



# Debunking Myths About Pain and Pain Management

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## Our Speaker



**Claire Morrow**  
Doctor of Physical Therapy  
Hinge Health

# Reimagined MSK care — built around your members

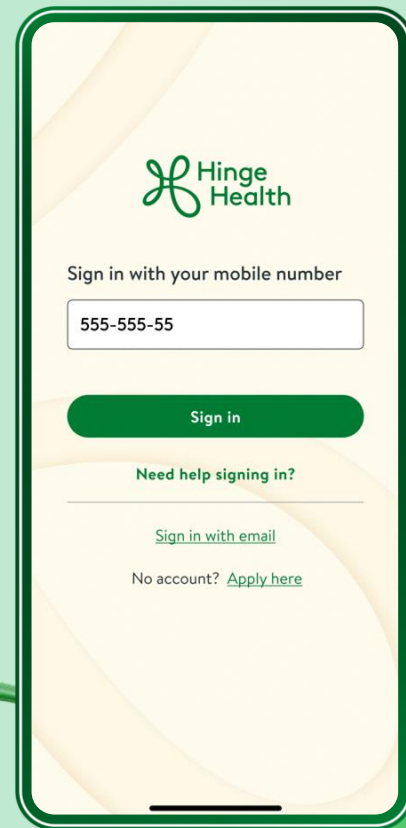
MSK care for every body. And every body part.



**Simple access** to a digital joint & muscle clinic gets members moving when and where they want.

**Clinically complete** care team and technology suite manage pain and remove barriers to recovery.

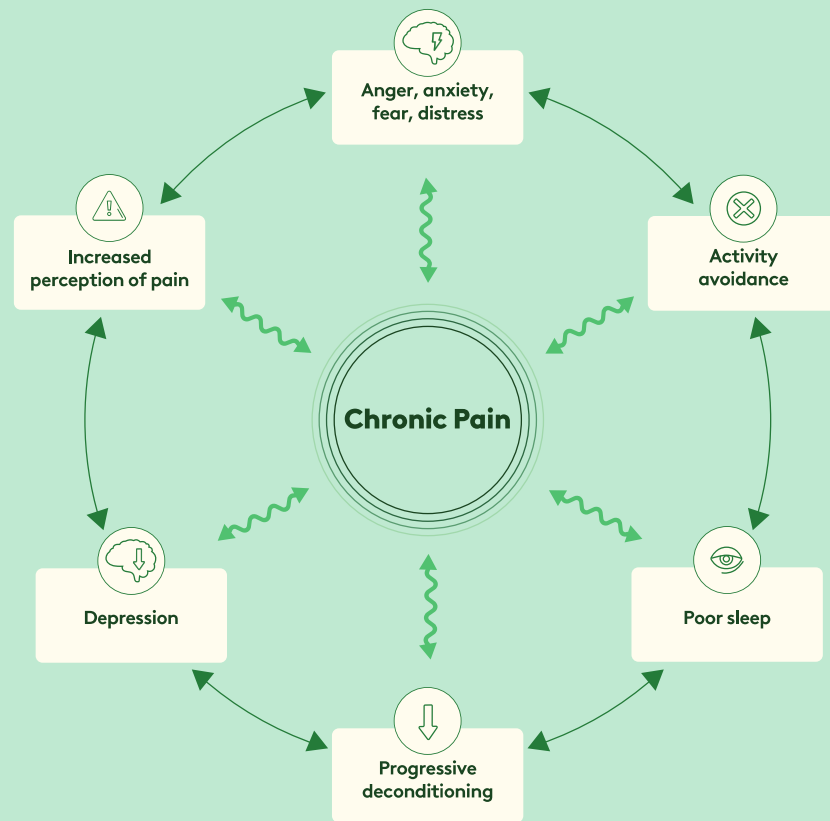
**Intelligently personalized** care gets smarter with every move — and intervenes earlier to reduce unnecessary utilization.



