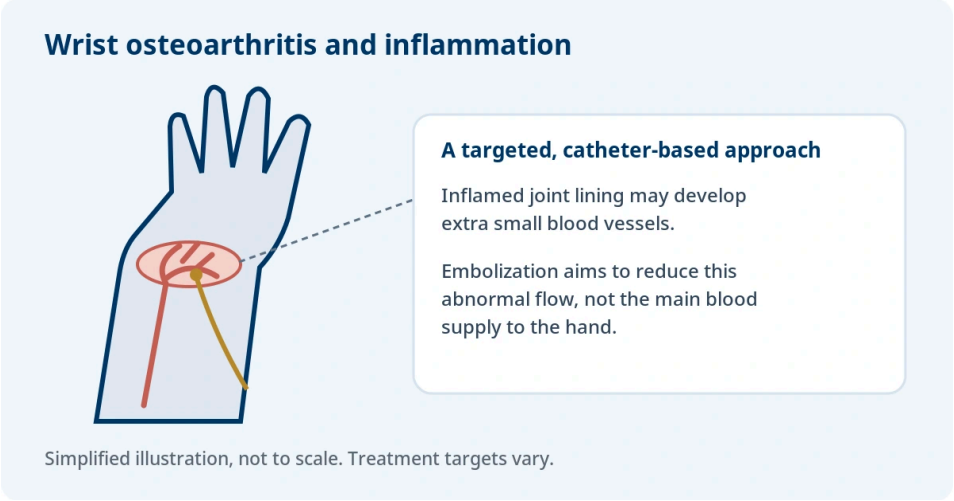
PATIENT GUIDE · JOINT PAIN CARE

Wrist embolization

Understanding an emerging option for osteoarthritis pain

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What it is

Wrist osteoarthritis can cause aching, stiffness and pain with gripping. Embolization is an image-guided arterial procedure that aims to reduce abnormal blood flow associated with inflammation. It is not a cure for arthritis.

Why target blood vessels?

The inflamed joint lining may develop extra small vessels, sometimes accompanied by pain-sensing nerves. Carefully targeted embolization seeks to reduce this abnormal flow while preserving circulation to healthy tissues. It is not intended to close the main blood supply to the hand.

At a glance

- An emerging treatment, not right for every painful wrist
- Generally outpatient with observation afterward
- Thin catheter, live imaging and contrast dye
- No promised success rate or timetable
- Evaluation at any of 7 GSMC offices

Know the limits

Evidence for wrist osteoarthritis is more limited than for the knee. Pain relief is not guaranteed. Embolization does not regrow cartilage, repair ligament damage or replace a joint.

Is an evaluation right for you?

Who may be considered

- Confirmed wrist osteoarthritis with pain that limits daily tasks, sleep or work despite appropriate conservative care
- Persistent symptoms after options such as activity changes, splinting, hand therapy, medicines or injections
- An evaluation suggesting inflammation may contribute to pain and that the vessels can be treated safely

May not be a good fit

- Infection in or near the wrist or poor hand circulation
- Pain mainly caused by nerve compression, instability or a condition other than osteoarthritis
- Advanced structural damage that may need a hand-surgery evaluation
- Significant kidney disease, contrast allergy or a bleeding disorder that makes the procedure unsuitable or requires precautions
- Pregnancy or other health concerns requiring individualized assessment

Your visit

Our team reviews symptoms, previous treatments, wrist examination, imaging and hand circulation. Ultrasound, MRI or kidney-function tests may be needed. Discuss blood thinners, other medicines, pregnancy and contrast allergies. Do not stop any medicine on your own.

Procedure day: general catheter-based steps

1. Follow your individualized eating and medication instructions. Arrange a driver when instructed, especially if sedation is used.
2. The team reviews your health, medicines and allergies. Local anesthetic numbs the chosen artery entry site; sedation may be used.
3. An interventional radiologist guides a thin catheter using live X-ray and contrast to map vessels near the wrist. The access site depends on your anatomy and treatment plan.
4. Embolic material is carefully delivered to selected abnormal branches while protecting normal circulation. Techniques and materials vary.
5. The catheter is removed and pressure or a closure device controls bleeding. After observation, you go home when medically appropriate with written instructions.

