



A minimally invasive treatment for knee pain

Genicular Artery Embolization (GAE)



National
VASCULAR
Physicians

GAE is a new and lasting option to alleviate knee pain caused by osteoarthritis

Osteoarthritis (OA) is a progressive disease, which means it will only worsen over time.

There is new science that shows how chronic inflammation actually accelerates the destruction of cartilage within the knee joint (synovitis) and leads to OA.

When the pain is mild to moderate, physicians often prescribe medications, physical therapy, gel injections or corticosteroid injections to manage the pain. Total knee replacement surgery is considered the gold standard treatment for severe knee osteoarthritis. However, not all patients are able—or willing—to undergo this major form of surgery, and the subsequent painful recovery and lengthy physical therapy required to regain function. Alternatively, treating this chronic pain with a lifelong medication regimen may not be practical and comes with its own health risks.

Today there is a new treatment option: Genicular artery embolization (GAE).





Normal Knee Joint

Knee Joint With Arthritis

The GAE procedure

GAE is a minimally invasive, outpatient procedure. It is performed by an interventional radiologist who inserts a tiny catheter into an artery in your upper thigh or wrist, and then uses x-ray imaging to guide it through the body's blood vessels to the arteries that supply blood to the synovium (the lining of the knee), where inflammation occurs. Tiny particles are injected through the catheter into these arteries, which reduces the flow of blood. 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.¹

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

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.

Some possible causes of this condition include:

- Being overweight
- Having an old knee injury or bone condition
- Having a job that requires you to put stress on your knee
- Family history or osteoarthritis

Osteoarthritis of the knee is common, affecting 46% of all people within their lifetime. Women are more likely to have this condition than men.



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 National Vascular Physicians. 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.

How do I know if GAE is right for me?

Genicular artery embolization is recommended for patients who:

- Are 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)

The following conditions may disqualify you from GAE:

- Current or former smoker
- Advanced arthritis based on imaging test
- Infection or malignancy
- If you are a good candidate for knee replacement surgery





National **VASCULAR** Physicians

National Vascular Physicians is a vascular and interventional radiology practice with locations in National Harbor, MD and Roanoke, VA. We perform minimally invasive treatments and procedures for a number of health conditions and diseases.

We offer the full range of minimally invasive vascular and interventional radiology services at each of our DC-area and Virginia locations. Vascular disease, orthopedic conditions, uterine fibroids, enlarged prostate and more can be treated faster, less expensively and with greater precision and safety than ever before. To learn more, visit NationalVascularPhysicians.com.

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