



WHAT IS THE IMPACT OF BURDEN OF MUSCULOSKELETAL DISORDERS AND WHY IS THE U.S. BONE AND JOINT INITIATIVE IMPORTANT?

Musculoskeletal health is critical for human function and active participation in all aspects of daily life. Musculoskeletal conditions comprise more than 150 diagnoses that affect the locomotor system, ranging from sudden short-lived injuries to lifelong conditions associated with ongoing pain and disability.

The Global Burden of Disease Study 2017 highlights the significant disability burden associated with these conditions, accounting for 16% of all years lived with disability. Lower back pain remains the leading cause of disability since first measured in 1990. Between 20% to 33% of people around the globe live with a painful musculoskeletal condition. ¹

In the United States alone, musculoskeletal conditions rank first among diseases using measures of disability; visits to physicians' offices; and among impairments. Musculoskeletal conditions are a cause of impairment in performing activities of daily living for half of all Americans reporting such impairments in the annual National Health Interview Survey.² Musculoskeletal conditions, injuries, and deformities also deprive children of normal development.

Musculoskeletal conditions are reported by 1 out of every 2 Americans,³ accounting for 19% of all health care visits in 2013.⁴ Musculoskeletal conditions were estimated to cost \$322 billion direct and indirect (mortality and morbidity) in 2014. For people with a musculoskeletal condition as well as other conditions, the direct and indirect costs total \$980 billion, or 5.76% of GDP.⁵

On average for the years 2013-2015, 35.3 million persons reported they suffered from a musculoskeletal injury or condition. However, in 2013, nearly twice that number, 62.7 million, sustained traumatic musculoskeletal injuries, injuries severe enough to require medical treatment, accounting for more than 87% of all injuries. Musculoskeletal injuries are the result of falls, unintentional injuries, workplace injuries, sports, and military injuries. Falls are a common cause of injuries in the older population, and often result in long-term care. Musculoskeletal injuries accounted for more than 1.6 million hospitalizations, 24.9 million emergency or outpatient visits, and 36.5 million physician office visits.⁶

Arthritis is the most common cause of disability in adults in the US, and a leading cause of work limitations. By 2040, the number of adults affected with doctor-diagnosed arthritis is projected to reach 78.4 million, or 26% of the adult population. Arthritis is reported by almost 50 percent of people age 65 and older.⁷ Today, arthritis is a more frequent cause of limitation of activity than heart disease, cancer, or diabetes. Arthritis is also the primary cause of joint replacement procedures. In 2013, an estimated 1.3 million inpatient joint replacement procedures were performed, with hospital costs of more than \$72 billion dollars.⁸

Back and spine impairments are the most prevalent among musculoskeletal impairments, affecting more than 1 in 3 adults annually and accounting for 57.1 million physician visits in 2013. Back pain is also a major cause of disability and inability to work or restricted work. Back pain accounts for 1 in 20 health care visits for any cause.⁹

Osteoporosis affects 12 million Americans and 45 million more with low bone mass are at risk, with women three to four times more likely than men to be affected.¹⁰ Annually for the years 2013-2014, 4.8 million fragility fracture health care visits were attributed to osteoporosis, including 1.1 million visits for hip fractures.¹¹ Nearly two-in-three hip fractures and one-in-two of all fragility fractures occur in persons age 80 and older. In 2014 dollars, the cost to treat osteoporosis and related fractures rose by 118% since the late 1990s, and now stands at \$73.6 billion.¹² As the share of the population in older cohorts in coming years, osteoporosis treatments are expected to continue increasing unless prevention and treatment strategies are initiated. In addition, hip fractures are associated with a high probability of a stay in a skilled nursing facility, further increasing the cost associated with osteoporosis.

Despite this current formation on burden of disease, and with costs attributable to persons with a musculoskeletal disease currently more than \$322 billion per year¹³, musculoskeletal research expenditures totaled only about \$7.9 billion annually between 2012 and 2016, less than 2% of the annual National Institutes of Health funding budget.¹⁴ Recent studies have also shown that training in musculoskeletal medicine is inadequate in both medical school and non-musculoskeletal residency training programs. Among non-orthopaedists, scores were significantly better if they had taken a medical school course or residency musculoskeletal rotation, suggesting that such a rotation would improve the general level of musculoskeletal knowledge.^{15,16}

Musculoskeletal impairments will increase over the next 25 years, as they are most prevalent in older segments of the population. By 2030, 1 in 5 persons in the US will be age 65 or older and by 2035 projected to outnumber the cohort age 18 and younger.¹⁷ Through the partnerships facilitated and promoted by *the United States Bone and Joint Initiative* and its member societies, musculoskeletal care providers, patients, patient advocacy groups, government, and industry will be better able to achieve the goals of the *Global Alliance for Musculoskeletal Health*, and reduce the burden of musculoskeletal diseases on Americans and the global population.

The United States Bone and Joint Initiative (USBJI) is an outgrowth of the US Bone and Joint Decade 2002-2011, and part of the Global Alliance for Musculoskeletal Health, formerly called The Bone and Joint Decade (BJD), a global campaign to improve quality of life for people with musculoskeletal conditions and to advance understanding and treatment of these conditions through research, prevention, and education.¹⁸ The USBJI aims to raise the awareness of the increasing societal impact of musculoskeletal injuries and disorders; empower patients to participate in decisions about their care; increase funding for prevention activities and research; and promote cost-effective prevention and treatment of musculoskeletal injuries and disorders.

The Bone and Joint Decade was formally launched at the World Health Organization (WHO) headquarters in Geneva, Switzerland, on January 13, 2000, following its endorsement by the United Nations on November 30, 1999.¹⁹ In 2010 the global *Bone and Joint Decade* (BJD) was extended and in 2015 changed its name to the Global Alliance for Musculoskeletal Health (G-MUSC).²⁰

The **United States Bone and Joint Initiative** is the US National Alliance of the Global Alliance for Musculoskeletal Health. Member organizations of the USBJI are engaged in developing new research and education programs that will bring about significant advances in the knowledge, diagnosis, and treatment of musculoskeletal conditions, and increase the number of resources at the disposal of the healthcare profession and the public at large.

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