



## VA research on **ARTHRITIS**

*Arthritis affects 53.5 million American adults, one in every five. According to the Centers for Disease Control and Prevention, it is the nation's most common cause of disability.*

### **ABOUT ARTHRITIS**

- Arthritis refers to joint inflammation from a number of causes. The term is used to describe more than 100 rheumatic diseases and conditions that affect joints, the tissues that surround the joint, and other connective tissue.
- Typically, pain and stiffness in and around one of the joints characterize rheumatic conditions. The symptoms can develop gradually or suddenly. Certain rheumatic conditions can also involve the immune system and various internal organs of the body.
- Osteoarthritis, or degenerative joint disease, is the most common form of arthritis, affecting up to 27 million Americans.
- Rheumatoid arthritis affects about 1.3 million Americans. In this disease, the body's immune system attacks its own joint tissue, causing inflammation. It can result in the destruction of cartilage and bone.

### **VA RESEARCH ON ARTHRITIS: OVERVIEW**

- VA researchers are developing new clinical treatments that reduce Veterans' disabilities and improve the ability of VA

clinicians to provide effective care for patients with arthritis.

- Some groups are identifying molecular mechanisms that affect skeletal health and can lead to new treatments for osteoarthritis. Others are using innovative techniques to design therapeutic interventions, from surgical techniques to physical therapy, for patients who have lost mobility or functioning. Still others hope to halt the progression of osteoarthritis, and to reverse the degeneration of cartilage associated with the disease.
- VA studies are exploring less expensive drug treatments for arthritis. Others are examining possible causes of arthritis, such as immune system changes and a possible link to PTSD.
- VA researchers are exploring complementary and integrative treatments, including nutritional supplements, massage, and activity pacing, to manage pain caused by arthritis.

### **SELECTED MILESTONES AND MAJOR EVENTS**

- 2002** – Established the [Rheumatoid Arthritis Registry](#), providing researchers

with access to information about hundreds of male patients with rheumatoid arthritis

- 2006** – [Found](#) little overall benefit in two widely used nutritional supplements for arthritis (glucosamine and chondroitin sulfate)

- 2011** – [Learned](#) that the complement system, a group of proteins that move freely through the blood stream, plays an important role in the development and spread of osteoarthritis

- 2014** – Received the [Lee C. Howley Sr. Prize](#) for Arthritis Scientific Research (VA Boston Health Care System and others) for determining that less expensive anti-rheumatic drugs worked as well as newer, more expensive, biological treatments

- 2014** – [Tested](#) an anti-inflammatory drug on mice that may someday have the effect of reversing bone loss in patients with RA

### **RECENT STUDIES: SELECTED HIGHLIGHTS**

- **Group and individual physical therapy are equally effective** for patients with knee osteoarthritis, found a study conducted at the Durham VA Medical Center in North Carolina. The researchers say both approaches are reasonable

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treatment options, and the group setting may have extra benefits such as cost-effectiveness and social support. ([Physical Therapy](#), May 2016)

• **Men with rheumatoid arthritis showed higher rates of mortality** than age-matched men without the disease, according to researchers from multiple VA health care systems. These men had a three-fold risk of respiratory-related deaths compared to men without rheumatoid arthritis. ([Arthritis Care & Research](#), Dec. 21, 2015)

• **Swedish massage may be effective for reducing pain** in patients with knee osteoarthritis, according to investigators with the Durham VA Medical Center and their colleagues. Their pilot study showed that Swedish massage is a feasible and acceptable treatment for VA health care users, and they suggest a larger, randomized trial to further explore its possible benefits. ([Journal of Alternative and Complementary Medicine](#), June 1, 2015)

• **Trauma exposure and PTSD may increase the risk of autoimmune disorders** such as rheumatoid arthritis, according to researchers at the San Francisco VA Medical Center. PTSD is associated with endocrine and immune abnormalities, and this study showed that Veterans with PTSD were at a significantly higher relative risk than Veterans without the condition. ([Biological Psychiatry](#), Feb. 15, 2015)

• **An anti-inflammatory drug that blocks a specific receptor of T cells** may halt or even reverse bone loss related to rheumatoid arthritis. This Atlanta VA Medical Center study found that the tested drug promoted bone formation and density in mice. ([Arthritis & Rheumatology](#), April 1, 2014)

• **Ann Arbor VA researchers are conducting a trial** that tests activity pacing in people with osteoarthritis, with funding from the National Institutes of Health. Activity pacing is a strategy that involves planning rest

breaks during the day, which helps to avoid arthritis flare-ups. A pilot study has indicated that tailored activity pacing reduces fatigue and makes daily activity easier. ([National Institutes of Health](#))

• **Less expensive combinations of disease-modifying anti-rheumatic drugs** produce the same clinical benefits for patients with rheumatoid arthritis as much more expensive biological treatment in a study conducted by the Omaha VA Medical Center and the University of Nebraska. The study included 353 patients at 16 VA medical centers, 12 rheumatoid arthritis investigational network sites, and eight Canadian medical centers. ([New England Journal of Medicine](#), July 25, 2013)

**For more information on VA studies on arthritis and other key topics relating to Veterans' health, please visit [www.research.va.gov/topics](http://www.research.va.gov/topics)**

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