Arthritis among Montana adults, 2021

SURVEILLANCE REPORT

Quick Facts

- Arth (joint) + it is (inflammation) = Inflammation of the joints
- There are over 100 different types of arthritis
- More than 1 in 4 Montana adults (28%) have been diagnosed with arthritis or an associated condition
- Arthritis does not discriminate – people of all ages, gender, and race can be affected by arthritis, including children
- Arthritis is most common among older adults and adults with disability
- Regular, low impact physical activity is the best way to manage arthritis pain and improve physical function

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Background

Arthritis is a general term for more than 100 diseases and conditions that affect the joints, tissues around the joints, and other connective tissue. The most common form of arthritis in the United States is osteoarthritis. Other frequent forms of arthritis include rheumatoid arthritis, gout, and fibromyalgia. Arthritis symptoms vary by disease or condition but commonly include pain, stiffness, and swelling in and around affected joints. Some types of arthritis, like rheumatoid arthritis, can also affect the body's internal organs and immune system.

It is estimated that 1 in 4 adults (25.2%) in the United States have been diagnosed with arthritis.[1] Arthritis limits the ability of millions of Americans to perform daily activities and is the leading cause of disability in the United States.[2,3] Annual lost wages attributed to arthritis have been estimated nationally at $164 billion[4], with 40% of working age Americans with arthritis reporting that it affects their ability to work or the type or amount of work they can do.[1]

Some people have an increased risk for developing arthritis. While risk factors such as genetics, increasing age, and sex cannot be modified, some risk factors can be changed. Maintaining a healthy weight, protecting joints from injury and infection, and not smoking can all decrease the risk of getting some types of arthritis.

There is no known cure for arthritis. However, there are actions that can be taken to reduce arthritis pain, improve daily function, and prevent or delay disability. Participating in a self-management education workshop, being physically active, maintaining a healthy weight, protecting joints from excess stress, and talking with a health care provider are all ways to manage arthritis and improve quality of life.

This report summarizes the prevalence of arthritis, activity limitations due to arthritis or joint symptoms, and moderate or severe joint pain due to arthritis among Montana adults by demographic characteristics and risk factors.

Methods

Data in this report are from the 2021 Montana Behavioral Risk Factor Surveillance System (MT BRFSS). MT BRFSS is a telephone survey of non-institutionalized adults living in Montana using randomly selected landline and cell phone numbers. Survey data are weighted to be representative of the Montana adult population based on state geographic region of residence, age, sex, ethnicity, marital status, education level, home ownership, and type of phone ownership.[3] There are some limitations to BRFSS data. Since it is a telephone survey, adults without a cell phone or living in households without a landline are not included in the sample. Adults who live in a group setting, such as a nursing home, in military housing, or prisons, are also not included in the sample. Data are self-reported and subject to recall bias and social desirability bias.

