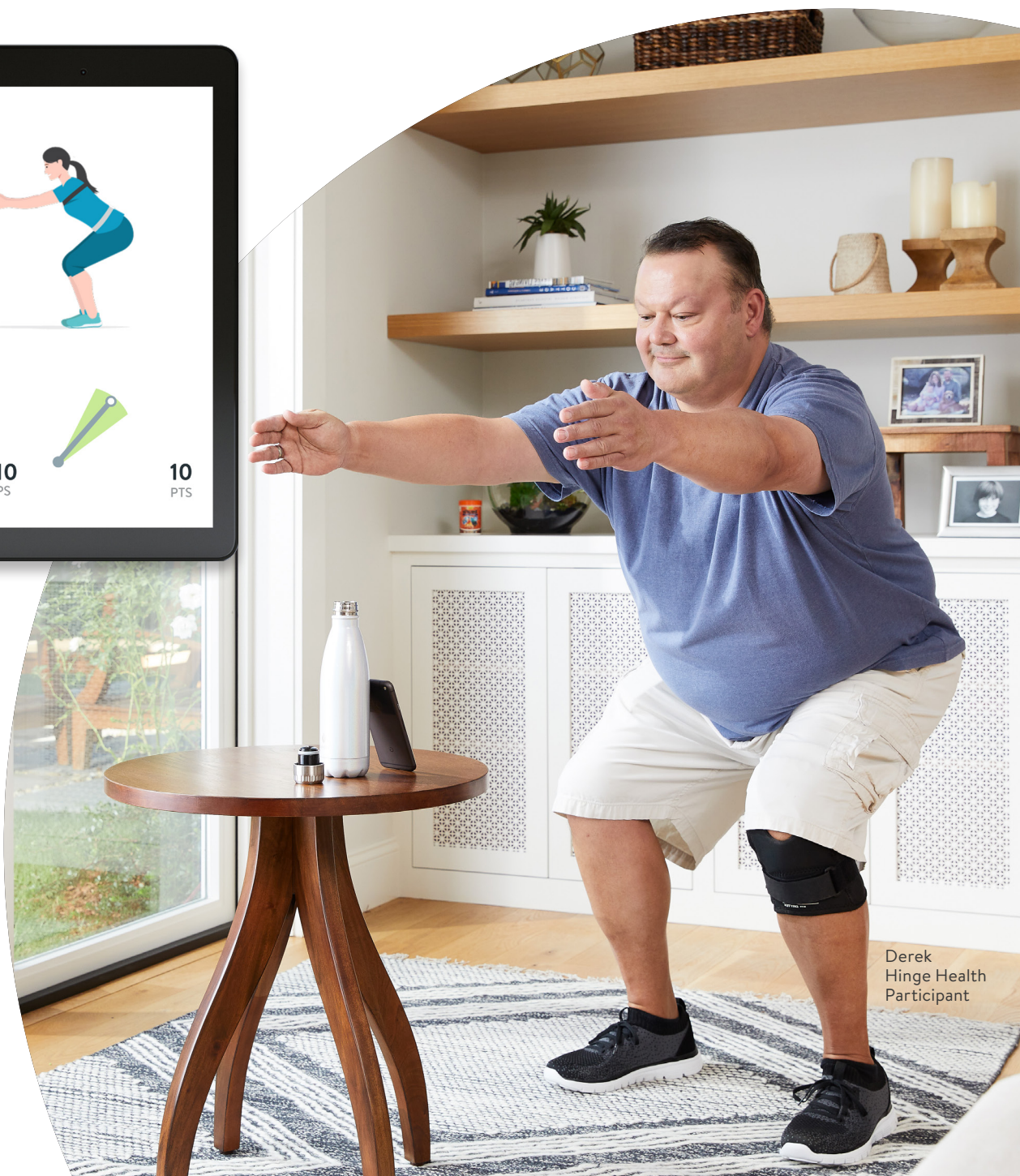
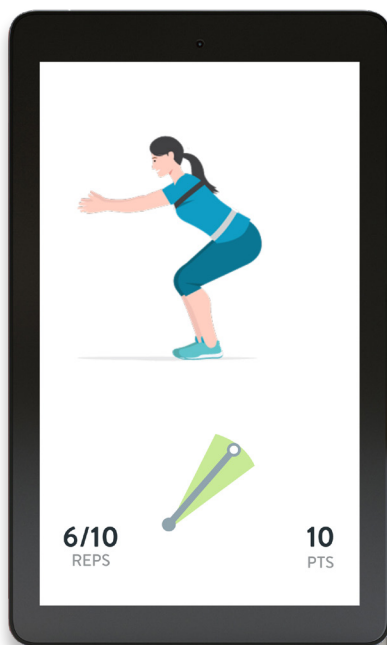