**Myth #1: “All MSK pain is the same.”**

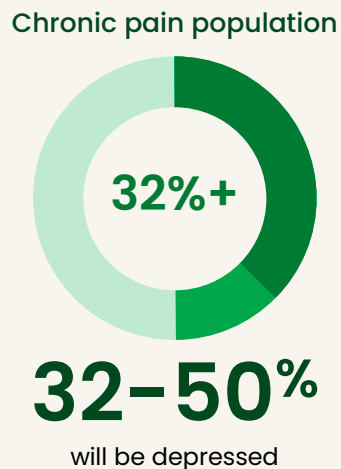
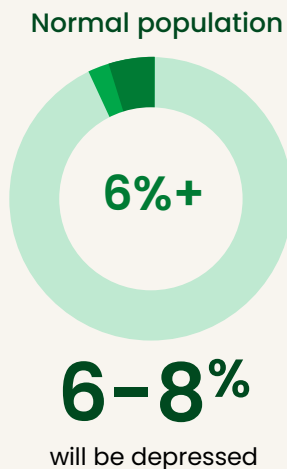
# Pain is complex, and everyone experiences it differently

If pain is perceived with high levels of fear, it causes an individual to experience increasing stress and anxiety with decreasing levels of activity, which causes pain levels to rise.



# Clinical connection

Chronic MSK pain increases risk for depression

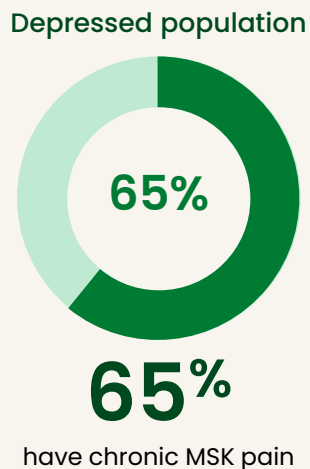
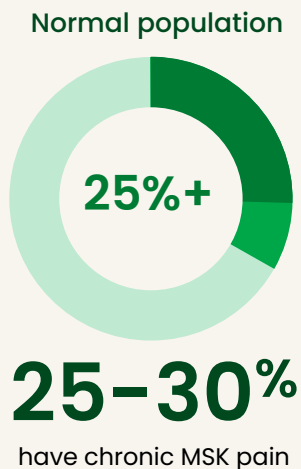


- ✔ **Associated with relapse**  
Of patients who relapse, **94%** have at least mild/moderate pain
- ✔ **Blunts effects of anti-depression treatment**

Veronese N, Stubbs B, et al; Association between lower limb osteoarthritis and incidence of depressive symptoms: data from the osteoarthritis initiative. *Age Ageing* 2017; 46 (3): 470-476. Bair MJ, Robinson RL, Katon W, Kroenke K. Depression and Pain Comorbidity; A Literature Review. *Arch Intern Med.* 2003;163(20):2433-2445.

## Clinical connection

Depression increases the risk for chronic MSK pain



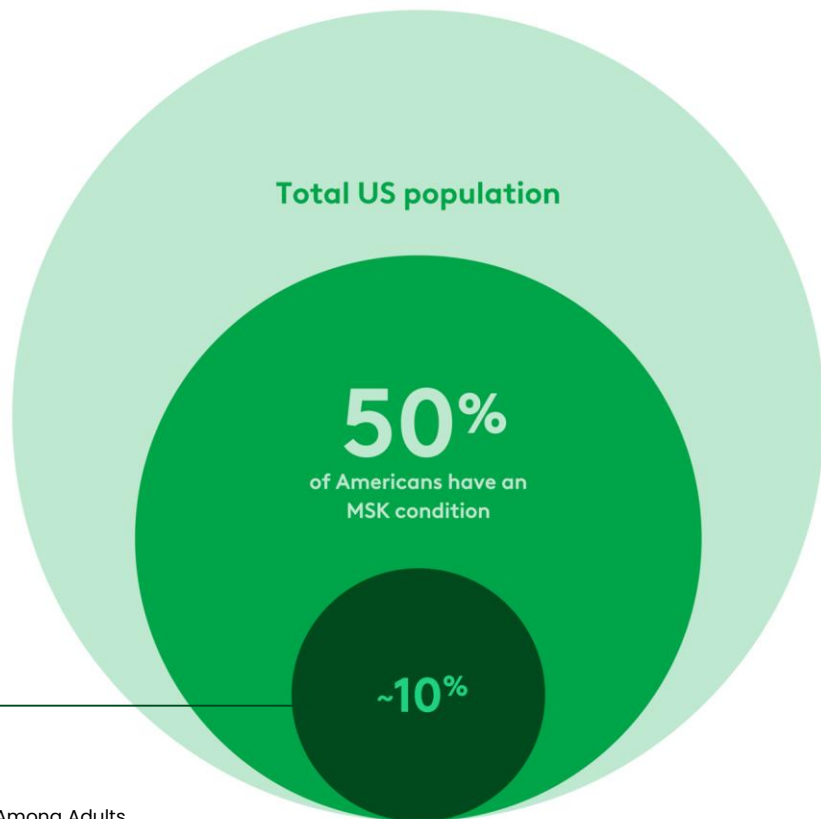
Bair MJ, Robinson RL, Katon W, Kroenke K. Depression and Pain Comorbidity; A Literature Review. *Arch Intern Med.* 2003;163(20):2433–2445. Kim KW, Han JW, et al. *J Bone Joint Surg Am.* 2011 Mar 16;93(6):556–63.