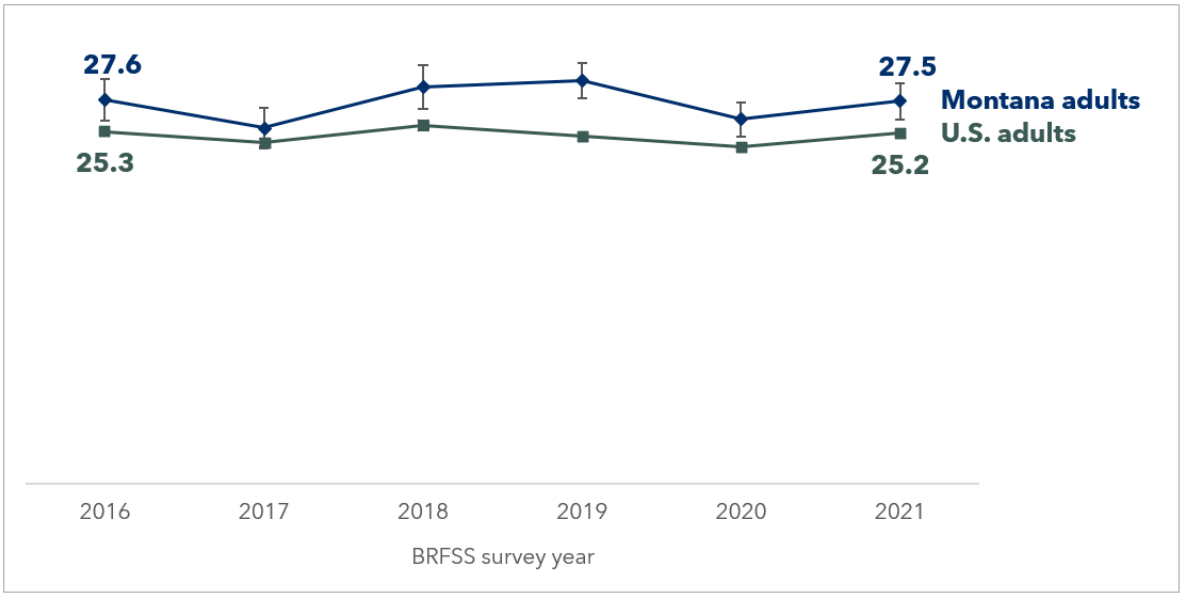
Response rates for BRFSS are calculated using standards set by the American Association for Public Opinion Research (AAPOR) Response Rate Formula #4 (https://aapor.org/wp-content/uploads/2022/11/Standard-Definitions20169theditionfinal.pdf). The response rate is the number of respondents who completed the survey as a proportion of all eligible and likely-eligible people. The median survey response rate for all states, territories and Washington, DC, in 2021 was 44.0 and ranged from 23.5 to 60.5.[5] The response rate for Montana was 47.5.[5] For detailed information, see the BRFSS Summary Data Quality Report.[5]

Arthritis among Montana Adults

Arthritis is common among Montana adults, with more than 1 in 4 adults (28%, estimated 237,000) reporting being diagnosed with arthritis or an associated condition. The prevalence of arthritis among Montana adults is significantly higher than the U.S. adult prevalence (Figure 1).

FIGURE 1.

Montana adults have significantly higher prevalence of arthritis than U.S. adults. (BRFSS, 2016-2021)



Some groups of Montana adults have significantly higher prevalence of arthritis than others (Table 1).

TABLE 1.

Prevalence of arthritis, arthritis-related activity limitations, and moderate or severe joint pain from arthritis among Montana adults by selected demographics. (MT BRFSS, 2021)

