

# Arthritis Update



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The Centers for Disease Control estimate that one in three American adults is affected with arthritis or some other joint disorder. More than 43 million Americans have been diagnosed with arthritis, and half of those affected are 65 years of age or older. In 20 years, as our population ages, it is estimated that 60 million Americans will be afflicted with the sometimes disabling, often painful disorder of arthritis. Healthy Living magazine recently assembled three Eisenhower Medical Center physicians to discuss arthritis, its current treatment options and trends, and the treatment outlook for the future. The participants were Board Certified physicians Joel Hirschberg, MD, Rheumatology and Internal Medicine, and Medical Director, Arthritis Education Program, Eisenhower Medical Center; Maria Greenwald, MD, Rheumatology and Internal Medicine; and, Philip Shaver, MD, Cardiology, who served as moderator.

**DR. SHAVER:** Although there are more than 100 forms of arthritis, we will focus this discussion on osteoarthritis, rheumatoid arthritis and gouty arthritis. There are 130 places in our body where a joint is present to allow bones to move freely without pain. Something common to all these junctions is cartilage, which allows for smooth movement. How does the joint operate? What allows this cartilage to move smoothly, and how does arthritis affect it?

**DR. HIRSCHBERG:** A joint is really a means by which we move our body from one place to another without causing friction. Bones have nerves, but cartilage does not, and so, acts as a buffer allowing us to move joints without significant sensation, unless there's an ailment or damage to the structure.

Joints are enclosed in a thin, cartilaginous, fatty and fibrous structure called a "joint capsule," which contains a thin membrane, called "synovium," that lubricates and nourishes the cartilage and the structures within the joint. Wear and tear and inflammation can lead to joint destruction, swelling and pain.

**DR. SHAVER:** Is cartilaginous destruction a common denominator in arthritis?

**DR. HIRSCHBERG:** Pain is a common denominator. Some types of arthritis are more inflammatory than others, but cartilage breakdown and bone destruction is found in most types. Sometimes the bone creates more bone, resulting in painful enlargements and spurs.

Osteoarthritis accounts for 90 percent of all arthritis and is what sends most people to a rheumatologist. Osteoarthritis happens when the force of the destruction is greater than the force of the cartilage trying to repair and reestablish itself, and mostly occurs in weight-bearing joints — our hips, knees, ankles, lower back, the neck and the ends of our fingers, which support a lot of pressure.

**DR. SHAVER:** Is osteoarthritis genetic?

**DR. HIRSCHBERG:** There are some genetic ties to osteoarthritis that usually follow females — following the X chromosome, particularly the cases where there is a great deal of enlargement, like Heberden's nodes, [bony outgrowths that appear on the joint nearest the fingernail]. But, it is more often a result of not taking very good care of our bodies.

To those people who do have a familial history, I recommend a good, balanced and regular exercise program that trains many muscle groups and avoids traumatizing any single joint repeatedly. Studies show that obesity does increase our chance for osteoarthritis, but it is not always a major contributor. **DR. SHAVER:**

I believe, Dr. Greenwald, that about 2.5 percent of arthritis is rheumatoid arthritis. How is that different in the way it destroys the joint? **DR. GREENWALD:**

Rheumatoid arthritis is an autoimmune process, in which the immune system begins to attack the synovium. Cells attack these joints, making them very swollen, hot and painful. This is typically symmetrical [affecting both sides], and frequently involves multiple joints at a time.

**DR. SHAVER:** Who are the patients typically affected by rheumatoid arthritis?

**DR. GREENWALD:** Rheumatoid arthritis can attack any age group. The youngest patient I've seen was 18 months and the oldest, 101 years. Osteoarthritis generally affects people over 40 and usually presents over time in two or so joints. In rheumatoid arthritis, you may just wake up one day and have 16 or 20 swollen joints. While osteoarthritis equally affects both sexes, with rheumatoid arthritis, the ratio is about three to one, women to men.

**DR. SHAVER:** How do you help your patients with osteoarthritis?

**DR. HIRSCHBERG:**

Physical therapy and a good exercise program. Pool programs are really very important and very accessible.

We also try some analgesics. Most people start with Tylenol® and then move into anti-inflammatories, although a lot of patients are fearful of anti-inflammatory drugs. There has been some good literature that Tylenol works fairly well. Mild analgesics like tramadol also work fairly well. **DR. SHAVER:**

Does weight loss stabilize, or even cause regression in some of these patients?

**DR. HIRSCHBERG:** It helps some, but it's a "soft" approach. By and large, it is the exercise, specifically in the water, that makes the difference and helps with joint support by strengthening supportive structures, such as muscles.

