. It is commonly referred to as “intermittent” claudication because it comes and goes with exertion and rest. (In severe claudication, the pain may also be felt at rest.)

**CAUSES**

“Several medical problems can cause claudication, but the most common is peripheral artery disease,” said Arun Singhal, MD, cardiovascular surgeon. “Peripheral artery disease (PAD) is caused by atherosclerosis, which is a hardening of the arteries from accumulation of cholesterol plaques that have formed on the inner lining of the arteries.” This is especially common at points of the arteries in the legs where one vessel branches off another. Blockage of the arteries from these plaques cause reduced blood flow to the muscles in the legs. When walking or exercising, the muscles in the legs require more blood flow to increase oxygen to the cells. “Atherosclerotic plaques cause decreased blood flow and decreased oxygen,” said Singhal. The muscles of the legs can ache and burn as a result of inadequate oxygen. This is felt as cramping in the legs.

**SYMPTOMS**

Pain and cramping in the legs with activity is the main symptom of claudication. Pain from claudication can be sharp or dull, aching or throbbing, or even burning. The severity of peripheral artery disease, the location of the blockages, and the activity of the muscles determine the severity of symptoms and location of pain. Calf pain is the most common location for leg cramps. However, pain may be experienced farther up the leg if blockages exist in the blood vessels of the thigh. If the blockage is in the aorta (the main artery from the heart to the legs) then symptoms may include pain in the buttocks or groin area.

**WHY DOES IT COME AND GO?**

The intermittent nature of pain from claudication is due to a temporary inadequate supply of oxygen to the muscles of the leg. The poor oxygen supply is a result of narrowing of the arteries that supply the leg with blood. This limits the supply of oxygen to the leg muscles and is especially noticeable when the oxygen requirement of these muscles rises with exercise or walking.

**WHO TYPICALLY IS AFFECTED BY CLAUDICATION?**

Intermittent claudication is more common in men than in women. The condition affects 1% to 2% of the population under 60 years of age, increasing in incidence with age, to affect over 18% of persons over 70 years of age, according to the American Academy of Family Physicians.

**RISK FACTORS**

- Smoking
- Diabetes
- High blood pressure
- High cholesterol
- African American descent
- Heart disease

**HOW IS THIS CONDITION DIAGNOSED?**

“Claudication can indicate you have underlying systemic atherosclerosis and a significantly increased risk for heart attack and stroke,” says Dr. Maziar Mahjoobi, Board Certified in Cardiovascular Disease. “Because of this, any symptoms of claudication should be assessed.” If you are diagnosed with claudication, you should also be screened for coronary and carotid artery disease to assess your risk for heart attack and stroke. Tests used to check for claudication include:

- Ankle-brachial index (ABI) – A test that measures blood pressure in the affected extremity.
- Ultrasound – A non-invasive test that uses high-frequency sound waves to evaluate blood flow in a blood vessel.
- Angiogram – An X-ray of blood vessels to identify blockage; it is performed by inserting a catheter into an artery in the leg and injecting dye into the artery to assess for blockages or reduced blood flow.

**TREATMENT OPTIONS**

Treatment of claudication focuses on modifying your risk factors, including:

- Stopping tobacco use
- Beginning an exercise program and eating a diet low in saturated fats
- Treating medical problems – high cholesterol, high blood pressure, high blood sugar levels – with diet, exercise or medication
- Preventing heart attack and stroke with antplatelet medication
- Taking medications such as Cilostazol, to improve the flow of blood and oxygen to the muscles.

“A surgical procedure called a revascularization is used in patients who do not respond to medications. There are two types of revascularization procedures: endovascular (inside the blood vessel) and surgical grafting or bypassing the artery,” said Singhal.

- Endovascular procedures include: Angioplasty- A balloon is placed in the blocked area and inflated to widen the diameter of the artery and increase blood flow. Stenting- A wire mesh tube is used to hold a blood vessel open after angioplasty and prevents scar tissue from narrowing the blood vessel
- Surgical procedures: Surgical grafting - An open surgery where the blocked area of an artery is taken out and a synthetic graft is sewn in to restore blood flow around the blocked area. Bypassing an artery – Using either a patient’s vein or an artificial graft that is sewn in place above and below the blockage to restore blood flow.

Beginning February 1, Good Shepherd Medical Center will open Good Shepherd Vascular Center. Patients referred to Good Shepherd Vascular Center will receive follow-up care for revascularization procedures associated with claudication and PAD. Good Shepherd Medical Center also recently launched a PAD/ claudication rehabilitation program. This is a medically supervised walking program for patients suffering from claudication. Studies have shown that such a program can help increase walking distances, quality of life and overall functional capacity. This program will also offer risk factor modification sessions for patients and family members by helping to provide an understanding of PAD and how lifestyle changes can be made to reduce further one’s risk for progressive vascular disease.