



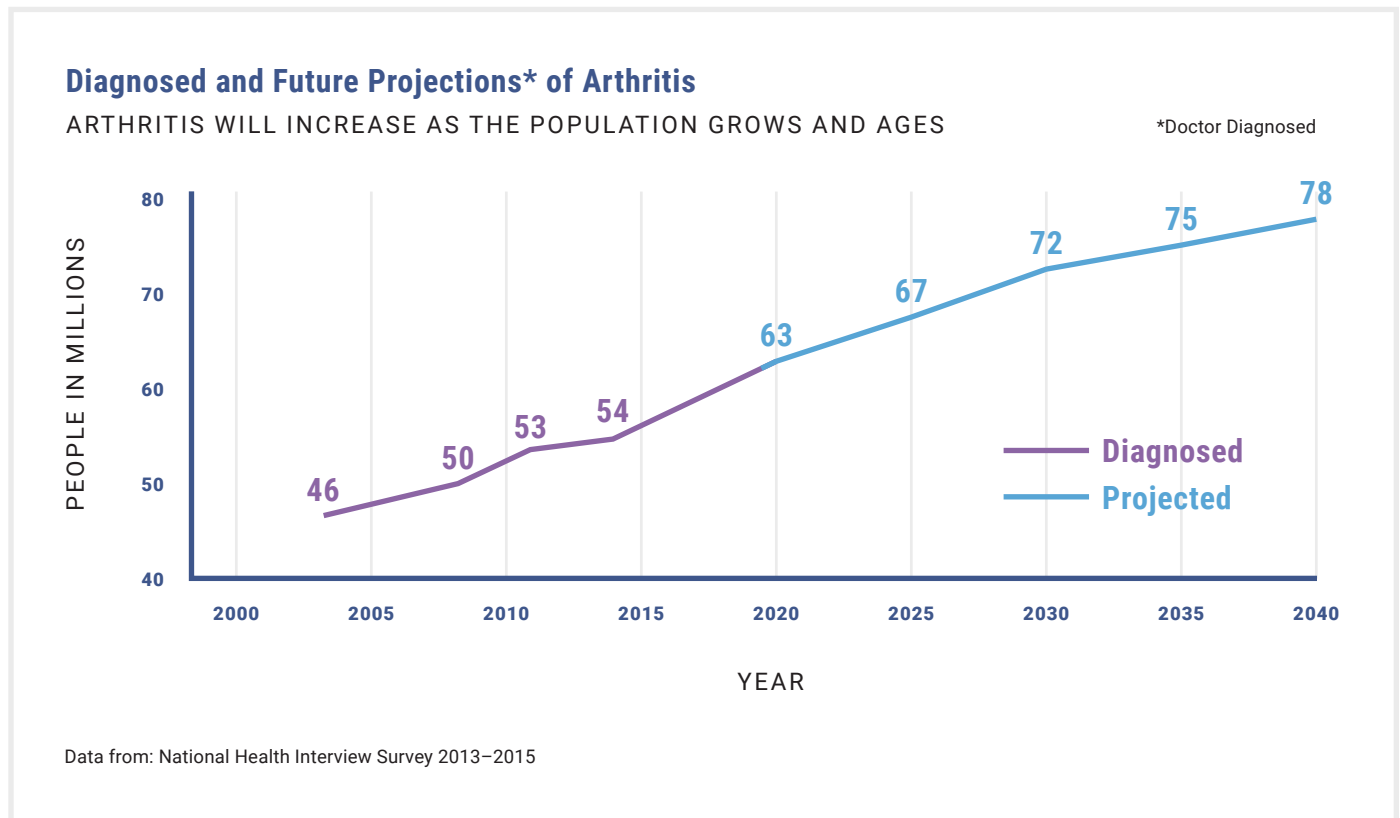
OA Prevalence & Burden

Osteoarthritis Prevention and
Management in Primary Care

OA Prevalence & Burden

Arthritis is a serious health crisis. CDC estimates that 1 in 4 (or 54.4 million) US adults have some form of arthritis, a figure that is projected to reach 78 million by the year 2040.¹ **While there are estimated to be more than 100 types of arthritis, OA is the most common form of arthritis, affecting 32.5 million US adults.**² The high prevalence of arthritis manifests in enormous societal and personal costs.