**Myth #2: “Traditional physical therapy is the best option.”**

# Half of Americans have an MSK condition yet only 10% are currently seeing a PT for their pain

# 10%

Of Americans use in-person physical therapy in a given year



Boersma P, Cohen R. Physical, Speech, Rehabilitative, or Occupational Therapy Use Among Adults Aged 25–64, by Veteran Status: United States, 2019–2020. NCHS Data Brief No. 439, 2022.

## Why aren't people in pain using PT?

29% Too expensive

19% I don't have the time

18% I don't believe professional treatment will help my condition

14% I'm not sure of my insurance coverage



# Social determinants of health that impact MSK care



## Access to care and transportation

73% of patients miss at least one PT appointment



## Income

Lower-income patients are 1.5x more likely to use opioids



## Race and ethnicity

2/3 orthopedic surgeons acknowledge evidence of disparities



## Health literacy

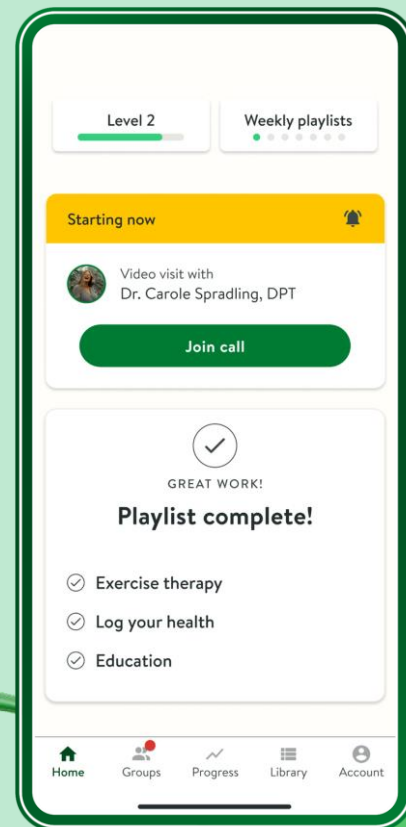
1/3 of adults in the U.S. have low health literacy

Sources: <sup>1</sup>Lam O, Broderick B, Toor S. 2018. How far Americans live from the closest hospital differs by community type. Pew Research Center 2018. <sup>2</sup>Bhavsar NA et al. Prevalence and predictors of no-shows to physical therapy for musculoskeletal conditions. PLOS ONE. 2021. <sup>3</sup>Dahlhamer JM, Connor EM, Bose J, Lucas JW, Zelaya CE. Prescription opioid use among adults with chronic pain: United States, 2019. National Health Statistics Reports; no 162. Hyattsville, MD: National Center for Health Statistics. 2021. <sup>4</sup>Adelani MA, O'Connor MI. Perspectives of orthopedic surgeons on racial/ethnic disparities in care. J Racial Ethn Health Disparities. 2017. <sup>5</sup>Zenk, S. N. et al. Neighborhood racial composition, neighborhood poverty, and the spatial accessibility of supermarkets in metropolitan Detroit. American journal of public health, 2005.

