

Overview of the Impact of Arthritis and Other Chronic Diseases

This fact sheet is part of a series for health education specialists and other professionals to enhance their understanding and dissemination of evidence-based lifestyle management programs related to arthritis; provide ideas for reaching populations that suffer disproportionately due to arthritis; and share lessons learned during the COVID-19 pandemic on alternative ways to effectively disseminate evidence-based lifestyle management programs to enhance the quality of life of individuals living with arthritis.

Arthritis and other chronic diseases impart a high personal and financial toll on society. Overall, nearly 60% of adults in the U.S. are affected by at least one chronic disease, including 4 in 5 adults 65 years and older. Nearly 4 in 10 adults have two or more chronic diseases (National Center for Chronic Disease Prevention and Health Promotion, 2022^a), including nearly 70% of older adults (National Council on Aging, 2021). Chronic conditions account for more than \$1.65 trillion, or 75%, of health care costs annually (National Center for Chronic Disease Prevention and Health promotion, 2022^b). Arthritis is a significant driver of health care costs—especially osteoarthritis, which is among the top three contributors to the cost of chronic conditions (Murphy et al., 2018).

The Centers for Disease Control and Prevention (CDC) estimate that nearly 58.5 million—or one quarter of U.S. adults—live with arthritis (Theis et al., 2021), at a cost of more than \$300 billion each year (National Center for Chronic Disease Prevention and Health Promotion, 2022^b). This burden is high among working-age adults, as

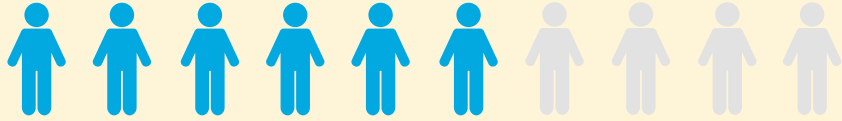


**Health
Disparity
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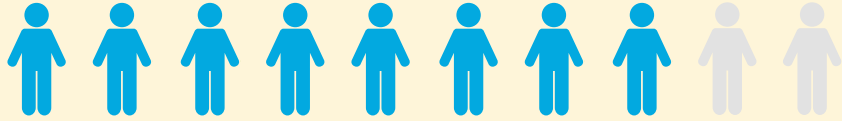
While the prevalence of arthritis diagnosis among white, non-Hispanic populations is similar to diagnosis among African American populations, arthritis-related activity limitations are 20 percent higher among African Americans.



Nearly **60%** of US adults are affected by chronic disease



Nearly **80%** of US adults 65+ are affected by chronic disease



more than half of adults in the U.S. (57.3%) with arthritis are between 18 and 64 years old. Further, arthritis is a leading cause of disability and work-related disability among adults (Theis et al., 2018). Falls among older adults due to conditions such as osteoarthritis cost more than \$50 billion annually (Bohl et al., 2010).

Health Disparities and Arthritis

Arthritis and other chronic diseases disproportionately affect certain populations (Ndugga & Artiga, 2021). These health disparities or differences in health care access and outcomes result from, or are closely connected to, broader socioeconomic or environmental inequities. For example, the prevalence of arthritis diagnoses is substantially higher among adults unable to work or disabled, those of mid- to low-income, and those reporting serious psychological distress than among other populations with arthritis (Theis, et al., 2021).

Chronic conditions account for more than 75% of health care costs annually

Although the prevalence of arthritis is 25% lower in Hispanic/Latino populations than in White, non-Hispanic populations, activity limitations in Hispanic/Latino populations are still higher than White, non-Hispanic individuals (Centers for Disease Control and Prevention, 2022). These disparities are even more striking among American Indian/Alaska Native populations, which have the 2nd highest arthritis prevalence and highest arthritis-attributable activity limitations (Theis et al., 2021).



Lifestyle management programs promote physical activity and self-management education and are informed by evidence on what's effective, replicable, scalable, and sustainable.