2-YEAR OUTCOMES COMPARISON STUDY

# Demonstrated long-term back and joint pain relief



Derek  
Hinge Health  
Participant

# Resolve chronic musculoskeletal pain with a holistic approach

Resolving chronic musculoskeletal (MSK) or back and joint pain is often medically simple but behaviorally complex. Studies have shown that consistent physical activity can be a more effective approach at resolving back and joint pain than medications or expensive surgery.<sup>1</sup> However, the exercise therapy route requires a more concerted effort to ensure patients stay on track and achieve positive outcomes. In-person physical therapy (PT) can lead to low adherence rates as patients fail to do their exercises or find time in their busy lives for PT appointments. In fact, research shows adherence rate to in-person physical therapy programs can be as low as 30%.<sup>2</sup>

Psychosocial issues are also barriers to participants to adopting and maintaining exercise therapy routines and achieving successful outcomes. For example, fear of falling or fear of pain related to the exercise activity can create significant barriers in participants' minds, preventing them from doing their prescribed therapy.<sup>3</sup> Moreover, studies also reveal participants' attitude or belief in their own ability to complete a task or reach a goal also influences whether they stick with physical therapy programs.<sup>4</sup>

In contrast, studies demonstrate personalized exercise therapies, motivation techniques, verbal encouragement, and celebration of successes can all help motivate and build participants' confidence in their ability to complete their exercise therapy program.<sup>5, 6</sup> Best practice research also shows the three pillars of exercise therapy, behavioral health, and education result in better patient outcomes. This evidence-based approach is the foundation of Hinge Health's program to resolving chronic MSK pain.

**HINGE HEALTH**  
**2-YEAR PROVEN OUTCOMES**  
n=276 participants

**2 YEARS LATER**

**70%**  
continued  
to do their  
exercises

**PARTICIPANTS STILL ENJOYED**

**more than**  
**50%**  
reduction  
in pain

<sup>1</sup> Ambrose KR et al. Physical exercise as non-pharmacological treatment of chronic pain. *Best Pract Res Clin Rheumatol* 2015.

<sup>2</sup> Jack K et al. Barriers to treatment adherence. *Manual Therapy* 2010.

<sup>3</sup> Stubbs B et al. The avoidance of activities due to fear of falling. *Pain Med* 2014.

<sup>4</sup> Huffman K et al. Self-efficacy for exercise. *Scand J Rheumatol* 2014.

<sup>5</sup> Imaiama I et al. Exercise adherence, cardiopulmonary fitness. *J Phys Act Health* 2013.

<sup>6</sup> Busch AJ et al. Exercise therapy for fibromyalgia. *Current Pain and Headache Reports* 2011.

## HINGE HEALTH 2-YEAR OUTCOMES STUDY

## Demonstrated lasting impact on participants

How does this unique, holistic approach impact long-term pain relief and behavior change? We tracked and analyzed 276 Hinge Health participants with back and knee pain over a 2-year period to see if they still enjoyed reduced pain long after their intensive care program was completed. We checked in with Hinge Health participants when they first signed up for the program, after the 12-week intensive Hinge Health clinical care program, and 2 years later. Hinge Health participants still enjoyed reduced pain 2 years later.

After completing the Hinge Health program, 276 participants enjoyed statistically significant improvements in back and knee pain when surveyed after 3 months and after 2 years. This study further validates pain reduction clinical outcomes from 2 published randomized control studies in peer-reviewed journals.<sup>7,8</sup>

Participants continued to do their exercise therapy and still enjoyed sustained pain reduction 2 years later, as a result of Hinge Health's unique holistic Clinical Care Model with dedicated Doctors of Physical Therapy and health coaches driving lasting behavior change.



2 YEARS LATER  
PAIN WAS CUT IN HALF

**3x**  
better  
than  
opioids

<sup>7</sup>Mecklenburg G et. al. Effects of a 12-week digital care program for chronic knee. J Med Internet Res 2018.