Demographics	ALL ADULTS IN MONTANA		ADULTS IN MONTANA WITH ARTHRITIS			
	Prevalence of arthritis[a]		Activity limitation due to arthritis[b]		Moderate or severe joint pain on average[c]	
	%	95% CI	%	95% CI	%	95% CI
Overall prevalence	27.5%	26.2, 28.8	41.2%	38.6, 43.9	57.7%	55.0, 60.4
Sex						
Male	24.5%	22.8, 26.3	36.9%	33.0, 40.7	53.7%	49.7, 57.6
Female	**30.5%**	28.5, 32.4	**44.7%**	41.1, 48.3	**60.9%**	57.3, 64.5
Age (years)						
18-44	10.2%	8.5, 11.8	43.9%	35.4, 52.4	64.0%	56.1, 72.0
45-64	**34.9%**	32.4, 37.4	42.7%	38.3, 47.1	57.3%	52.9, 61.8
65 and older	**47.6%**	45.2, 50.0	39.0%	35.5, 42.4	55.7%	52.2, 59.2
Race and ethnicity						
White, non-Hispanic	28.1%	26.6, 29.5	40.4%	37.5, 43.2	56.7%	53.8, 59.5
American Indian or Alaskan Native, non-Hispanic	27.2%	21.8, 32.6	**55.8%**	45.2, 66.4	**73.7%**	65.0, 82.4
All other races, Hispanic or non-Hispanic	19.0%	13.9, 24.0	34.2%	20.7, 47.7	54.7%	38.4, 71.0
Veteran status						
Veteran	**37.9%**	34.1, 41.6	44.5%	38.0, 50.9	60.9%	54.9, 66.8
Not a veteran	26.0%	24.6, 27.4	40.6%	37.7, 43.6	57.1%	54.1, 60.1
Disability status[d]						
Has a disability	**44.5%**	41.6, 47.3	**60.7%**	56.9, 64.6	**74.2%**	70.8, 77.6
Does not have a disability	20.7%	19.3, 22.1	23.9%	20.6, 27.2	43.3%	39.5, 47.1
Educational Attainment						
Did not graduate high school	27.1%	20.7, 33.6	48.4%	34.8, 62.1	**75.4%**	62.7, 88.0
Graduated high school or GED	29.5%	26.9, 32.2	40.8%	35.6, 46.0	64.5%	59.5, 69.4
Some college or technical school	27.5%	25.2, 29.7	41.8%	37.2, 46.4	57.8%	53.1, 62.5
Graduated college or technical school	26.0%	24.1, 27.9	39.2%	35.1, 43.3	45.8%	41.6, 50.0
Annual household income						
Less than $25,000	**36.9%**	32.9, 40.8	**56.1%**	49.6, 62.5	**73.6%**	68.2, 79.0
$25,000 to less than $50,000	28.4%	25.7, 31.1	43.1%	37.8, 48.3	61.4%	56.2, 66.5
$50,000 to less than $100,000	26.7%	24.3, 29.1	31.4%	26.6, 36.2	52.3%	47.0, 57.5
$100,000 or more	20.2%	17.5, 22.9	30.3%	23.4, 37.2	37.4%	30.6, 44.1
Smoking status						
Current smoker	**33.3%**	29.3, 37.4	**53.6%**	46.3, 60.9	**71.3%**	64.6, 77.9
Former or never smoker	26.7%	25.3, 28.1	39.0%	36.1, 41.9	55.1%	52.2, 58.0
Body mass index[e]						
Obese	**36.3%**	33.5, 39.0	**46.7%**	42.2, 51.2	**63.6%**	59.3, 67.9
Not obese	23.8%	22.3, 25.4	38.1%	34.6, 41.6	54.3%	50.7, 57.9
Physical activity or exercise, past 30 days						
No physical activity or exercise	**38.3%**	35.0, 41.5	**49.3%**	44.3, 54.3	**67.7%**	63.0, 72.4
Did physical activity or exercise	24.6%	23.2, 26.0	37.8%	34.6, 40.9	53.5%	50.3, 56.8

Prevalence data is expressed as the weighted percent of adults with the listed demographic or characteristic who have the column outcome of interest. Prevalence in bold type represents significantly higher prevalence using a p-value cut-off of .01. The weighting methodology used in this analysis is described in the 2021 BRFSS survey documentation. Responses coded as "don't know", "unsure", "missing", or "refused" were excluded from analysis.

[a] Respondents who reported ever being told by a health professional that they have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

[b] Respondents who have arthritis and reported being limited in any way in their usual activities because of arthritis or joint symptoms.

[c] Respondents who have arthritis and reported average joint pain from arthritis during the past 30 days as 4-6 (moderate) or 7-10 (severe) using a scale of 0 to 10.

[d] Respondents who responded "yes" to any of the six American Community Survey (ACS) disability questions are classified as having a disability. Respondents who responded "no" to all six ACS disability questions are classified as not having a disability.

[e] Body mass index (BMI) is classified as not obese if BMI is less than 3000 and as obese if BMI is 3000 or more.

Age

Although arthritis is not a normal part of aging, the prevalence of arthritis increases significantly with age and is highest among older adults. Almost half (48%) of Montana adults aged 65 years and older have been diagnosed with arthritis compared with 1 in 5 (20%) working age adults (aged 18-64 years).

When examining the frequency of adults with arthritis across Montana, there are more adults with arthritis who are working age (estimated 130,700) than who are aged 65 years and older (estimated 106,600). This is because of differences in the population size of these two age groups.

