



A SILENT ENEMY

HOW ARTHRITIS IS THREATENING
THE U.S. MILITARY



PREPARED BY THE ARTHRITIS FOUNDATION

A SILENT ENEMY



THE ARTHRITIS FOUNDATION IS LEADING THE WAY FOR OUR MILITARY

As the Champion of Yes for all people with arthritis, the Arthritis Foundation is committed to helping ease their pain and finding a cure. We also believe it's our duty to support America's veterans and service members, who are disproportionately affected by arthritis.

One way we're leading the fight is by putting a spotlight on how arthritis is impacting our armed forces. We've taken the latest research data and turned it into a compelling case for public policy change. We believe that arthritis research supporting better prevention strategies, interventions and treatments should be a top national health priority – and we're rallying Arthritis Foundation Advocates, the physician community and veteran and military organizations to push for **\$20 million in dedicated arthritis research funding.**

How Arthritis Is Threatening Veterans and the U.S. Military

One of every three veterans and service members in the United States lives with arthritis, a serious, chronic and complex disease that affects one in five Americans in the general population. Arthritis carries with it enormous physical, financial and societal costs, but for veterans and service members, the costs are multiplied. Today, arthritis is among the most chronic conditions veterans and service members face.

Osteoarthritis (OA) is the most frequent reason active duty personnel are deemed unfit for duty. A 10-year review of arthritis among active duty personnel found OA rates to be 26 percent higher in the under-20 age group, compared with the same age group in the general population. A study of post-traumatic OA caused by battlefield injuries found that arthritis was the most common unfitting condition, with 94.4 percent of cases attributed to combat injury.

Traumatic anterior cruciate ligament (ACL) injuries occur frequently among service members – and can lead to the development of arthritis and possible joint reconstruction within 20 years. In fact, between 2,500 to 3,000 ACL reconstructions are performed every year in U.S. military hospitals. Musculoskeletal injuries are pervasive, and represent 68 percent of all limited-duty orders, even in non-combat units.

What Military Personnel With Arthritis Have in Common

One in three veterans has arthritis (34.7 percent), compared to one in five civilians. Individuals over age 40 are twice as likely to develop arthritis after returning to civilian life. Wounded service members often require costly lifelong care for this progressively degenerative condition. Service members injured by roadside

“The Arthritis Foundation has worked hard to support research to find a cure for all forms of arthritis. They offer many resources that help and support veterans and active duty service members.”

—Edward Patterson Wyatt Jr., U.S. Navy, Retired, Round Hill, VA

EXECUTIVE SUMMARY

“With advances in science and technology, we have the potential to make dramatic strides in combatting arthritis. Through congressional funding dedicated to arthritis research, we can better care for our veterans and promote a more active lifestyle.”

—Steven Sampson, DO, Osteopathic Physician, Los Angeles, CA

bombs and other blasts are often diagnosed with the condition within two years of being injured, versus civilian injuries where onset of arthritis usually occurs 10 years later. Arthritis also complicates chronic disease management among veterans. More than half of veterans with heart disease or diabetes also have arthritis. Rheumatoid arthritis (RA) is known to increase the risk of cardiovascular disease; data from the Veterans Affairs (VA) Rheumatoid Arthritis Registry confirms that the mortality rate of veterans with RA is more than double the rate among those without RA.



Why Service Members Are More Prone to Arthritis

Even in basic training, new recruits are carrying 60-100+ lb. packs that can injure and weaken their joints, which can lead to arthritis. Combat injuries also increase the risk for arthritis. For example, shock waves from bomb blasts can cause early joint damage, which in turn may lead to early onset arthritis. Post-traumatic OA can be severely disabling and debilitating. Service members are often injured at a young age, which translates to more years of joint-related symptoms, activity limitations and risks associated with medical procedures.

How Further Arthritis Research Can Help

Research can help identify ways to lessen joint injury during military training and service. More research on post-traumatic OA can lead to the development of interventions at the time

of injury that can mitigate the impact of arthritis, and possibly prevent it altogether. In addition, research on the genetics and epigenetics of rheumatoid arthritis can help us better understand what causes RA, which can lead to more effective treatments with fewer side effects.