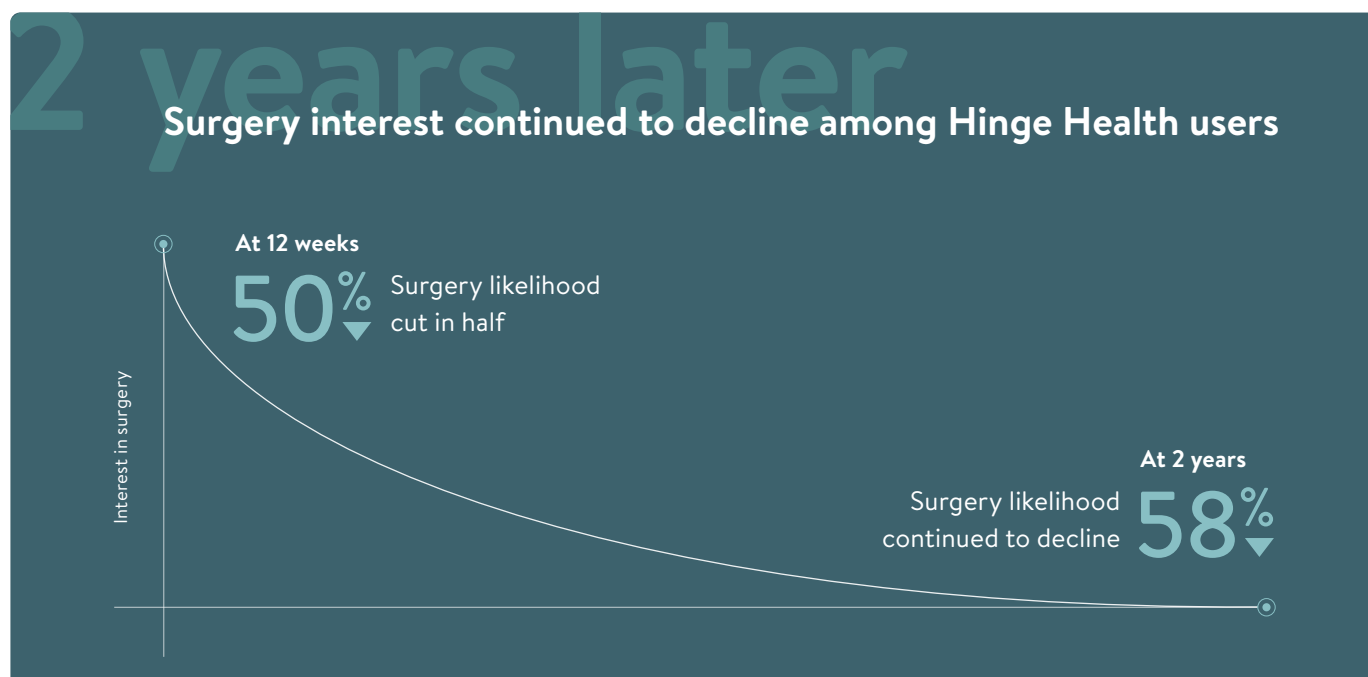
<sup>8</sup>Bailey, J.F. et al. Randomized controlled trial of a 12-week digital care. Nature 2019.



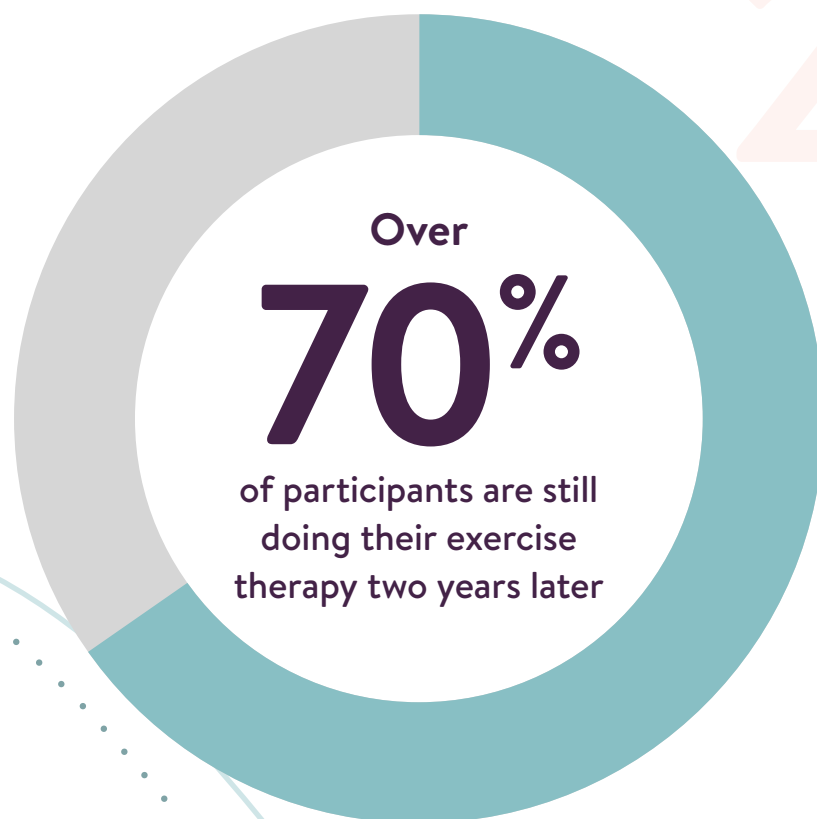
## Participants continued to enjoy sustained pain reduction 2 years later

