

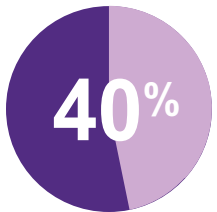
# KNEE OSTEOARTHRITIS:

## Prevalence, Risks and Treatment Options

### PREVALENCE



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



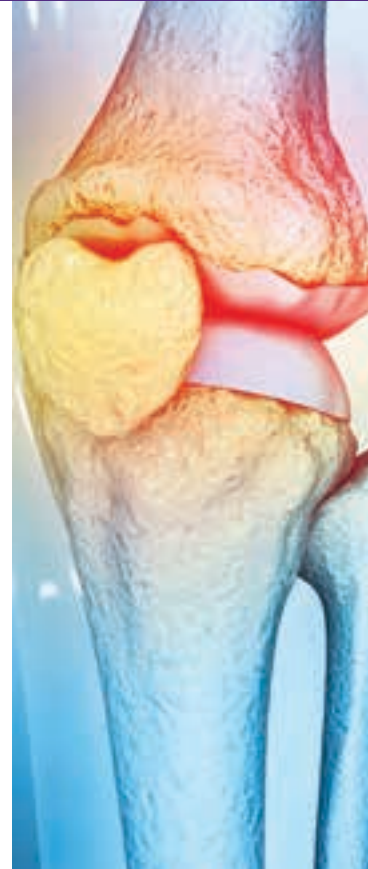
APPROXIMATELY **40%** OF THEM REPORT **BOTHERSOME SYMPTOMS**<sup>1</sup>

**WOMEN ARE MORE LIKELY TO DEVELOP OSTEOARTHRITIS AFTER AGE 50<sup>2</sup>**

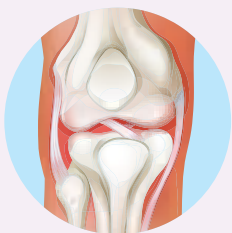


OSTEOARTHRITIS IS A MUCH **MORE COMPLEX** DISEASE THAN PREVIOUSLY THOUGHT, WITH INFLAMMATORY MEDIATORS RELEASED BY CARTILAGE, BONE AND SYNOVIUM.<sup>3</sup>

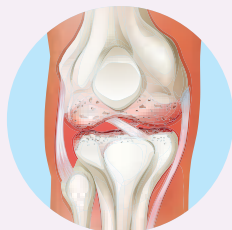
**SYNOVITIS IS NOW ACCEPTED AS A CRITICAL FEATURE OF OSTEOARTHRITIS<sup>3</sup>,** AND SOME STUDIES HAVE SUGGESTED THE CONDITION IS A DRIVER OF THE OSTEOARTHRITIS PROCESS.



### 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 HIGHER.<sup>4</sup>

#### SYSTEMIC RISK FACTORS FOR OA INCLUDE:

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

# 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 pain.<sup>5</sup>

9% of those with knee OA use opioids chronically.<sup>6</sup>

### Chronic NSAID use is not without risks in older patients:

- They are responsible for 30% of hospital admissions for adverse drug reactions<sup>7</sup>
- Increased risk of bleeding and cardiovascular disease<sup>8</sup>
- Double the risk of hospitalization due to heart failure<sup>8</sup>
- Can cause GI bleeds<sup>8</sup>
- Risk of impaired renal function<sup>8</sup>

### 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**<sup>9</sup>

More than **2/3 of patients** with severe OA are **unwilling to consider TKA**<sup>10,11</sup>

...and **20%** of patients who undergo TKA report **dissatisfaction** with the procedure<sup>12</sup>

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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.<sup>13,14</sup>

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>15</sup>

Although there are many conservative treatment options available before surgery, there is still a lack of therapies that consistently provide long-term relief without the need for ongoing medication. Emerging data on GAE suggest it may help address this gap.<sup>16</sup>

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