Sex

Arthritis is significantly more common among women. Almost 1 in 3 (31%) adult women in Montana have been diagnosed with arthritis compared with 1 in 4 (25%) adult men. The significant increase in prevalence among adult women in Montana is observed beginning around age 45.

Disability

Arthritis is significantly more common among adults with disability. Nearly half (45%) of Montana adults with disability have been diagnosed with arthritis compared with 1 in 5 (21%) adults with no disability. The prevalence of arthritis is also significantly higher among each of the six American Community Survey disability types – hearing, visual, cognitive, ambulatory, self-care, and independent living – when comparing adults who do and do not have that disability type.

Arthritis is a major cause of disability[2,3] and the prevalence of arthritis among adults with disability includes adults whose disability is caused by arthritis. Nonetheless, chronic pain in muscle and joints is the most reported secondary condition among adults with disability[6] and people with disabilities may have higher risk of developing some types of arthritis as a secondary condition.

Geographic distribution

Adults who live in rural areas of the state have significantly higher prevalence of arthritis (31%) compared with adults who live in more populated areas (26%).

Veterans

Arthritis is significantly more common among veterans compared with non-veterans. Specifically, working age veterans (29%) have significantly higher prevalence of arthritis compared with working age non-veterans (19%) (not shown). There is no difference in the prevalence of arthritis among older adults based upon veteran status.

Health disparities

There are income disparities in the prevalence of arthritis. Montana adults with annual household incomes less than $25,000 have significantly higher prevalence of arthritis (37%) compared with all other income levels (20-28%). Conversely, Montana adults with annual household incomes of $100,000 or more have significantly lower prevalence of arthritis (20%) compared with all other income levels (27-37%).

Modifiable risk factors

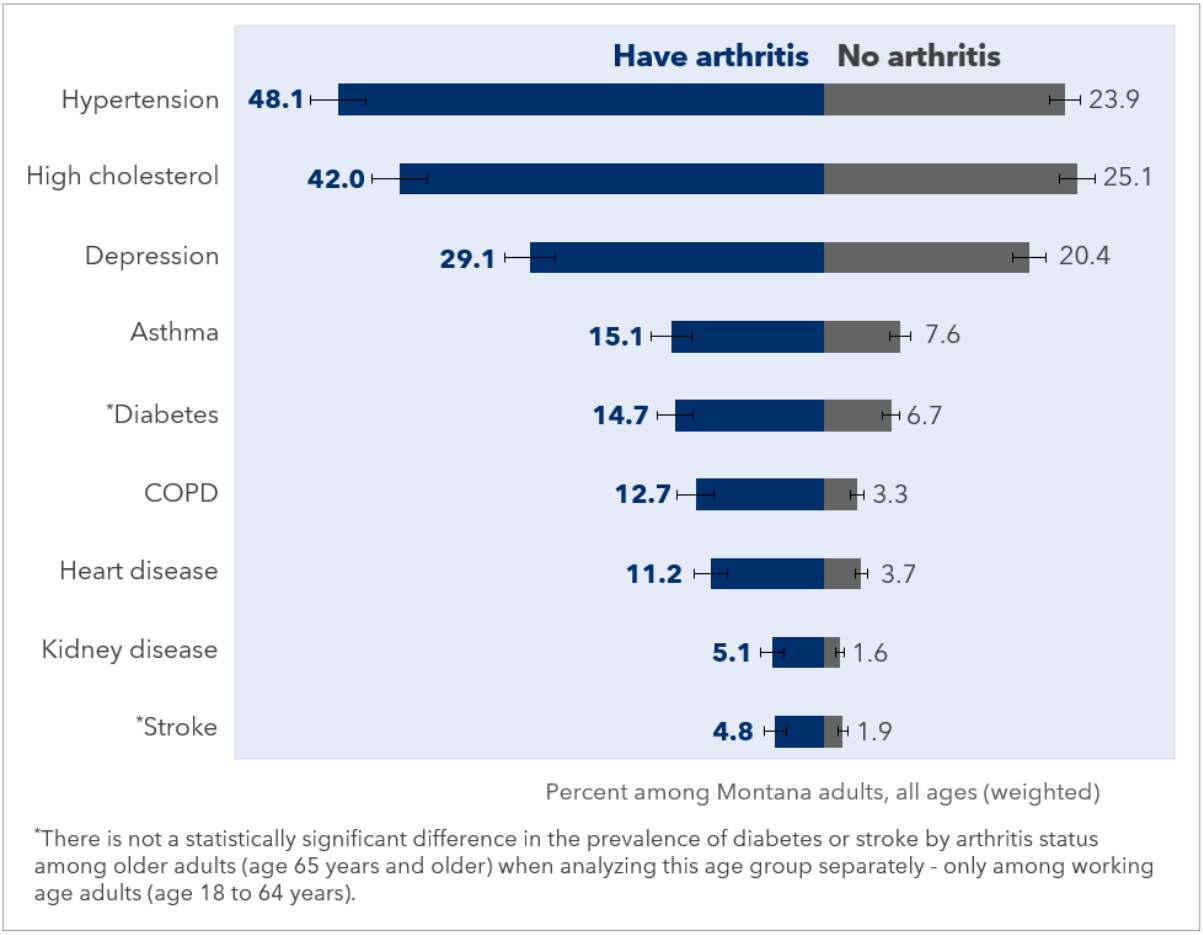
Montana adults who smoke cigarettes (33%), do not participate in physical activity or exercise outside of work (38%), or have obesity (36%) have significantly higher prevalence of arthritis compared with adults who do not have those risk factors (27%, 25%, and 24%, respectively).