Each back and knee Hinge Health participant enjoyed an average reduction in pain of 67% at 12 weeks and continued to enjoy more than 50% reduction in pain two years later.

After the 12-week intensive phase of the Hinge Health chronic pain program, surgery likelihood was also cut almost in half. After 2 years, Hinge Health participants reported their interest in surgery continued to decline by 58% reduction from baseline.



<sup>9</sup> Based on saving \$71.09 in MSK spend per participant per year for every 1% decrease in pain.



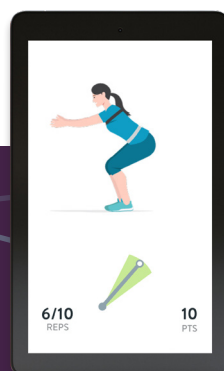
# 2 years later

## Lasting behavior change

Hinge Health's holistic clinical care approach has a lasting effect on behavior change. The fact participants continued to do their exercise therapy on their own plays a critical role in keeping their chronic MSK pain at bay over the long term.

**“Thanks to Hinge Health, my sciatic pain decreased by 90%.** When I keep that in mind, I am motivated to do the exercise therapy every day. I’ve picked up the concept that doing any kind of movement is better than none at all.”

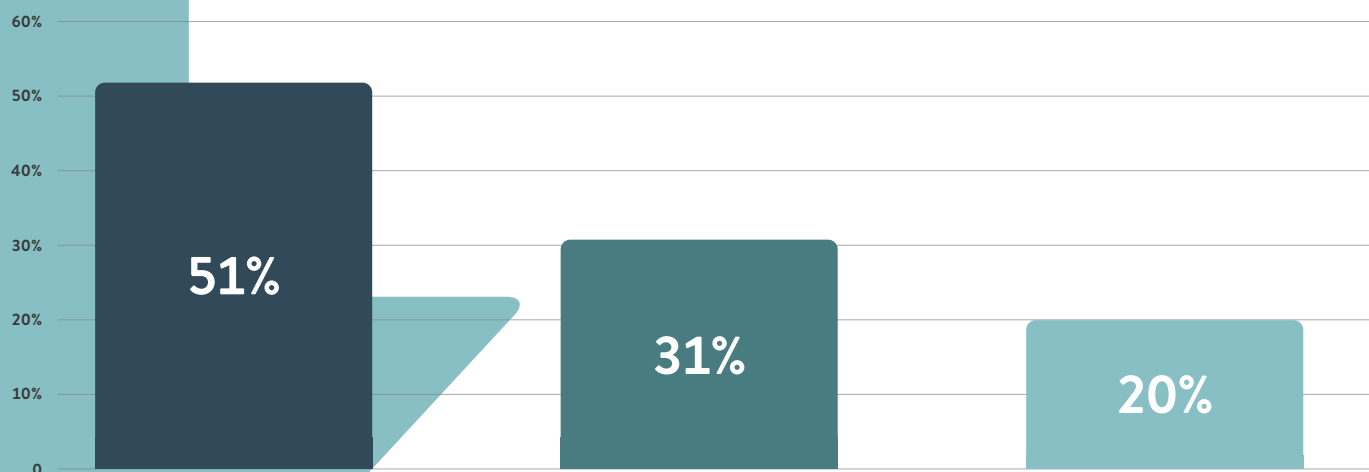
Hinge Health Participant



# Hinge Health's 2-year outcomes surpass other interventions

When comparing pain reduction results from other conservative care programs with similar time frames, Hinge Health users enjoyed significantly better pain improvements after 2 years. Moreover, the clinical study demonstrated greater improvement in pain for both knee and low back pain in a real-world setting.

## Pain reduction after 2 years



### Hinge Health

Each Hinge Health participant enjoyed on average a 51% reduction in their pain after 2 years, higher than other similar studies.

