

# The State of MSK

How musculoskeletal conditions are impacting the modern workforce



# About the survey

As the world begins to recover from the COVID-19 pandemic, millions of Americans have been working remotely for the better part of two years. Employers have spent these years looking for solutions to mitigate the health impacts of our new normal, including surges in complaints of musculoskeletal (MSK) conditions. We conducted a study of 1,040 employed Americans to understand the state of MSK conditions in the U.S. today. In this report, you'll learn how prevalent MSK conditions of all types are in today's workforce, the impact of remote work and other lifestyle factors on MSK pain, and employees' shifting attitudes toward treatment options, including traditional and virtual physical therapy.

The sample included 1,040 employed Americans (working part- or full-time) aged 18-99+ across all regions of the United States. Data analysis was performed by Sword's Clinical Validation team.

**1040**  
**respondents**

**Working**  
**full or part time**

**18 - 99+**  
**years old**



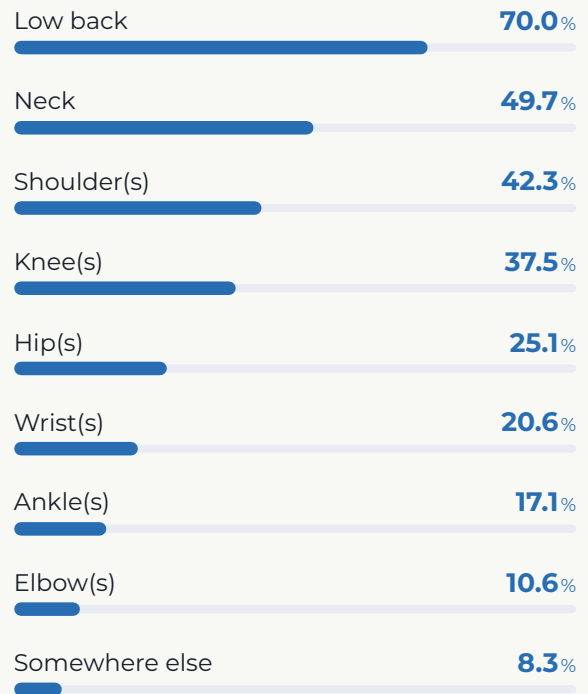
# Pain in the workforce is surging

MSK conditions affect a growing portion of the workforce. Previous reports<sup>1</sup> estimate the number of Americans suffering from MSK issues to be around 50% of the population, but our research has found that in the wake of the pandemic, the number may be significantly higher. In our study, almost 80% of respondents claimed to be suffering from some kind of musculoskeletal pain, with 79.2% of pain sufferers reporting pain in more than two areas of their body.

For two-fifths (40.5%) of pain sufferers, the pain was relatively recent, flaring up before October 2020. Among those for whom the pain is chronic (defined as pain that has lasted more than 12 weeks), 37.9% had experienced an increase in pain since the pandemic began.

## Back, neck and shoulder pain is most prevalent

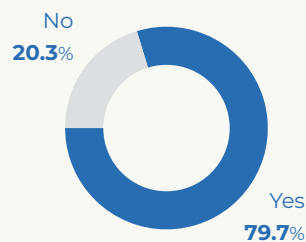
In which area(s) of your body are you feeling pain?



Base: suffering from pain in back, muscles or joints

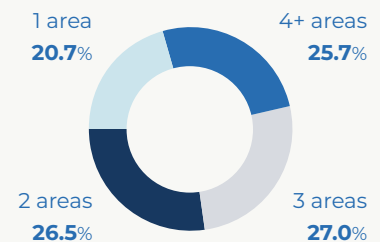
### Almost 80% of respondents are in pain

Are you currently suffering from pain in your back, muscles or joints?



### Almost 80% of pain sufferers have pain in more than one area

In which area(s) of your body are you feeling pain?



<sup>1</sup> The Burden of Musculoskeletal Diseases in the United States, U.S. Bone and Joint Initiative

# Remote work is causing more pain, but office setups aren't to blame

If the pandemic has changed anything about the workforce, it's the uptick in fully remote employee bases. Our study found that over half (59.7%) of respondents are working from home, either every day or some days. When it comes to office-related pain, sub-optimal office setups are often cited as a contributing factor, but our analysis has uncovered a different culprit.