Multimorbidity and Arthritis

In Montana, 4 in 5 adults with arthritis (81%) have at least one additional chronic health condition.[1] Having two or more chronic conditions increases the risk of poor day-to-day functioning, hospitalization, and death compared with having only one chronic condition.[7] The most frequently reported co-morbidity among Montana adults with arthritis is hypertension. Nearly half (48%) of adults with arthritis have hypertension, which is twice as high as adults with no arthritis (Figure 2). Montana adults with arthritis also have twice as high prevalence of asthma, diabetes, and stroke and three times as high prevalence of chronic obstructive pulmonary disease (COPD), heart disease, and kidney disease compared with adults with no arthritis (Figure 2).

FIGURE 2.

Montana adults with arthritis have significantly higher prevalence of other chronic health conditions compared with Montana adults with no arthritis. (MT BRFSS, 2021)

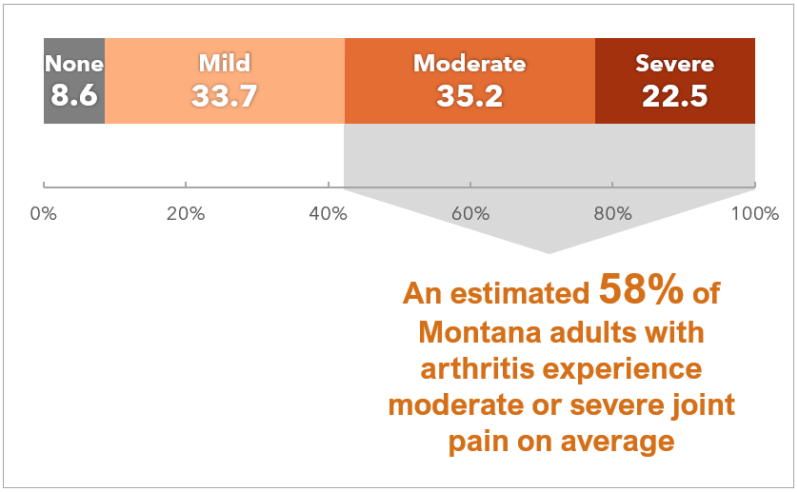


*There is not a statistically significant difference in the prevalence of diabetes or stroke by arthritis status among older adults (age 65 years and older) when analyzing this age group separately - only among working age adults (age 18 to 64 years).

