

## **What is Arthritis?**

### **Written By:**

Jeff Temple Advanced Practice Registered Nurse  
Bigfork Valley Clinic and Hospital

### What is arthritis?

Arthritis is defined by medical terminology as “inflammation” (-itis) of a “joint” (arth-).

When a joint becomes inflamed, trying to determine the cause can be a challenge for the practitioner. In this article, we will focus on the most common form of arthritis: Osteoarthritis.

Osteoarthritis is sometimes referred to as “wear and tear” arthritis. It can begin at any age, but it generally does not affect people until later in life. It commonly affects weight-bearing joints such as hips and knees. The hip is classified as a “ball and socket joint” whereas, the knee is a “hinge joint”. The cartilage that covers the ends of the bone is called “articular cartilage” like that of a chicken bone. Therefore, as two opposing joint surfaces articulate together, over time the cartilage breaks down, increasing the development of arthritis. As the cartilage breaks down, the individual may walk with a limp, have difficulty getting dressed, and/or limited activity because of pain and swelling.

### What causes osteoarthritis?

The exact cause in identifying why one person may develop arthritis compared to the next is unknown, however, various factors can contribute to its development. Uncontrollable variables may include metabolic and hormonal factors, congenital or acquired pes planus (flat feet), neurologic disorder, or a congenital deformity altering one’s gait of how they walk placing undue stress to the joint. Controllable variables include obesity, poor nutrition, lack of exercise

weakening muscles, athletics, injuries, surgeries, or a job that requires a lot of stress to the joint such as construction or mining, to name a few.

### How can you diagnose osteoarthritis?

Diagnosing osteoarthritis can be a challenging hurdle for the practitioner due to common symptoms of joint stiffness, swelling, warmth, decreased motion, or quality of pain. It may mimic underlying conditions such as a tear of the fibrous cartilage (meniscus), ligament, tumor, or infection. Therefore, it is vital that the practitioner possess active listening skills while obtaining a detailed history including the onset, history or injury, limitations, and observation of gait mechanics. Next, is completing a careful detailed examination of BOTH the affected and unaffected painful joint. This allows for a comparison between a “normal” and a “painful” joint. The examiner feels for swelling, redness, fluid, and certain motions that can cause pain, which is not experienced in the “normal joint”.

After completing the history and clinical examination, the ordering of standard radiographs (x-rays) of the painful joint should be completed. Because it is a weight-bearing joint, the x-rays should be taken while standing. This will give the practitioner a better representation on how the joint(s) “line -up”, the degree of arthritis, and potential deformity. If there is no evidence of arthritis, the practitioner may order an MRI to determine another potential cause for the pain.

### What is the treatment for Osteoarthritis?

I inform my patients when given a diagnosis of arthritis that we must try and maintain it current state and/or prevent it from worsening. Treatment options for arthritis are numerous with the major emphasis of conservative versus surgical care. Conservative care is the gold standard prior to surgery if at all possible. Conservative options consist of therapy (exercise), weight loss,

proper nutrition, insoles, braces, medication, and injections to mention a few. Initial supervised therapy is the main building block for transitioning to an exercise regimen. This approach ensures proper education on performing the exercises to maintain or improve range of motion and strength. Additional adjuncts may include different types of bracing, or the common over the counter (OTC) insole to correct any gait abnormality. Proper nutrition of a well-balanced diet to ensure a healthy lifestyle and reduce the risk for obesity, coronary heart disease (CAD), and hypertension. Supplements including multi-vitamin, calcium, and vitamin D within the recommended daily allowance (RDA) can also help improve bone health.

#### Are there medications available for osteoarthritis?

Yes. Today, consumers are faced with many pharmacological options for treating joint pain and arthritis in the form of topical creams and gels, oral nutritional supplements to build cartilage and for pain relief. Theoretically, topical preparations produce their effect by altering the skin surface primarily by increasing warmth via relaxing muscle tightness. These are generally self-limiting because they do not penetrate deep below the skin surface. Historically, traditional OTC oral medications available to treat pain and discomfort include Tylenol (acetaminophen), Motrin/Advil (ibuprofen), Aleve (naproxen), and aspirin (ASA) to mention a few. Although these are safe to obtain without a prescription, it is extremely important to urge patients to read the labels and dosing carefully to avoid unwanted complications. If you have any questions about OTC medications, contact your practitioner or local pharmacist.

#### Are there injections available for arthritis?

Yes. Many practitioners utilize intraarticular injections (injections into a joint) to help lessen symptoms caused by arthritis such as swelling and inflammation. Although injections are an

option, it should also be understood that receiving an injection may briefly elevate one's blood sugars if you are diabetic and may also cause some bleeding if you are on a prescribed blood thinner. Lastly, allergies to foods and medicines are also reviewed prior to proceeding forward. This will be reviewed by the practitioner prior to the injection.

Two types of injections are that of cortisone or viscosupplementation. Cortisone is a form of a corticosteroid which is available in many different forms. It is generally practitioner comfort with the same overall principle: swelling and pain reduction. Cortisone provides quick relief, but the duration is determined by the degree of arthritis in the joint. Viscosupplementation (or hyaluronic acid) or as some people say "rooster combs" has also become available for managing arthritis. Theoretically, viscosupplementation produces its effect by increasing the viscosity of the synovial (joint) fluid to lessen friction between the ends of arthritic joint. Currently it is only approved for the knee, and it is not meant to "cure the arthritis" but to help with symptoms. One should also remember injections benefit everyone differently for relief of symptoms.

### Is surgery an option for arthritis?

Yes. Although surgery is common for advanced arthritis, as a nurse practitioner specializing in orthopedics, I work diligently with the patient to try and fail all conservation options prior to discussing a joint replacement. Although surgery is an option to conservative treatment, one would also have to understand that any form of surgery is invasive and comes with certain risks based on the intended procedure.

## Final Notes

Indeed, there are a variety of treatment options available for osteoarthritis. Recent advances in conservative treatment may prolong one's chance of needing surgery. If surgery is the final definitive treatment option, advances in joint replacement has curtailed with pre-surgical strengthening, one can expect a quicker recovery compared to years past.



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**Jeff Temple**  
APRN, OPA-C

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