FIGURE 1³



Source: Centers for Disease Control and Prevention. 2003 National Health Interview Survey; 2030 Census projected population. Available at https://www.cdc.gov/arthritis/data_statistics/national-statistics.html

PREVALENCE BY AGE, GENDER, AND ETHNICITY

Age

- 43% of people with OA are 65 or older and 88% of people with OA are 45 or older.²
- Annual incidence of knee OA is highest between 55 and 64 years old.⁶
- More than half of individuals with symptomatic knee OA are younger than 65.⁶

Gender

- 62% of individuals with OA are women.²
- Among people younger than 45, OA is more common among men; above age 45, OA is more common in women.⁶

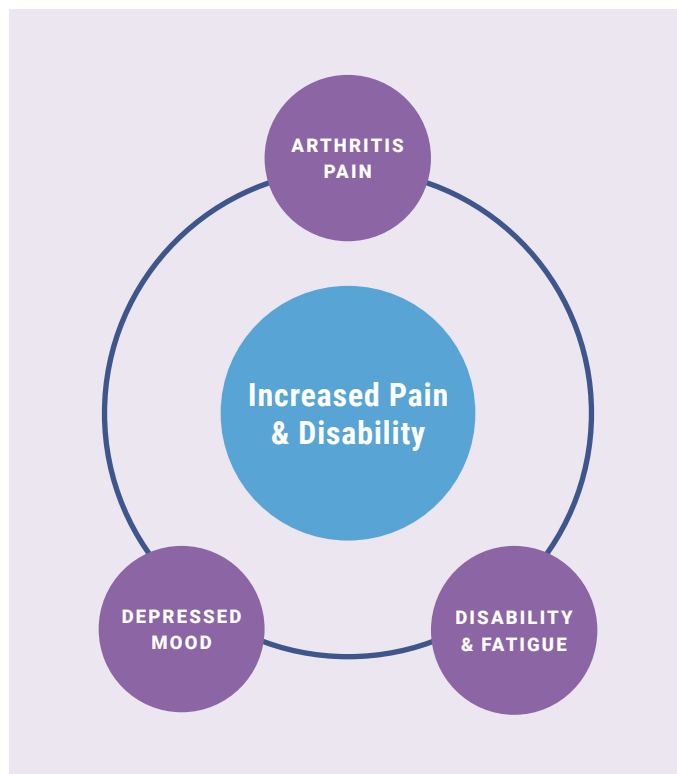
Ethnicity

- 78% of individuals with OA are non-Hispanic whites.²
- However, within their own race/ethnic groups, non-Hispanic black and Hispanic populations have higher rates of OA than non-Hispanic whites.²
- American Indians report among the highest prevalence of arthritis of any population in the US.¹⁰
- Documented musculoskeletal health disparities persist, with arthritis having a greater impact on people of color than Whites.^{1,12,13}
- See Patient Burden/Activity & Work Limitations below for more details on racial disparities in OA.

PATIENT BURDEN

PAIN

- People with OA experience greater pain, fatigue, levels of disability, and activity limitations than people of their comparable age.⁴
- While arthritis pain is extremely individualized, severe joint pain is not uncommon. Recent estimates suggest that one-fourth of adults with arthritis experience severe joint pain, characterized by a score of 7 or greater on the 0–10 pain scale.⁵
- Severe joint pain occurs more often in middle-aged adults (45–64), women, non-Hispanic blacks, Hispanics, those with a disability, and in people with the following concurrent health conditions: fair/poor health, obesity, diabetes, heart disease, and serious psychological distress.⁵



- 99% of all hip and knee replacements are done to address pain and functional limitations.¹
- Over 50% of people with knee OA will have a total knee replacement done during their lifetime.⁶

Pain—both chronic and episodic—can result in depression and other mood disturbances, functional disabilities, and work limitations.