### In-person physical therapy

For low back pain, 2-year studies of conservative treatment demonstrate average improvements in pain of 31%.<sup>11, 12</sup>

### Medications & injections

Medications and injections for knee pain have shown changes in pain on average around 20%.<sup>10</sup>

<sup>10</sup> Gregori, D. and et al. Association of long-term pharmacological treatments with long-term pain. JAMA 2018.

<sup>11</sup> Hüppe, A. and et al. Feasibility and long-term efficacy of a proactive health. BMC Health Services Research 2019.

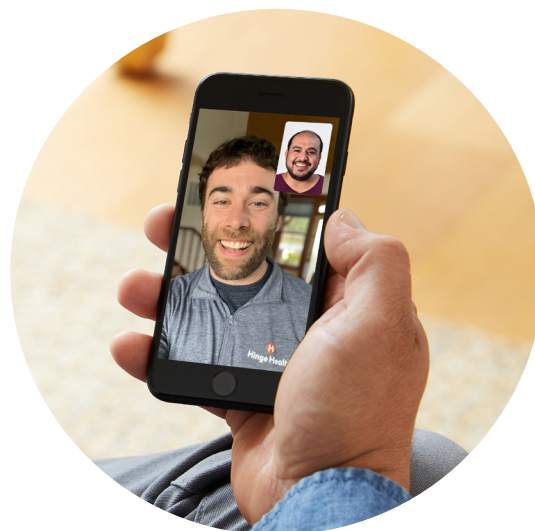
<sup>12</sup> Weinstein, J. N. and et al. Surgical versus nonoperative treatment for lumbar. Spine 2010.

## THE BIOPSYCHOSOCIAL APPROACH

# The Hinge Health Clinical Care Model

The Hinge Health Clinical Care Model recognizes the biological, psychological, and social influences on a participant's road to recovery. That's why we match each participant with a dedicated Doctor of Physical Therapy and Board-certified health coach to meet 1-on-1 through text, phone, and video sessions.

The Doctor of Physical Therapy can help personalize their exercise therapy program, and a high-touch health coach offers critical motivational and behavioral support throughout the duration of the program. Guided by our wearable sensor technology and app, Hinge Health participants can do physical-therapist recommended exercise therapy from the comfort of their homes and virtually connect with their Doctor of Physical Therapy and health coach anytime and as often as they need. The result? Hinge Health's Clinical Care Model resolves back and joint pain with lasting behavioral changes and positive clinical outcomes for Hinge Health participants.



# success stories

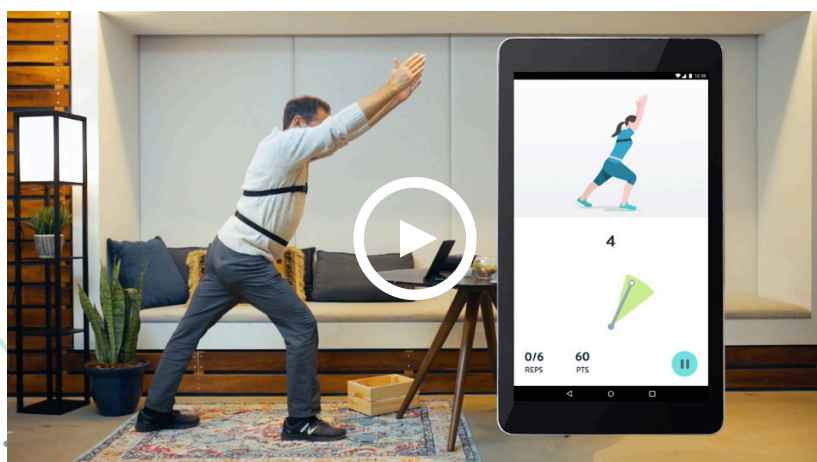


**“What I have learned through the Hinge Health program is that exercise therapy CAN help my situation.** I can also change the way my body reacts to pain and stress by changing the way I think and react to it.”

Hinge Health Participant

# Hinge Health has an enduring impact on chronic back and joint pain relief

Hinge Health's digital Clinical Care Model has evolved best practice MSK care by combining dedicated Doctors of Physical Therapy and Board-certified health coaches with wearable sensor technology—resulting in lasting chronic pain reductions rooted in successfully changing participant behavior and lifestyle over time.



Watch video



Hinge Health is pioneering the world's most patient centered Digital Clinic for back & joint pain. Our Digital Clinic is the #1 MSK solution for employers and health plans. With 300+ enterprise customers including Boeing, Salesforce, and US Foods, Hinge Health empowers people to reduce chronic pain, opioid use and surgeries.



Learn more at [hingehealth.com](https://hingehealth.com)