



# Genicular Artery Embolization

**An alternative treatment for osteoarthritis of the knee.**



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# Osteoarthritis of the knee can be a painful, debilitating condition...

When the symptoms of osteoarthritis (OA) are mild to moderate, pain medication is often prescribed. When the symptoms become severe, total knee replacement surgery is recommended to treat the underlying cartilage destruction. However, not all patients are able—or willing—to undergo this surgery, and treating chronic pain with a lifelong medication regimen may not be desired.

## **WHAT CAUSES OSTEOARTHRITIS OF THE KNEE?**

Knee cartilage is a tough, rubbery tissue on the ends of the bones within the knee that allows the joint to bend and move. Over time, this cartilage can wear out or become damaged. As it does, the bones in the knee joint rub together, causing friction that results in inflammation and subsequent knee pain, stiffness and swelling. It can even change the shape of your knee over time.

Osteoarthritis of the knee is common, affecting 46% of all people within their lifetime. Women are more likely to have this condition than men. Some possible causes of the condition include being overweight, having had an old knee injury or bone condition, a job that puts stress on the knee and a family history of osteoarthritis.

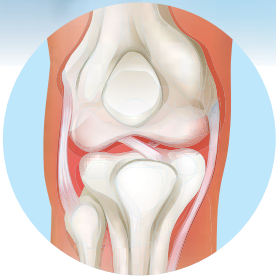




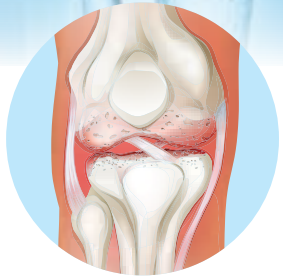
## HOW DO I KNOW IF GAE IS RIGHT FOR ME?

Genicular artery embolization is recommended for patients who:

- 40-80 years of age
- Have moderate to severe knee pain
- Are diagnosed with osteoarthritis based on X-ray or other imaging, but without bony deformity/sclerosis
- Experience local knee tenderness
- Have resistant or failed conservative treatment (medication, physical therapy, joint injections)



Normal Knee Joint



Knee Joint With Arthritis

## TREATMENT

Treatment with medication, supplements and/or lifestyle changes are recommended for those with the majority of their knee cartilage intact. For others, physical therapy or support braces might be prescribed. For those with severe symptoms, total knee replacement surgery is often advised. As an alternative to surgery, gel pain injections may be an option. These can last for up to six months, with results taking effect between 4-5 weeks after treatment.

There is a new and minimally invasive option called genicular artery embolization (GAE). This minimally invasive procedure reduces the flow of blood to the synovium—the lining of the knee—which reduces inflammation and the associated pain.

<sup>1</sup> <https://www.sirweb.org/media-and-pubs/media/news-release-archive/sir-2021-knee-pain-031621/>

## THE GAE PROCEDURE

GAE is performed by an interventional radiologist who inserts a tiny catheter into an artery in your upper thigh or wrist, and then uses imaging to guide it through the body's blood vessels to the arteries that supply blood to the synovium, where inflammation occurs. Tiny particles are injected through the catheter into these arteries, which get lodged in the smaller blood vessels and reduce blood flow to the synovium. The effect is a significant reduction in the inflammation associated with osteoarthritis, and a reduction in pain.

A clinical study performed in 2021 demonstrated that the average pain scores decreased from 8 out of 10 to 3 out of 10 within the first week of the procedure<sup>1</sup>



## TALK TO YOUR DOCTOR ABOUT GAE

GAE is a new and less invasive option to treat osteoarthritis of the knee, performed by the experienced doctors at Memphis Vascular Center. If you are not a candidate for knee surgery, or do not wish to have it, talk with your doctor and share this brochure with them. If you have questions, call us! We are happy to help provide the information that you need to make an informed decision with your doctor.

## MEMPHIS VASCULAR CENTER

The doctors of Memphis Vascular Center are among the region's most experienced team specializing in the minimally invasive treatment of many diseases and health conditions. Vascular and interventional radiology is a method of treating disease from inside the body, without open surgery. This results in less trauma for the patient, lower risk of complications, shorter recovery time and virtually no scarring. Additionally, these treatments are performed in our outpatient center, a safe and convenient alternative to a hospital.

Our doctors are fellowship trained in vascular and interventional radiology. With more than 13 years of education and training, they are among the most highly trained doctors practicing medicine today and are uniquely qualified to provide both diagnostic evaluations as well as the required treatment.

If you are a candidate for one of our procedures, we invite you to schedule a consultation with us. We are happy to work with your doctor(s) and other members of your care team to find the right treatment for your specific condition.

**FOR MORE INFORMATION, VISIT  
MEMPHISVASCULAR.COM**



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