## Is remote work causing more pain?

All signs point to yes. Almost half (42.1%) of those working from home at least some workdays identified new pain within 6 months of the work-from-home order (October 2020). Additionally, 22.8% of respondents that suffered from chronic pain and were working from home reported that their pain increased since the pandemic began.

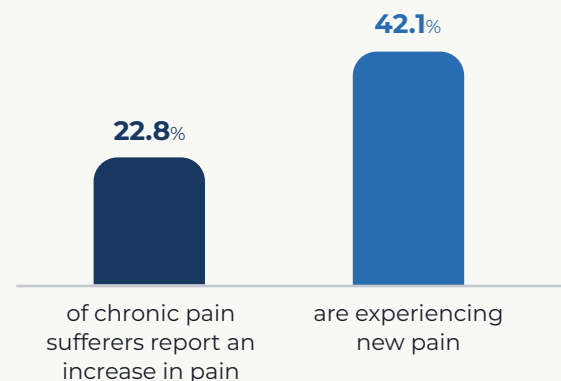
*Increases in pain among those working from home are at best only marginally related to the quality of their office setup.*

## Is the office setup to blame?

Surprisingly, no. The increase in pain symptoms and intensity among those working from home seems to be, at best, only marginally related to the quality of their office setup. Pain was equally prevalent irrespective of workspace setup: 80.2% among those working on a desk or table in a dedicated office space; 84.7% among those working from a desk or table in a non-dedicated office space such as a living room, bed-room, kitchen, or dining room, or 81.3% among those working in a non-dedicated space without a desk or table. What could it be?

### Working from home is associated with new or increased pain

Of those currently suffering from pain and working from home...



Base: suffering from pain in back, muscles or joints

# The real culprit is lack of movement

It's well known that a lack of movement for prolonged periods of time can lead to MSK pain. Our bodies were designed to move, and the shift to remote work brings with it a more sedentary lifestyle. All of the small, incidental movements associated with commuting, walking from meeting to meeting and picking up lunch—things that can help prevent and relieve pain—have been significantly reduced in their day-to-day lives. Our research shows it's probable that this lack of movement is what's really responsible for some of the surge in MSK pain: Of those working from home, almost half (43.6%) of those who reported moving the same or less are in pain, compared to just 8.1% of those who claimed to be moving more.



Interestingly, even a commute can be protective against pain. The biggest gaps in pain prevalence were found between those working from home only some days (26.1%) and those working from home either every day (34.7%) or not at all (38.4%), suggesting that those who vary their work environment by commuting into a workplace on some days are slightly less likely to be in pain.

## **Movement may be the antidote to WFH pain**

Of those working from home...

**43.6%** moving the same or less are in pain

**8.1%** moving more are in pain

Base: suffering from pain in back, muscles or joints, working from home some or all days

*Even a commute can be protective against pain. People who commute on some days are less likely to be in pain.*

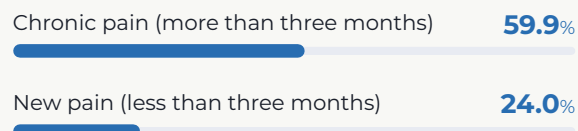
# It's affecting our minds as well as our bodies

Much has been written about the impact of COVID-19 on mental health. In our study, 76.2% of all respondents claim to have experienced depression and/or anxiety since the pandemic began. We sought to understand the role of MSK pain in mental health, and found, not surprisingly, that increases in pain are correlated with increases in mental health issues. Those in chronic pain are 1.5x as likely to respond with depression or anxiety to serious life and world events. For instance, 31.8% experienced an increase in depression and anxiety since the pandemic began, compared to just 1 in 5 of those who had pain for fewer than three months (19.9%) or those who did not experience pain at all (18.6%).

Of those who experienced an increase in depression, anxiety, and panic since the pandemic began, they were 3x more likely to have chronic pain (59.9% vs. 24.0%).

## Chronic pain makes people 3x more likely to experience mental health issues

Among those who have experienced an increase in feelings of depression, hopelessness, sadness, anxiety or panic during the pandemic...



