

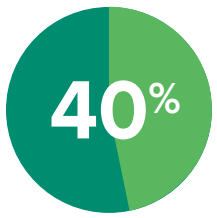
KNEE OSTEOARTHRITIS:

Prevalence, Risks and Treatment Options

PREVALENCE



MORE THAN **1 IN 3** AMERICANS OVER 60 HAVE RADIOGRAPHIC EVIDENCE OF OSTEOARTHRITIS AND



APPROXIMATELY **40%** OF THEM REPORT **BOTHERSOME SYMPTOMS**¹

WOMEN ARE MORE LIKELY TO DEVELOP OSTEOARTHRITIS **AFTER AGE 50**²

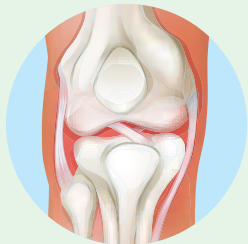


OSTEOARTHRITIS IS A MUCH **MORE COMPLEX** DISEASE THAN PREVIOUSLY THOUGHT, WITH INFLAMMATORY MEDIATORS RELEASED BY CARTILAGE, BONE AND SYNOVIUM³

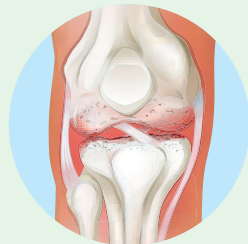
SYNOVITIS IS NOW ACCEPTED AS A CRITICAL FEATURE OF OSTEOARTHRITIS³, AND SOME STUDIES HAVE SUGGESTED THE CONDITION IS A DRIVER OF THE OSTEOARTHRITIS PROCESS.



RISK



NORMAL KNEE JOINT



KNEE JOINT WITH ARTHRITIS

LIFETIME RISK OF DEVELOPING SYMPTOMATIC KNEE OA IS **40% IN MEN** AND **47% IN WOMEN**. THAT RISK RISES TO **60%** IN SUBJECTS WITH A BMI OF 30 OR HIGHER⁴

SYSTEMIC RISK FACTORS FOR OA INCLUDE:

- AGE
- SEX
- ETHNICITY
- BONE DENSITY
- SPORTS PARTICIPATION
- ESTROGEN REPLACEMENT THERAPY
- NUTRITION
- GENETICS
- OBESITY
- JOINT INJURY/ DEFORMITY

KNEE OSTEOARTHRITIS:

TREATMENT

Non-surgical

Nonpharmacologic interventions and NSAIDs are most commonly prescribed to treat the pain associated with OA (conservative management), with alternative pharmacologic therapy only prescribed in the presence of inadequate response and severe pain⁵

9% of those with knee OA use opioids chronically⁶

Chronic NSAID use is not without risks in older patients:

- They are responsible for 30% of hospital admissions for adverse drug reactions⁷
- Increased risk of bleeding and cardiovascular disease⁸
- Double the risk of hospitalization due to heart failure⁸
- Can cause GI bleeds⁸
- Risk of impaired renal function⁸

Surgical

600,000 Total Knee Arthroplasty (TKA) surgical procedures are performed in the U.S. annually...

...and that number is projected to rise to over **3 million per year**⁹

More than **2/3 of patients** with severe OA are **unwilling to consider TKA**^{10,11}

...and **20% of patients** who undergo TKA **report dissatisfaction** with the procedure¹²

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2. Source: CDC

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A NEW AND MUCH-NEEDED OPTION

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

GAE is performed by an interventional radiologist who inserts a tiny catheter into an artery in the upper thigh, 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 reduces the flow of blood. The effect is a significant reduction in the inflammation associated with osteoarthritis, and a reduction in pain.

GAE has a high clinical improvement rate and a low incidence of adverse reactions^{13,14}

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 procedure¹⁵

“Although there are many options for conservative therapy prior to surgery, there is yet to be a treatment modality that provides reliable, sustained relief without the risks of chronic medication. The available data for GAE suggest that it may fill this void.”¹⁶

Dr. Golzarian and Dr. Astani of North Star Vascular & Interventional are among the most experienced in the region at performing interventional radiology procedures. If you are interested in learning more about GAE or consulting with us regarding a patient, please call (952) 960-9399.



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