Arthritis health disparities are also prevalent among other underserved/underrepresented communities. Older lesbian and bisexual women have higher rates of arthritis compared to straight women (Fredriksen-Goldsen et al., 2017). Nearly 1 in 3 adults in rural areas have arthritis compared to 1 in 4 nationally, plus higher numbers of people report arthritis-related activity limitations (Boring et al., 2017). Furthermore, more than half of low-income adults and two thirds of those living near the poverty line report that arthritis limits their daily activities, including their ability to work, compared with about 30%–40% of wealthier individuals (Kuehn, 2021).

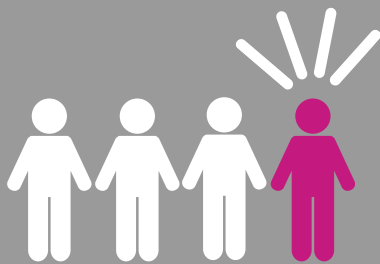
ARTHRITIS RISK FACTORS

- ❑ Rural vs Urban
- ❑ Lesbian/bisexual
- ❑ Low income

Fortunately, the impact of arthritis and other disparities is not inevitable. Prevention and treatment strategies are available for individuals and communities to address these health disparities, reduce disability, decrease pain, and improve quality of life.



The CDC and Administration for Community Living (ACL) promote multiple recognized, evidence-based programs (EBPs) that are proven to improve the quality of life of adults with arthritis. These programs, also called lifestyle management programs, promote physical activity and self-management education and are informed by evidence on what's effective, replicable, scalable, and sustainable. The programs may be offered by health departments, health care facilities, senior centers, or community-based organizations in various formats. For a complete list of CDC-recognized programs, see the [Osteoarthritis Action Alliance \(2022\) website](#). A listing of ACL-recognized programs is available at the [National Council on Aging \(2022\) website](#).



One-quarter of U.S. adults live with arthritis.

Promoting Health Equity With Evidence-Based Interventions—Lessons From COVID-19 and Remotely Delivered Programs

During the COVID-19 pandemic, the CDC and ACL recognized that some evidence-based programs—including physical activity and self-management education programs—were adapted from in-person to remote delivery. Some programs were modified to be delivered online, by telephone, and by mail.

Remotely delivered programs can be effective in reaching many underserved populations, including those experiencing health disparities (e.g., those living in rural areas, places where

transportation is an issue, or locations where community-based delivery is not available or preferred.) Evaluations are underway regarding the extent to which remotely delivered EBPs can also help adults begin or maintain health-enhancing behaviors to prevent and manage chronic diseases, including arthritis.

Some EBP providers who adapted their programs during the pandemic have shared insights on how to better reach underserved populations and promote health equity. Some recommendations for program planners include the following:

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- Identify and address potential barriers to program access, including cost and technology limitations, and partner with existing community-based organizations to reduce barriers to entry and participation.
- Include populations of focus in program development, dissemination, and evaluation, and ensure that program content is culturally appropriate.
- Ensure that program instructors are specifically trained to effectively deliver programs via a remote setting—including safety considerations.
- Consider incorporating caregivers and other family members into remotely delivered programs.
- Work with existing trusted stakeholders—such as employers and health care providers—to enhance program availability.

Remote Delivered Programs

To expand the reach of EBPs for people with arthritis and other chronic conditions, a variety of programs have been adapted for remote delivery. These programs are featured below, along with important considerations and recommendations for recruiting and engaging underserved populations. (Note: These programs are also offered in their traditional face-to-face or group versions. A complete listing of all EBPs is available from [NCOA](#).)

Walk With Ease (WWE)

The Arthritis Foundation's Walk With Ease (WWE) program can be offered in a group or individual setting that combines self-paced walks with discussions about health-related topics. WWE can be offered as a self-guided course or in a community setting, and it focuses on physical activity, which is a highly effective way to manage arthritis pain.