Base: have experienced an increase in feelings of depression, hopelessness, sadness, anxiety or panic since the pandemic began (March 2020)



# Pain is largely going untreated

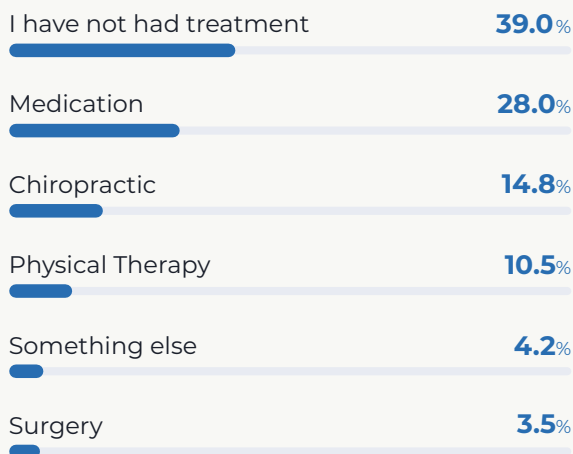
The majority (39.0%) of people in pain have not sought treatment in the last six months. Among those who are treating their pain, almost a third (28.0%) are taking medication, and a small percentage have undergone surgery (3.5%). And while physical therapy has been shown to be an effective treatment for MSK pain<sup>2</sup>, only about 1 in 10 respondents had seen a physical therapist for their condition as of 2020.

The pandemic has caused many people to reconsider going into clinics and hospitals for fear of infection, and our research confirms that MSK sufferers are no exception. Almost a third (29.1%) of untreated pain sufferers said that

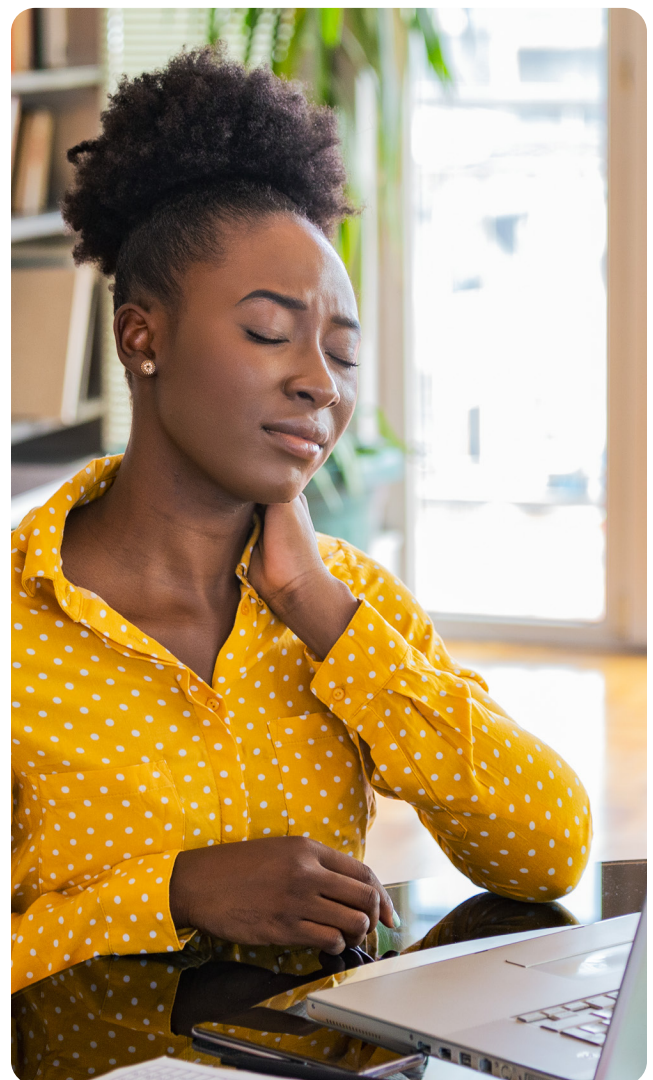
they haven't pursued treatment because they don't feel safe going into a hospital or clinic right now. The lack of convenience of many MSK treatments also continues to be an issue: over a quarter (26.3%) of pain sufferers report that they haven't had treatment because they haven't had the time. Lack of appointment availability or appointment cancellations only contribute marginally to treatment barriers.