DEPRESSION AND SOCIAL ISOLATION

- One-third of people with arthritis over the age of 45 suffer from depression or anxiety.¹
- People with OA are likely at greater risk for depression because of increased disability and fatigue associated with their pain.⁷
- People with doctor-diagnosed arthritis report more days in the last month of poor mental health (5.4 days vs 2.8 days for people without arthritis).²
- Social isolation and loneliness are often evident among people with OA and other chronic musculoskeletal diseases. There appears to be a bi-directional relationship with pain impacting social isolation and loneliness, and vice versa.⁸

ACTIVITY LIMITATIONS

- Almost 44% of people with arthritis have “arthritis-attributable activity limitations,” defined as self-reported limitations in “usual activities” because of arthritis symptoms.¹
- By 2040, 11.4% of all adults will experience arthritis-attributable activity limitations.⁹
- Blacks with knee OA have greater prevalence, severity, progression, and worse pain and function compared with Whites.¹⁴
- Over 60% of American Indians report AAALs and mobility restrictions.^{1,15,17}

WORK LIMITATIONS

- 30% of adults with arthritis find stooping, bending, or kneeling very difficult.
- 20% cannot or find it very difficult to walk 3 blocks or push/pull large objects.
- People with OA (working age) experience lower employment rates than those without OA. Research suggests that arthritis-related activity limitations might contribute to their lack of employment.
- Latinos are more likely to report greater pain, functional limitations, and work limitations than non-Latino Whites.^{12,15,16}

