RESEARCH!AMERICA
DISCOVERY. INNOVATION. HEALTH.

If you think research is expensive, try disease.

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

Arthritis

Arthritis is not a single disease; it is an array of conditions that cause joint pain and swelling. Arthritis is common and often debilitating, making it the leading cause of disability in the United States.[1] Major categories of arthritis include osteoarthritis, rheumatoid arthritis, fibromyalgia, gout, and juvenile arthritis.[2] Thanks to research advances, treatments for arthritis can alleviate symptoms and in some cases, slow or stop the progression of the disease.

TODAY

In the United States, around

54.4 million

adults have arthritis.[3]

By 2040, it is estimated that

78 million

adults will have arthritis due to the growing and aging population.[3]

60%

of adults with arthritis are **under 65 years old.**[4]

294,000

children under 18 have juvenile arthritis or other rheumatic conditions.[5]

Arthritis is more common among people with other chronic conditions, including **obesity (31%)**, **diabetes (47%)**, and **heart disease (49%)**, compared to the general population.[6]

COST

$304 billion:

Combined cost of medical care and lost wages due to arthritis in the United States in 2013.[3]

1 in 4

adults with arthritis have work limitations.[3]

Total health care costs are

3x higher

for Medicare patients with rheumatoid arthritis compared to other Medicare patients.[7]

Research Delivers Solutions

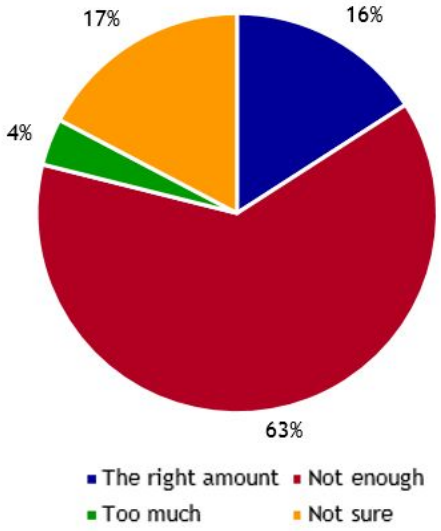
Roughly **5 in 1,000 people** have rheumatoid arthritis, which occurs when the immune system attacks the body's own tissues, particularly around the joints.[8] Treatment has evolved from managing symptoms to actually **preventing further joint damage**, using traditional "small-molecule" drugs as well as newer biologics—genetically-engineered proteins that target specific aspects of the immune system.[8,9] Novel biologic agents continue to be developed, providing **additional treatment options** for patients who do not respond to the currently-available therapies.[9,10]

Osteoarthritis, caused by the breakdown of cartilage within a joint, is the **most prevalent form of arthritis.**[11] Treatments for osteoarthritis focus on alleviating symptoms and improving quality of life. However, as our understanding of this disease has improved, scientists are working on new therapies that could **slow, stop, or even reverse the progression of the disease**.[12]

Research has demonstrated that treating arthritis earlier can slow or prevent its progression and improve patient outcomes.[8,10] New imaging techniques are being developed that could allow for the **earlier detection** of various types of arthritis. [13]

Majority Say Current Spending on Research to Prevent, Cure and Treat Disease is Not Enough

The U.S. spends about 5 cents of each health dollar on research to prevent, cure and treat disease and disability. Do you think that this is too much, the right amount, or not enough?



Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2019

Arthritis

Then. Now. Imagine.

THEN

Prior to the mid-1980's, treatments for rheumatoid arthritis were largely palliative.[14] Rheumatoid arthritis caused significant disability and joint disfigurement in most patients.[15]

NOW

Early treatment for rheumatoid arthritis can prevent progression of joint damage in up to 90% of patients.[8]