Impact of Arthritis

Pain and limited joint function from arthritis prevent some Montanans from being able to perform daily tasks. Some are less productive at work or unable to work due to arthritis and joint symptoms, resulting in job loss or lower earnings. The impact of arthritis is less independence, higher medical expenditures, earnings losses[4], and a reduced quality of life.

FIGURE 3.
Average joint pain level among Montana adults with arthritis. (MT BRFSS, 2021)



Among Montana adults with arthritis:

- 2 in 5 (41%) are limited in usual activities due to arthritis or joint symptoms.
- More than half (58%) regularly experience moderate or severe joint pain (Figure 3).
- 1 in 3 (37%) who are working age report that arthritis or joint symptoms affects their ability to work or the type or amount of work they do.
- 1 in 3 (35%) experience depression or frequent mental distress, which is significantly higher compared with Montana adults with no arthritis (26%).

Pain and limited joint function from arthritis are significantly more common among certain demographic groups in Montana. (Table 1).

Sex

Adult women with arthritis in Montana have significantly higher prevalence of usual activity limitations due to arthritis (45%) and moderate or severe joint pain (61%) compared with adult men (37% and 54%, respectively).

Health disparities

While there is no difference in the prevalence of arthritis between white non-Hispanic and American Indian adults in Montana, American Indian adults experience significantly higher impacts from arthritis. More than half (56%) of American Indian adults with arthritis in Montana are limited in usual activities due to arthritis compared with 2 in 5 (40%) white non-Hispanic adults. Almost 3 in 4 (74%) American Indian adults with arthritis in Montana experience moderate or severe joint pain compared with 57% of white non-Hispanic adults.

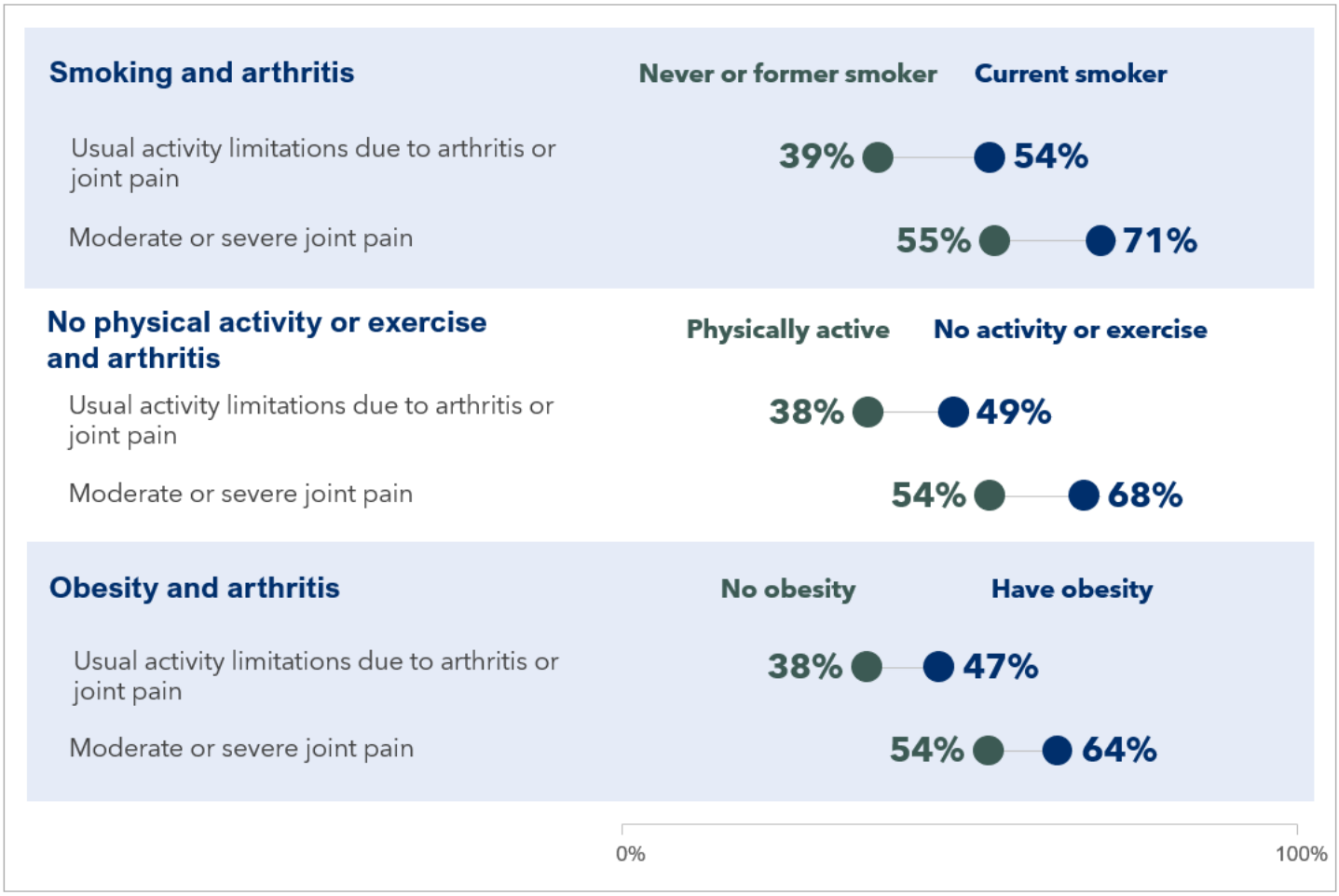
Montanans with fewer economic opportunities also experience significantly higher impacts from arthritis. Three in 4 (75%) adults with arthritis who did not graduate high school experience moderate or severe joint pain, which is significantly higher compared with those who attended (58%) or graduated (46%) from college