## Over a third of pain sufferers haven't had treatment

Have you had any of the following treatments for your pain in the last six months?



Base: suffering from pain in back, muscles or joints



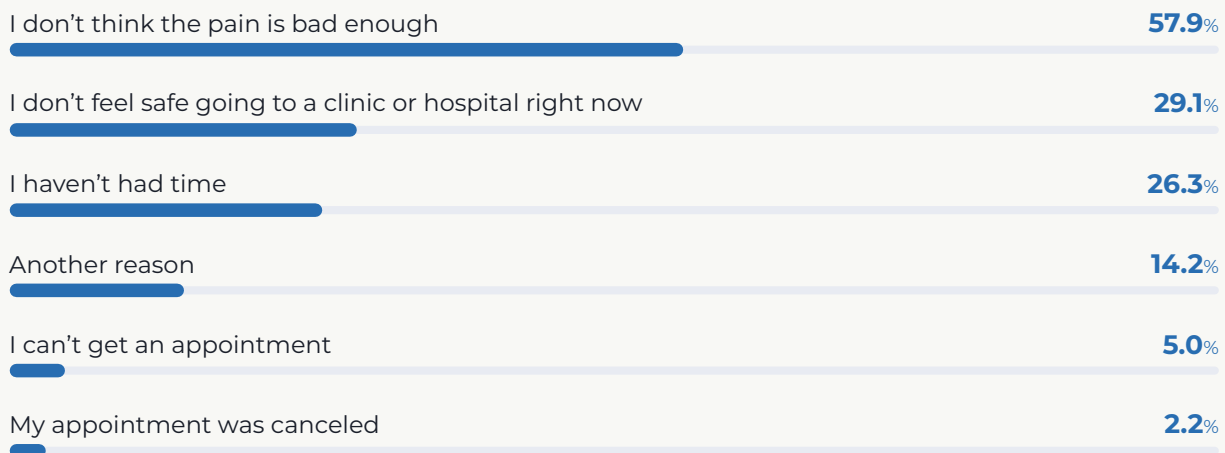
<sup>2</sup> Centers for Disease Control, Guideline for Prescribing Opioids for Chronic Pain — United States, 2016

Of those who have not treated their pain at all, more than half (57.9%) claim that they haven't pursued treatment because they don't think the pain is bad enough. MSK conditions, like many medical issues, are best treated early. The longer we experience pain, dysfunction, and range of motion limitations, the more our nervous system, movement patterns, and behaviors will change in response, and the worse the condition can get.



### Safety and time are getting in the way of treatment

Why haven't you had treatment for your pain since the pandemic began?



Base: have not had treatment for pain in the past six months



# Physical therapy is seen as expensive, time consuming and unsafe

There is substantial clinical and real-world evidence that physical therapy is effective in managing chronic pain as well as speeding recovery from acute injuries and surgery<sup>3,5</sup>, but the gap between those who would consider treatment and those who actually pursue it remains high. We asked respondents who had not had treatment as well as those who had pursued a treatment other than physical therapy whether they would consider physical therapy to treat their pain. A total of 524 respondents (63.2% of all pain sufferers) said that they would consider physical therapy: six times as many as the 87 pain sufferers (10.5%) who have had physical therapy.

Among those who would consider PT but have not pursued it, cost is the highest barrier to treatment (31.5%). Time and safety are less of a concern for these respondents, yet still remain a barrier: one fifth (18.1%) reported not having enough time, and a similar proportion (16.9%) did not feel safe going to a clinic during the pandemic.