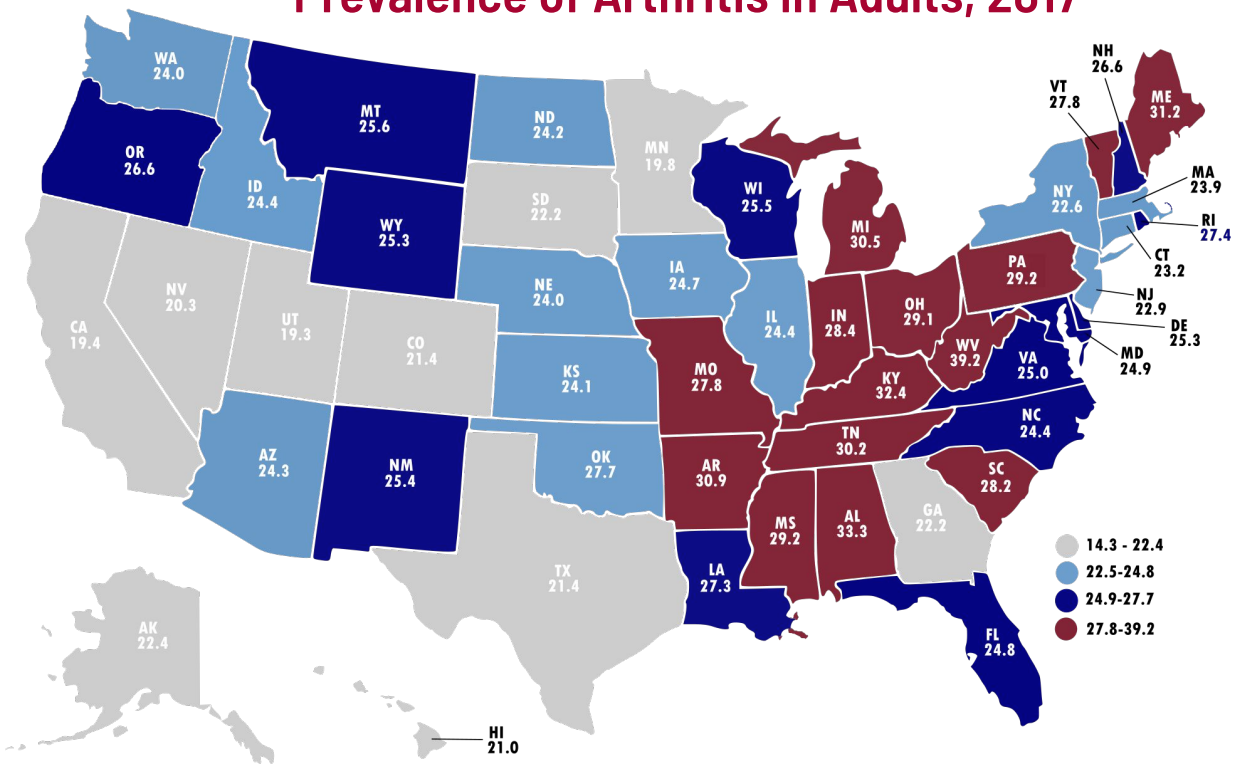
IMAGINE

A cure.

Spotlight on Juvenile Arthritis

The most common form of juvenile arthritis, juvenile idiopathic arthritis (JIA) is an autoimmune disorder of unknown cause. Left untreated, JIA can cause serious complications like growth problems and vision impairment.[16] Due to treatment advancements, disability and disease activity in children with JIA have declined significantly over the past 25 years.[17] Scientists are also making progress towards understanding what causes JIA. In a recent study of young identical twins girls, researchers identified a single mutation in a gene in both girls. They then used a genetically-edited mouse model to confirm that this gene plays a role in the disease.[18] Such studies could help unlock better treatments, and perhaps one day, a cure.

Prevalence of Arthritis in Adults, 2017



1. "What is Arthritis?" The Arthritis Foundation
2. "Arthritis Basics." Centers for Disease Control & Prevention
3. "Arthritis-Related Statistics."Centers for Disease Control & Prevention
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5. "Juvenile Arthritis Research." Arthritis National Research Foundation
6. "Arthritis Comorbidities." Centers for Disease Control and Prevention
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18. Schlenner et al. "NFIL3 mutations alter immune homeostasis and sensitise for arthritis pathology." 2019.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data [accessed Jun 17, 2019]

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