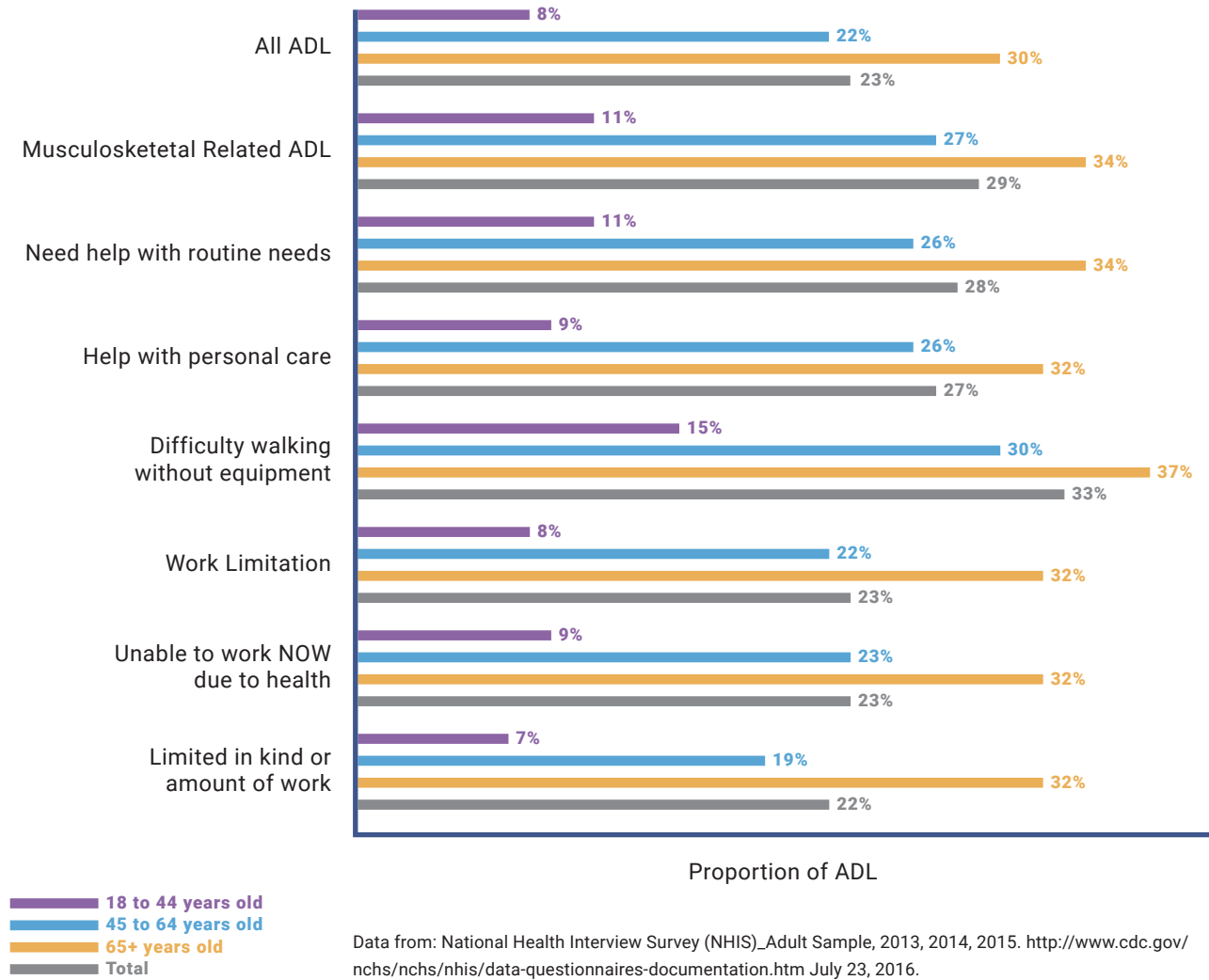
ECONOMIC BURDEN

The overall economic burden associated with OA in the US is estimated at \$136.8 billion annually.² This figure has more than doubled over the last decade. For perspective, the annual economic cost of arthritis surpasses that of tobacco-related health effects, cancer, and diabetes. Direct medical costs reach \$65 billion annually.²

- Because of OA, an estimated 1 million knee and hip replacements are completed each year.¹
- In 2013, OA was the 2nd most costly health condition treated in hospitals in the US.¹⁰
- In 2013, total lost wages due to OA were \$164 billion, or \$4,040 less per adult with OA compared to those without OA.¹⁰
- Increased absenteeism among workers with OA is fairly well documented, with workers with OA missing an average of 2 more days per year than workers without OA. Presenteeism, or loss of productivity while on the job, is less easy to calculate but is no less costly for workers or businesses.¹¹

FIGURE 2²

Proportion of Adults Age 18 and Over with Self-Reported Doctor-Diagnosed Arthritis Reporting Limitations of Daily Living (ADL) and Activity Attributed to Arthritis, by Age, United States 2013–2015



Source: The Burden of Musculoskeletal Diseases in the United States (BMUS), 2018. Fourth Edition. Available at <http://www.boneandjointburden.org>.

THE BURDEN OF OSTEOARTHRITIS

Osteoarthritis: A Serious Disease

242 million people worldwide have symptomatic and activity-limiting OA of the hip and/or knee.

OA pain affects **sleep quality, mood**, and participating in **everyday life**.

The Cost of Osteoarthritis



Indirect costs are **\$17 billion** (i.e., lost earnings).

Direct costs are **\$65 billion** (i.e., medical expenditures).

3rd most rapidly rising condition associated with disability, just behind diabetes and dementia.

OA significantly limits a person's ability to self-manage other conditions, such as **diabetes and hypertension**.

A third of people with OA have **5 of more chronic conditions**.

OA increases the risk of developing heart disease by **50%**.

Reduced levels of physical activity, comorbid conditions, and adverse effects of medications lead to a **55% increase in all cause mortality**.

This graphic can be downloaded as a single infographic on the Toolkit website.

Data Sources: Osteoarthritis Research Society International. Osteoarthritis: A Serious Disease, submitted to the U.S. Food and Drug Administration. 2016. https://www.oarsi.org/sites/default/files/docs/2016/oarsi_white_paper_oa_serious_disease_121416_1.pdf. Accessed March 27, 2019.

United States Bone and Joint Initiative. The Burden of Musculoskeletal Diseases in the United States (BMUS). In: In. Fourth ed. Rosemont, IL. 2018: Available at <https://www.boneandjointburden.org/fourth-edition>. Accessed June 12, 2019.

ADDITIONAL READING

Hunter DJ, Bierma-Zeinstra S. Osteoarthritis. Lancet. 2019;393(10182):1745–1759.

Arthritis Foundation. Arthritis by the Numbers. In: Atlanta, GA: Arthritis Foundation; 2019: <https://www.arthritis.org/Documents/Sections/About-Arthritis/arthritis-facts-stats-figures.pdf>.

United States Bone and Joint Initiative. The Burden of Musculoskeletal Diseases in the United States (BMUS). In: In. Fourth ed. Rosemont, IL. 2018: Available at <https://www.boneandjointburden.org/fourth-edition>.