Access site, materials and technique are individualized. This is not a fixed wrist-treatment protocol.

Where care takes place

Evaluation and follow-up: any GSMC office. The procedure is performed by an interventional radiologist who works with the GSMC team at Manchester Surgery Center, 1100 Route 70 West, Whiting, or Bey Lea Surgery Center, 54 Bey Lea Road, Building 2, Toms River.

Recovery and follow-up

Recovery depends on the access site, technique and your health. Follow your team's instructions about dressings, bathing, lifting, driving, work and hand exercises. Do not stop blood thinners or other medicines on your own. Follow-up checks pain, useful hand function and the access site. Relief is not guaranteed and may not be lasting. There is no well-established wrist-specific recovery or pain-relief timetable.

Risks to discuss

- Bruising, bleeding, a growing lump or artery injury where the catheter enters
- Temporary pain flare, skin tenderness or skin color changes
- Nontarget embolization: material reaching normal vessels can injure skin, nerves or other tissues
- Contrast allergy or kidney problems related to contrast
- Infection
- No meaningful pain relief, or pain returning later

Small wrist studies cannot precisely establish how often serious complications occur. Your physician will review your individual risks.

When to get help

Seek urgent medical attention for a cold, pale, numb or increasingly painful hand, uncontrolled bleeding, a growing access-site lump, or darkening, blistered or open skin. Call our team for fever or increasing redness. **Call 911** for chest pain, trouble breathing or severe uncontrolled bleeding.

Questions? Call 732-202-3000.

Questions people ask

Is this a cure for wrist osteoarthritis?

No. The aim is pain control, not cartilage regrowth or reversal of arthritis. Results vary.

Is it right for every painful wrist?

No. A diagnosis and review of hand circulation, imaging and prior treatment are essential. Wanting to avoid surgery alone does not establish candidacy.

How soon will it work and how long does relief last?

The evidence cannot establish a reliable wrist-specific timetable or duration. Some patients may not improve. Your physician will discuss realistic goals and follow-up.

Is it surgery?

It is an image-guided arterial procedure through a small skin opening, rather than an operation inside the joint. It still has risks, including tissue injury from unintended embolization.

How this fits into arthritis care

Joint protection, adapted tools, splinting, hand therapy and appropriate medicines are usual starting points. Injections may be considered for selected patients. Embolization targets abnormal vessels associated with inflammation; it does not regrow cartilage, reverse arthritis, repair ligament damage or replace a joint. Wrist fusion, joint replacement or another operation may be appropriate for substantial damage or instability. A hand surgeon can explain the trade-offs. Embolization does not remove the need for a broader arthritis care plan.

What research shows

Embolization has been studied more extensively for knee osteoarthritis than for the wrist or hand. Knee findings are mixed and cannot establish effectiveness for the wrist. A small 2024 study in *Diagnostic and Interventional Radiology* reported pain improvement after embolization for symptomatic hand osteoarthritis, but had no comparison group and was not a large dedicated wrist-osteoarthritis trial. Larger controlled studies are needed to clarify benefit, duration and risks. Research on tendon-related wrist pain does not prove effectiveness for wrist osteoarthritis.

Source: Diagnostic and Interventional Radiology. 2024;30:65-71. DOI: 10.4274/dir.2023.232350.

Insurance and cost

Coverage for wrist embolization varies. Insurers may consider joint embolization, including treatment of the wrist, investigational and may not cover it. Our team checks benefits and prior-authorization requirements and discusses costs before scheduling. If it is not covered, ask for a written self-pay estimate and information about covered alternatives.

Questions for your visit

- Is osteoarthritis the main cause of my wrist pain?
- What are realistic goals and my individual risks?
- What alternatives should I consider?
- What will my plan cover and what might I pay?

Interventional radiology: Douglas Gibbens, MD, board certified in Interventional Radiology and Nuclear Medicine.

Call 732-202-3000

Consultations at all 7 offices: Whiting · Toms River · Brick · Barnegat · Manahawkin · Freehold · West Long Branch.

Toms River: 1314 Hooper Ave, 1st Floor, Toms River, NJ 08753

gsmedicalcenter.org/treatments/wrist-artery-embolization/

General patient education, not individualized medical advice. Results vary. Original illustration is simplified and not to scale. November 6, 2026.