or technical school. Montana adults with arthritis and household incomes less than $25,000 per year also have significantly higher prevalence of usual activity limitations due to arthritis (56%) and moderate or severe joint pain (74%) compared with all other income levels (30-43% and 37-61%, respectively).

Modifiable risk factors

In addition to having a significantly higher prevalence of arthritis, adults who smoke cigarettes, do not participate in physical activity or exercise outside of work, or have obesity have significantly higher prevalence of usual activity limitations from arthritis and moderate or severe joint pain compared with adults with arthritis who do not have those risk factors (Figure 4).

FIGURE 4.
Montana adults with arthritis who are current smokers, do not engage in physical activity or exercise outside of work, or have obesity report significantly higher prevalence of usual activity limitations due to arthritis or joint symptoms and moderate or severe joint pain compared with adults with arthritis who do not have those risk factors. (MT BRFSS, 2021)



Healthy People 2030

Healthy People 2030 is our nation's 10-year plan to improve the health and wellbeing of Americans. There are four Healthy People 2030 objectives to reduce pain, disability, and limitations among adults with arthritis.[8] Montana currently meets two of these four objectives (Figure 5). Further reductions in the proportion of Montana adults with arthritis who experience moderate or severe joint pain and who are limited in their ability to work for pay due to arthritis are needed by the year 2030 to meet the Healthy People 2030 targets. Both measures can be reduced through teaching people with arthritis strategies to manage their condition, such as increasing physical activity.

FIGURE 5.
Reductions in the proportion of Montana adults with arthritis who experience moderate or severe joint pain and who are limited in their ability to work for pay due to arthritis are needed to meet the nation's Healthy People 2030 arthritis objectives. (MT BRFSS, 2021)

Healthy People 2030 Arthritis Objectives	Target (2030)	Montana (2021)	Status
Moderate or severe joint pain A-01 Reduce the proportion of adults with provider-diagnosed arthritis who experience moderate or severe joint pain	52.1%	57.7%	☒ Decrease needed to meet target
Arthritis limits activities A-02 Reduce the proportion of adults with provider-diagnosed arthritis who experience a limitation in activity due to arthritis or joint symptoms	46.8%	41.2%	☑ Currently meets target
Arthritis limits work A-03 Reduce the proportion of adults aged 18 to 64 with provider-diagnosed arthritis who are limited in their ability to work for pay due to arthritis	34.7%	37.0%	☒ Decrease needed to meet target
Counseling for physical activity A-04 Increase the proportion of adults with provider-diagnosed arthritis who receive health care provider counseling for physical activity or exercise	57.7%	61.5%	☑ Currently meets target

Arthritis Prevention

While increasing age is a risk factor for arthritis, arthritis is not a normal part of aging. Steps can be taken to reduce the chance of developing some types of arthritis.