Why Department of Defense (DoD)-Funded Arthritis Research Is Key

There is a growing burden of arthritis among active duty and veteran populations. Arthritis negatively affects the ability of active duty service members to perform their duties, and it limits the quality of life for veterans. Arthritis is responsible for rising health care costs because of its impact. Currently, arthritis and clinical care research – on both active duty military and veteran populations – is very limited.

Arthritis research has been funded at the DoD since Fiscal Year 2009 in the Peer Reviewed Medical Research Program (PRMRP) within the Congressionally Directed Medical Research Program (CDMRP). Since then, Congress has authorized up to four arthritis topics, including OA, post-traumatic OA, RA and arthritis overall. To date, a total of 29 grants have been funded. However, arthritis can be crowded out by the 37 other authorized topics in the PRMRP, so funding is not guaranteed.

Arthritis Foundation Recommendation

The Arthritis Foundation is leading the fight for the arthritis community, asking Congress to create a stand-alone arthritis program within the DoD's Congressionally Directed Medical Research Program – **funded at \$20 million**. This would guarantee dedicated research funding to meet the growing needs of active duty personnel and veterans. Moreover, arthritis research that helps our military and veteran populations will benefit everyone with arthritis, which is the number one cause of disability in the United States.

A SILENT ENEMY

THE COST OF COMBATTING ARTHRITIS IN THE U.S. MILITARY

When our service members are wounded in combat, their injuries can immediately trigger the cascade of events that result in arthritis, which lasts a lifetime.

Arthritis can directly and indirectly affect a service member's quality of life in many ways – and can have cumulative effects – such as:

- Experiencing daily pain, disability and physical limitations.
- Being discharged from service early because they can't perform their duties, ending their careers and dreams.
- Impacting their ability to hold down a job and be a functioning member of society because of disability.
- Possibly developing major emotional and psychological effects.

Traumatic injuries, such as those caused by an explosion or shrapnel, create physical damage – but they can also set off a cascade of biochemical changes in affected joints (including cartilage, underlying bone, tendons and other soft tissue).

Depending on the type of trauma (and the force behind it), bones can be fractured, ligaments can be torn and cartilage can be damaged. These injuries, even if repaired, can trigger chronic inflammation and bone remodeling that set the stage for the development of arthritis in that joint.

Joint trauma affects all joint tissues, but the damage to cartilage is most serious, as it is largely irreversible and is thought to be the major determinant for the subsequent development of OA.

Other OA risk factors, such as obesity, joint malalignment or genetic risk factors, can lead to worse symptoms.

Service members are at risk of getting arthritis much earlier than civilians – and are often discharged because of it, even in their twenties and thirties.

Biochemical changes from injuries on the battlefield will not be apparent. Over time, damage to the joints may be worsened by the service member continuing rigorous activity, like hauling heavy equipment and supplies. Multiple tours of duty exacerbate the damage. By the time the extent of the damage is known, the service member may no longer be able to perform heavy duties and is likely to be discharged.

- At first-line treatment, the physician can prescribe physical therapy, with a recommendation to lose weight, if needed, and to stay physically active. Prescription pain pills may be needed, too. For many, this may only delay progression of the disease.
- Eventually, the only option may be joint replacement surgery, followed by intense rehabilitation.
- Future surgeries are often needed to replace worn-out prosthetics.

Besides medical care, service members may need psychological counseling, an additional cost, to cope with their own situation.

Discharged service members may receive monthly **disability compensation** from the Veterans Benefits Administration (VBA), with additional compensation for dependents.

Long-term medical and disability costs can be reduced with a greater, dedicated budgetary investment in arthritis research and providing more aggressive early care.