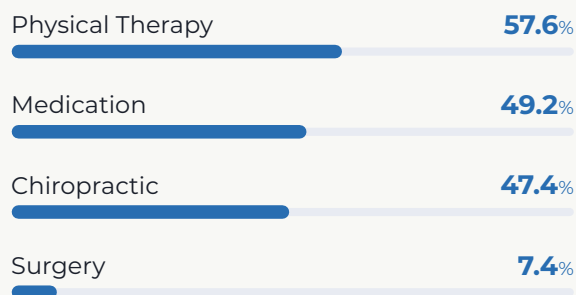
<sup>3</sup> Westby MD, Brittain A, Backman CL. Expert Consensus on Best Practices for Post-Acute Rehabilitation After Total Hip and Knee Arthroplasty: A Canada and United States Delphi Study. Arthritis Care Res (Hoboken). 2014

<sup>4</sup> Madera, M., Brady, J., Deily, S., McGinty, T., Moroz, L., Singh, D., Tipton, G., & Truumees, E. The role of physical therapy and rehabilitation after lumbar fusion surgery for degenerative disease: a systematic review, Journal of Neurosurgery, 2017

<sup>5</sup> Littlewood C, Bateman M, Clark D, Selfe J et al. Rehabilitation following rotator cuff repair: a systematic review. Shoulder Elbow 2015

## Two-thirds of untreated pain sufferers would consider physical therapy

Which treatment(s) would you have considered?



Base: have not had treatment for pain in the past six months

## Cost, time and safety are barriers to pursuing physical therapy

Why haven't you done physical therapy yet?



Base: have not had treatment for pain in the past six months or have had treatment other than physical therapy (337)

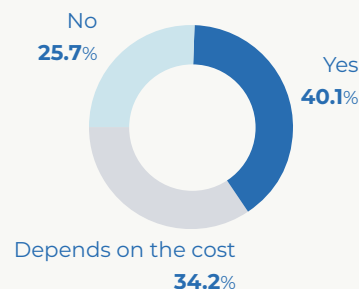
# The majority of pain sufferers would consider virtual physical therapy, but most want licensed PTs to provide the care

The pandemic has changed the way patients view telemedicine, and physical therapy is no exception. Almost three-quarters (74.3%) of all pain sufferers would consider a virtual physical therapy solution. Of those, over two-thirds (67.5%) think that care from a licensed PT, not a non-clinical health coach, is important when choosing a virtual PT provider. About half of pain sufferers believe that proven efficacy (52.8%), a large patient base (46.6%) and the ability to see how they're performing their exercises in real time (44.9%) are important (respectively).

*Over two-thirds of those who would consider virtual PT think that care from a licensed PT, not a non-clinical health coach, is important.*

## Two-thirds of untreated pain sufferers would consider physical therapy

Which treatment(s) would you have considered?



Base: suffering from pain in back, muscles or joints

## Care from a licensed physical therapist is important

Which of the following would be important to you in choosing a virtual physical therapy provider?



Base: have not had treatment for pain in the past six months or have had treatment other than physical therapy (337)

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# Recommendations for employers

The high incidence of untreated MSK conditions and comorbid mental health issues in today's workforce is concerning, but need not be cause for alarm. For employers with large numbers of remote workers, educating employees on the value of movement and implementing programs to encourage more movement can be protective. To help those already in pain but resisting treatment for safety, cost and convenience reasons, employers should consider adding a robust digital solution to their MSK solution set. Adding a solution like Sword Health that

combines therapeutic exercise with behavioral interventions can help those with new pain resolve the issue before it becomes chronic. For those with chronic conditions, a high-quality digital solution can relieve the pain and prevent it from progressing so far that surgery is desired or required. Implementing a digital MSK solution now can improve employees' wellbeing, mental health and productivity in this challenging time, and importantly, it can also reduce the likelihood of a spike in surgeries and other costly treatments once the pandemic has subsided.

## About Sword Health

Sword Health is a digital musculoskeletal (MSK) care provider on a mission to free two billion people from chronic and post-surgical pain. The company's clinical-grade digital therapy platform pairs expert physical therapists with FDA-listed wearable technology to deliver a personalized treatment plan that is more effective, easier and less expensive than the traditional gold standard of care. Sword Health believes in the power

of people to recover at home, without resorting to imaging, surgeries or opioids. Since launching in 2015, Sword Health has worked with insurers, health systems and employers in the U.S., Europe and Australia to make quality physical therapy more accessible to everyone.

To learn more about Sword Health, visit [www.swordhealth.com](http://www.swordhealth.com)