Maintain a healthy weight

Being overweight or having obesity is a risk factor for developing certain types of arthritis. Even a little excess body weight adds stress to the joints, increasing the likelihood that joints will wear down and become damaged.

Avoid joint injury and infection

Protect joints from injury and overuse by avoiding activities that put extra stress on joints, using proper body mechanics and ergonomic workplace practices, and wearing protective equipment as indicated. Perform exercises that reduce the risk of joint injury by increasing balance, flexibility, and stability. See a health care provider if joints have signs of infection such as being swollen, warm, or red.

Not smoking

Cigarette smoking is a major risk factor for developing rheumatoid arthritis. While quitting smoking has immediate benefits to health, a person has to quit smoking permanently to reduce the risk of rheumatoid arthritis.[9] To learn about free help quitting any commercial tobacco products, visit https://quitnowmontana.com or call 1-800-QUIT-NOW.

Arthritis Management

There are actions that people with arthritis can take to be more in control of their health and to manage joint pain and other symptoms.

Attend a self-management education workshop

Self-management education workshops teach skills to effectively manage arthritis and other chronic conditions. Only 16% of Montana adults with arthritis reported taking an educational class to manage their condition.[1] These workshops may be offered in your local community or online. A list of proven self-management education workshops can be found at https://www.cdc.gov/arthritis/interventions/self_manage.htm.

Participate in low-impact physical activities

Low-impact physical activity is a simple and effective way to reduce arthritis pain and improve physical function. The Physical Activity Guidelines for Americans recommends that people with arthritis aim for at least 150 minutes a week of moderate-intensity activity and at least 2 days a week of muscle strengthening activities. People with arthritis should be as active as their health and arthritis symptoms allow.[10] Any amount of physical activity is better than none.

See a health care provider

Talk with a health care provider regularly about joint pain and other arthritis symptoms. Early diagnosis and treatment can improve disease outcomes. Some inflammatory arthritis conditions, such as rheumatoid arthritis, are treated with medications that are only available by prescription. The goal of arthritis treatment is to minimize joint damage, reduce pain, and improve or maintain daily function and mobility.

Maintain a healthy weight

Being at a healthy weight is important for managing arthritis. Excess weight increases stress on the joints and is associated with worsening arthritis symptoms and disease progression. Even a modest amount of weight loss among people who are overweight or obese can help reduce arthritis pain and improve physical function.

Relieve joint stress

Remaining in the same position throughout the day adds strain to the joints and can lead to stiffness. Relieve joint stress by alternating between sitting and standing and doing simple stretches throughout each day. When performing daily activities, use the strongest joints and muscles to reduce stress on smaller joints and consider using assistive devices that make tasks easier on joints and more efficient for people with arthritis.

Arthritis Programs

The Montana Arthritis Program is working to improve the quality of life for Montanans affected by arthritis and other rheumatic conditions by increasing awareness about appropriate arthritis exercise and self-management activities. The Montana Arthritis Program works with local organizations to implement arthritis approved evidence-based classes:

Stay Active & Independent for Life (SAIL)

SAIL is a 12-week arthritis management and falls prevention exercise program for older adults (aged 65 years and older) that focuses on strength, balance, and mobility. The exercises are joint safe movements to help reduce joint pain and stiffness, while increasing strength and balance. Exercises can be done sitting or standing.

Walk with Ease

The Walk with Ease program is a 6-week walking program for anyone to start or a maintain a low-impact exercise program to help manage or prevent arthritis. The Walk with Ease is offered in a group or self-directed format.

Find a class near you: https://dphhs.mt.gov/publichealth/chronicdisease/CommunityBasedPrograms

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