DISCOVERING NEW AND BETTER TREATMENTS ... AND A CURE

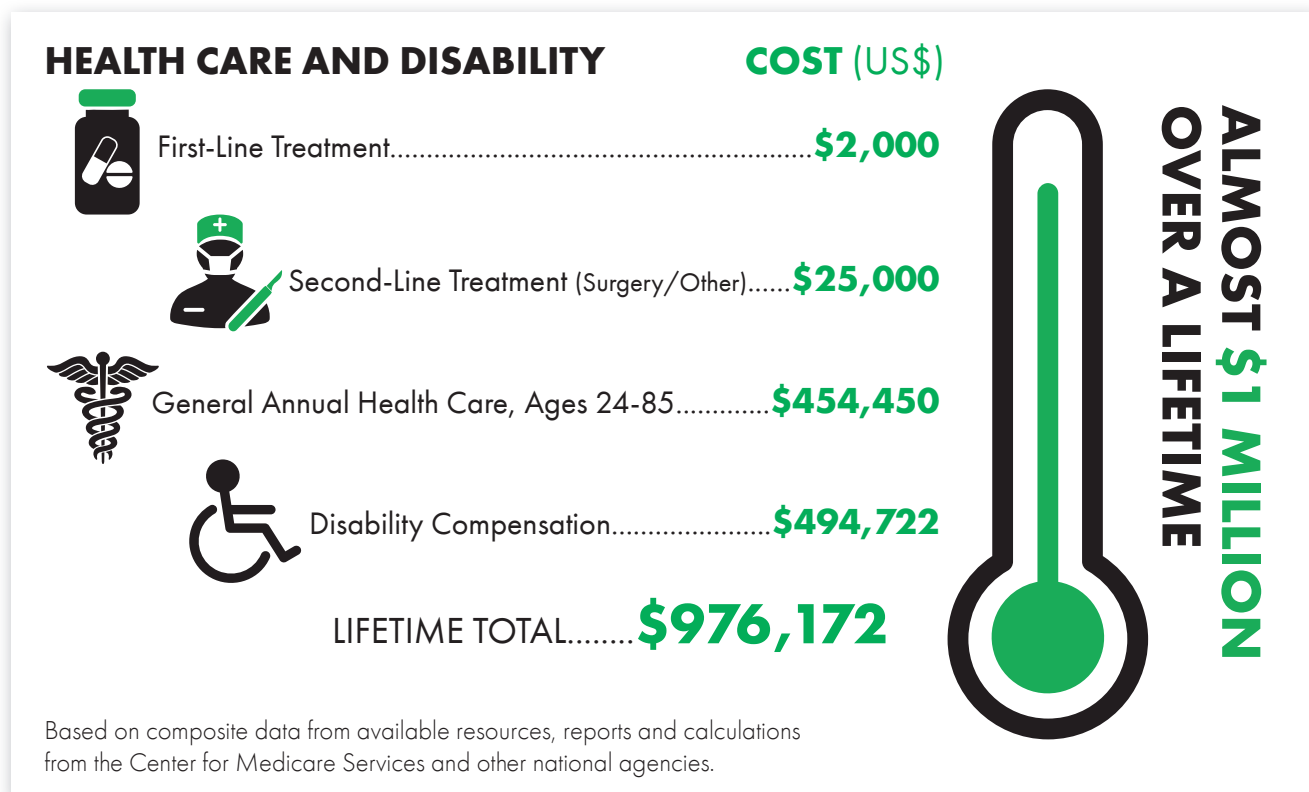
A Lifetime Of Disability

For the rest of his or her life, the impacted service member will require arthritis-related health care, paid for by U.S. taxpayers, in the form of doctor visits, medications, procedures and physical therapy. Since the average annual health care expenditures for a disabled veteran are \$7,450, the cost for lifetime care can be profound – and rises every year. Add disability compensation, and the costs increase significantly. We can help improve their outcomes.

That's why we need to make arthritis research a top national health priority – to stop the disease and cure it.

Cost Example

Based on a U.S. Army soldier diagnosed with post-traumatic OA at age 24 (two years after a traumatic injury), who is discharged and requires knee replacement surgery in his or her thirties. (Amounts will vary in individual situations, including the kind of treatment, surgery required, number of dependents, etc.)



CUT HEALTH CARE COSTS

**Invest \$20 million in dedicated arthritis research at the
Department of Defense for our service members and veterans.**

A SILENT ENEMY

ON THE FRONT LINES AGAINST ARTHRITIS

Nicholas Steen knows firsthand why so many veterans have arthritis.

Arthritis is an occupational hazard in the military. Studies show that one in three servicemen and women has some form of arthritis; it's the second leading cause of medical discharge from the Army. Worse, many service members are young when they receive injuries that lead to osteoarthritis. That means more years of pain, disability and limitations; veterans often need costly, lifelong care for this progressively degenerative disease.