A recent review found that online efforts to disseminate the WWE program had low engagement with minority and rural populations. Strategies were developed to reach underserved populations more effectively, including the following:

- Developing an app-based alternative-delivery model for participants with limited access to technology and broadband.
- Expanding engagement among Hispanic populations through the Camine Con Gusto program, which is a culturally appropriate, Spanish-language version of the WWE walking program.
- Creating tools, such as videos and infographics to engage additional stakeholders—such as employers and health care providers—to connect with hard-to-reach populations more effectively.

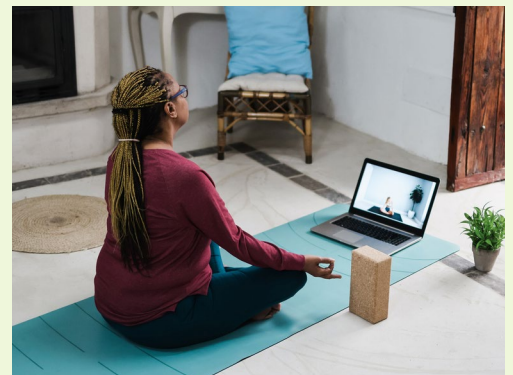
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Fit & Strong!

Fit & Strong! is an 8-week, community-based physical activity program. It uses flexibility and strength training, aerobic walking, and health education to promote behavior change in people with arthritis. Developed at the University of Illinois at Chicago, the

community-based program has been delivered among underserved, disadvantaged minority populations on the south and west sides of Chicago. Because promoting equity has been an inherent component of the Fit & Strong! mission, the following program components have been incorporated to reach underserved populations more effectively:

- Ensuring a low barrier to entry to participate in online/remotely delivered programs. Any participant with an Internet-capable device can access programming at no cost.
- Partnering with other community-based organizations, such as Area Agencies on Aging, to disseminate internet-capable devices, such as tablets, to those who do not have them.
- Soliciting and incorporating feedback from at-risk populations. For example, in response to requests from African American females, a weight-management component was added to the program. Fit & Strong! Plus is the resulting new program that was developed to address both arthritis and weight management.



Additional insights about digitally reaching underserved populations with Fit & Strong! is available from a SOPHE (2021) webinar, *COVID-19 and Evidence-Based Programs: Digitally Reaching Underserved Populations*.

Enhance®Fitness

Project Enhance's Enhance®Fitness is a low-cost, evidence-based group exercise and falls-prevention program that includes arthritis-appropriate exercises. Participants can join or quit at any time. While Enhance®Fitness partners with Young Men's Christian Association clubs to offer free programs to their members, a telephone adaptation of the program has proven particularly effective for people with disabilities who may not be aware of programs for older adults. Specifically, Enhance®Fitness has incorporated these strategies to promote health equity:

- Developing an inclusion guide to inform Enhance®Fitness instructors so they can better integrate and administer programs for people with disabilities.
- Focusing on incorporating caregivers and others into EnhanceFitness sessions.
- Partnering with rural health care providers to promote and deliver Enhance®Fitness remotely during routine care.

Additional insights about digitally reaching underserved populations with Enhance®Fitness is available from the Society for Public Health Education (SOPHE) (2021) webinar, *COVID-19 and Evidence-Based Programs: Digitally Reaching Underserved Populations*.



Effective strategies included creating tools, such as videos and infographics to engage additional stakeholders—such as employers and health care providers—to connect with hard-to-reach populations more effectively.

Additional Resources

More information about these and other remotely delivered programs to assist people with arthritis and to reach underserved populations, is available from the following sources:

Centers for Disease Control and Prevention—[Remote Delivery of Evidence-Based Programs for Chronic Disease](#)

Administration for Community Living—[Aging and Disability Evidence-Based Programs and Practices](#)

National Council on Aging—[Resource Guide: Remote Delivery of Evidence-based Programs](#)

OA Action Alliance - [Arthritis-Appropriate, Evidence-Based Interventions \(AAEBI\) - Osteoarthritis Action Alliance \(unc.edu\)](#)



Total knee replacement (TKA) is one of the most common major surgical procedures performed in the US, and is usually undertaken due to arthritis. Significant racial disparities in utilizing this procedure are well established — but continue to increase, for a variety of reasons.

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