**DR. SHAVER:** How about plain old aspirin? **DR. GREENWALD:**

Although aspirin does work for pain, it's not a good treatment for arthritis because it's too toxic. There are a lot of creams, patches and other liniments on the market, which won't hurt your stomach. Also, treatments like Felden®, Voltaren®, and Orudis® creams have been proven to have fairly excellent penetration without systemic blood levels or renal-type toxicity. We hope one day they'll be sold over-the-counter like Aspercreme®.

**DR. SHAVER:** Let's talk about non-steroidal anti-inflammatory drugs (NSAIDs), because they give fairly immediate relief...and the controversies surrounding COX-2 inhibitors.

**DR. GREENWALD:** Aspirin, ibuprofen and Naprosyn (Aleve® and Advil® respectively) are NSAIDs that block or inhibit the production of both COX-1 and COX-2 enzymes, which affect pain metabolism. COX-1 inhibition adversely affects the production of mucus, which protects the stomach, and leads to gastric erosion and possibly bleeding, while the COX-2 inhibitors have more to do with the pain management. Pure COX-2 inhibitors, like Celebrex®, Vioxx® and Bextra®, came along, which didn't cause bleeding or stomach problems, but they also didn't thin the blood or protect the heart. So the question has been — are these safe? Low dose Celebrex remains the one COX-2 inhibitor currently available. Cardiac patients should add 81 milligrams or low dose aspirin to this medication.

**DR. SHAVER:** Celebrex seems to be the sole survivor of the COX-2 inhibitors. Are there any other COX-2 inhibitors?

**DR. GREENWALD:** There are several at the FDA right now that should be coming out this year. So, we're going to have multitudes of COX-2s to choose from again in a year.

**DR. HIRSCHBERG:** The data on COX-2 inhibitors and cardiovascular risks is evolving. It's important to keep in mind that we don't have all the information on anti-inflammatory drugs, and that everything has a risk and a benefit. You always need to protect your stomach. It's probably good to remember that all anti-inflammatories now have concerns from a cardiovascular risk. "...there's a clear message that rheumatology is on the move. It's a very, very exciting time for us and for the patient population."

**DR. SHAVER:** The question has also been raised that ibuprofen may actually reverse the blood-thinning heart benefits of daily aspirin therapy.

**DR. HIRSCHBERG:** Actually, if you spread them out and take the aspirin first, then the ibuprofen does not reverse the effect of the aspirin.

**DR. SHAVER:** Dr. Greenwald, what are the medications that you give for rheumatoid arthritis?

**DR. GREENWALD:** From day one, I prescribe methotrexate, which is also used to treat psoriasis, cancer, and other diseases, and then treat their pain, often with prednisone, a much stronger antiinflammatory than traditional nonsteroidals. Our goal would be to get them off prednisone, due to the drug's serious side effects, within six months. What becomes very clear over time is that a rheumatoid patient who has taken methotrexate for a long time lives 10 years longer than one who has not, because of cardiovascular protection. Patients on methotrexate have a 70 percent reduction in death from a heart attack.

**DR. HIRSCHBERG:** We also have a number of new biological therapies now that modulate the inflammatory response by blocking inflammatory substances which damage the joint. They are also all extraordinarily expensive. But the cost of these medicines is far less than the cost to society of not giving them.

**DR. SHAVER:** Let's move on to gout, a very painful form of arthritis that has been known for hundreds of years. Is there anything new in gout?

**DR. GREENWALD:** There are new therapies coming that block the production of uric acid crystals that cause inflammation in the joints. Typically gout occurs in your big toe, because that's the lowest part of the body and the concentration is greatest...that's why gout is almost always in the lower extremities.

**DR. SHAVER:** Does diet or limiting alcohol consumption help?

**DR. GREENWALD:** Alcohol interferes with the kidney's ability to rid your body of extra uric acid and can aggravate gout. Also, food components called "purines," found in steak and shrimp increase gout. I usually start treating gout with allopurinol, which is a very effective medication, and with colchicine, to treat acute attacks.

**DR. HIRSCHBERG:** Gout also has a genetic predisposition, so I first attempt to modify the environment, like ask a patient to modify their diet. In closing, I'd like to say there's a clear message that rheumatology is on the move. It's a very, very exciting time for us and for the patient population.

Eisenhower Community Pool Program Eisenhower Medical Center's pool is four-feet deep and maintained at a comfortable 89°. The water is kept crystal clear using a state-of-the-art hydrogen peroxide and ultraviolet light disinfecting system instead of chlorine. The Eisenhower facility also offers dressing rooms with showers, lockers and hair dryers. Call 760-773-2036 for details and class schedules.

Eisenhower Arthritis Education Program Eisenhower's Arthritis Education Program offers six-week programs in tai chi, pool and land exercises, and nutrition. Call 760-773-4535 for class schedules and lectures.