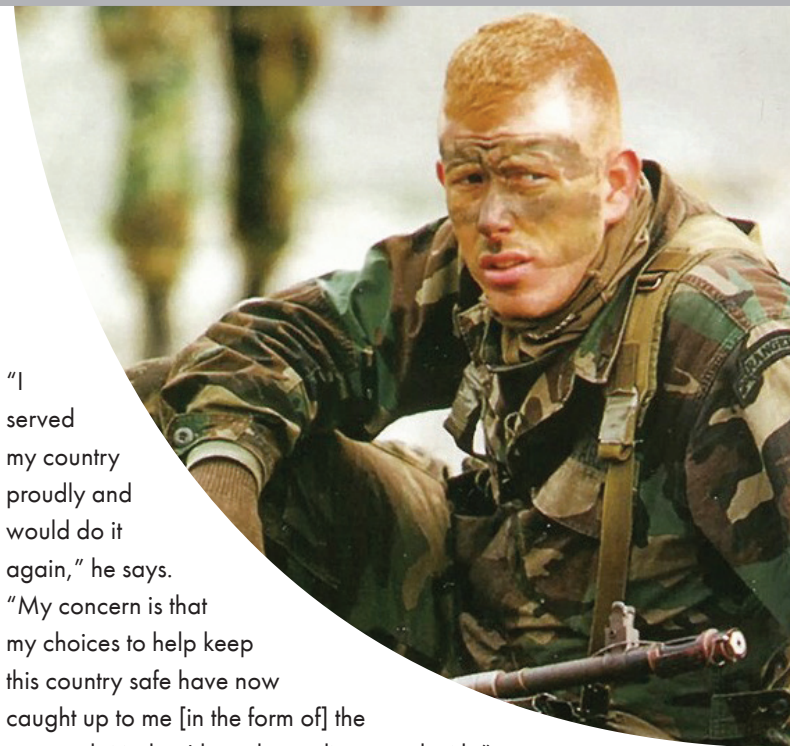
Sgt. Nicholas Steen is a living example. Now 38 and working in the private sector, he joined the Army right out of high school in 1994. By the time he was honorably discharged four years later, he had acquired leadership and lifesaving skills – and arthritis.

As an airborne infantryman in the 2nd Ranger Battalion, Steen was a member of the elite special operations forces. "My

primary job in the Army was that of a heavy machine gunner, which meant I was either carrying a 30-pound gun or approximately 600 rounds of ammunition that often weighed over 50 pounds in addition to the normal load. As you can imagine, jumping out of airplanes with this type of weight often made me turn into an anchor as I crashed to the ground," Steen says. He also sustained injuries, including a broken collarbone and a shattered ankle.



Steen and daughter, Chloe, at the 2015 JA Conference



"I served my country proudly and would do it again," he says. "My concern is that my choices to help keep this country safe have now caught up to me [in the form of] the osteoarthritis that I have been diagnosed with."

Steen, who has a 30 percent disability rating, often feels pain that affects almost every joint, from his shoulders to his ankles. "My back, knees, ankles and feet are often in pain as I do my normal activities," he says. "I live with this pain daily."

The Department of Defense (DoD) has funded some arthritis research since 2009, but funding is not guaranteed. It could be, though: The Arthritis Foundation and American College of Rheumatology have been working to have arthritis added to a list of specific diseases that receive dedicated research funding from the DoD.

Veterans like Steen will speak on Capitol Hill to appeal for a \$20 million arthritis research program that could, for example, help identify ways to reduce joint injuries and manage them so they don't result in arthritis. It might even help identify a cure for arthritis.

Originally published in *Arthritis Today* (Nov-Dec 2015), the magazine published by the Arthritis Foundation

“It is my hope that, through continued funding for research, one day a cure or a better treatment for arthritis will be found. Support for arthritis research will show veterans and future soldiers that their hard work is valuable to the country we served.”

—Nicholas R. Steen Jr., U.S. Army Veteran, Loma Rica, CA

“Veterans have already served our country. Through participation in research, they are given the chance to serve again, this time in the battle against rheumatoid arthritis.”

—Jane Hoyt Buckner, MD, Benaroya Research Institute at Virginia Mason, Seattle, WA

“Veterans are affected by all forms of arthritis and sometimes at rates higher than the civilian population. The great thing about research at the Department of Defense is that it can be generalized to all Americans.”

—Jessica Edgar, MSN, CPNP, Glendale, AZ



CONTACT:

Sandie Preiss

National Vice President

Advocacy & Access | Arthritis Foundation

spreiss@arthritis.org • 202.887.2910



Learn more at arthritis.org/advocate