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REFERENCES

1. Barbour KE, Helmick CG, Boring M, Brady TJ. Vital Signs: Prevalence of Doctor-Diagnosed Arthritis and Arthritis-Attributable Activity Limitation—United States, 2013–2015. *MMWR Morb Mortal Wkly Rep.* 2017;66(9):246-253.
2. United States Bone and Joint Initiative. The Burden of Musculoskeletal Diseases in the United States (BMUS). In: In. Fourth ed. Rosemont, IL. 2018: Available at <https://www.boneandjointburden.org/fourth-edition>. Accessed June 12, 2019.
3. Centers for Disease Control and Prevention. 2003 National Health Interview Survey; 2030 Census projected population. Available at https://www.cdc.gov/arthritis/data_statistics/national-statistics.html. Accessed January 19, 2019.
4. Osteoarthritis Research Society International. Osteoarthritis: A Serious Disease, submitted to the U.S. Food and Drug Administration. 2016. https://www.oarsi.org/sites/default/files/docs/2016/oarsi_white_paper_oa_serious_disease_121416_1.pdf. Accessed March 27, 2019.
5. Barbour KE, Boring M, Helmick CG, Murphy LB, Qin J. Prevalence of Severe Joint Pain Among Adults with Doctor-Diagnosed Arthritis—United States, 2002–2014. *MMWR Morb Mortal Wkly Rep.* 2016;65(39):1052-1056.
6. Arthritis Foundation. Arthritis by the Numbers. In: Atlanta, GA: Arthritis Foundation; 2019: <https://www.arthritis.org/Documents/Sections/About-Arthritis/arthritis-facts-stats-figures.pdf>. Accessed April 5, 2019.
7. Hawker GA, Gignac MA, Badley E, et al. A longitudinal study to explain the pain-depression link in older adults with osteoarthritis. *Arthritis Care Res (Hoboken)*. 2011;63(10):1382–1390.
8. Smith TO, Dainty JR, MacGregor A. Trajectory of social isolation following hip fracture: an analysis of the English Longitudinal Study of Ageing (ELSA) cohort. *Age Ageing*. 2018;47(1):107–112.
9. Hootman JM, Helmick CG, Barbour KE, Theis KA, Boring MA. Updated Projected Prevalence of Self-Reported Doctor-Diagnosed Arthritis and Arthritis-Attributable Activity Limitation Among US Adults, 2015-2040. *Arthritis Rheumatol.* 2016;68(7):1582–1587.
10. Centers for Disease Control and Prevention. Arthritis Cost Statistics Available at https://www.cdc.gov/arthritis/data_statistics/cost.htm. Published 2018. Accessed January 19, 2019.
11. Menon J. Osteoarthritis related absenteeism and activity limitations. *Osteoarthritis and Cartilage*. 2015;23:A343.
12. Bolen J, Schieb L, Hootman JM, et al. Differences in the prevalence and severity of arthritis among racial/ethnic groups in the United States, National Health Interview Survey, 2002, 2003, and 2006. *Prev Chronic Dis*. 2010;7(3):A64.
13. Huff T, Scott M. Musculoskeletal Health Disparities in America. *MOJ Orthopedics & Rheumatology*. 2017;7(6):00290.
14. Callahan LF, Cleveland RJ, Allen KD, Golightly Y. Racial/Ethnic, Socioeconomic, and Geographic Disparities in the Epidemiology of Knee and Hip Osteoarthritis. *Rheumatic Disease Clinics of North America*. 2021;47(1):1-20.
15. Theis KA, Murphy LB, Guglielmo D, et al. Prevalence of Arthritis and Arthritis-Attributable Activity Limitation – United States, 2016-2018. *MMWR Morb Mortal Wkly Rep.* 2021;70(40):1401-1407.
16. Guglielmo D, Murphy L, Boring M, et al. State-Specific Severe Joint Pain and Physical Inactivity Among Adults with Arthritis – United States, 2017. *MMWR Morb Mortal Wkly Rep* 2019. 2017;68:381-387. DOI: <http://dx.doi.org/10.15585/mmwr.mm6817a2>.
17. Ferucci ED, Schumacher MC, Lanier AP, et al. Arthritis prevalence and associations in American Indian and Alaska Native people. *Arthritis Rheum.* 2008;59(8):1128-1136.