# Make MSK care accessible

## Simple access

- Easy to follow all-in-one app
- Flexible delivery of care, anytime and anywhere
- Effective and equitable options



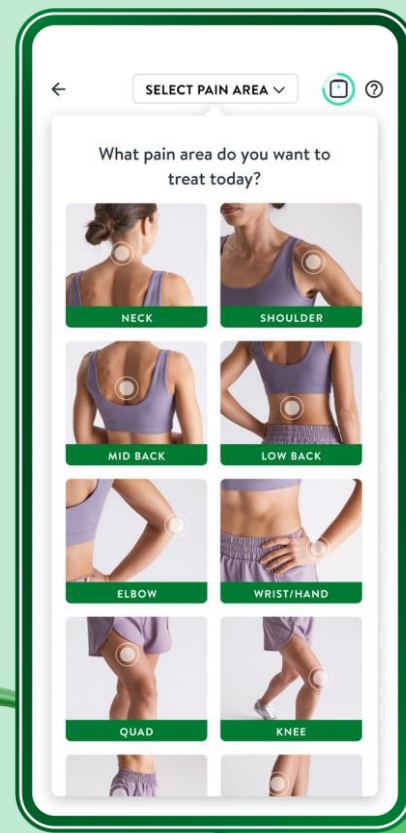
# Offer a solution that's clinically complete and provides full support

## Simple access

- Easy to follow all-in-one app
- Flexible delivery of care, anytime and anywhere
- Effective and equitable options

## Clinically complete

- Specialized care team to meet any need
- Advanced technology to keep members engaged



# Personalize care to help every type of person in pain

## Simple access

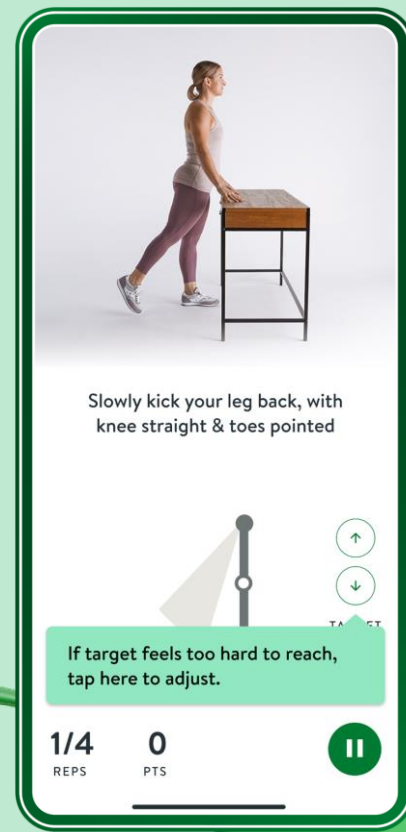
- Easy to follow all-in-one app
- Flexible delivery of care, anytime and anywhere
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## Clinically complete

- Specialized care team to meet any need
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## Intelligently personalized

- Data integration for personalized care on day one
- Ongoing customization of exercises, education, behavioral support
- High-risk intervention



**Myth #3: “MSK is limited to back and joint pain.”**

# Women's pelvic floor disorders are common MSK conditions, overlooked and underserved by the current healthcare system

**1 in 4**

women have pelvic floor disorders<sup>1</sup>

**6.5**

years is the average to wait to seek care for urinary incontinence<sup>2</sup>

**< 50%**

start PT after receiving a referral<sup>3</sup>

Sources: <sup>1</sup>The epidemiology of pelvic floor disorders and childbirth: an update <https://pubmed.ncbi.nlm.nih.gov/34261109/>. <sup>2</sup>Continenence Promotion, Education & Primary Prevention. <sup>3</sup>Comparison of Pelvic Floor Physical Therapy Attendance Based on Referring Provider Specialty. Female Pelvic Med Reconstr Surg. 2022 Jan.

# Pelvic Floor Disorders can occur at any age, but are most common during pregnancy, postpartum, and menopause

Symptoms/conditions associated with pelvic floor disorders:

- Urinary incontinence
- Bladder & bowel disorders
- Pelvic organ prolapse
- Pelvic pain
- Diastasis recti
- Sexual dysfunction



# Personalized care for pelvic health disorders

## Care for the unique musculoskeletal needs of women:

Supports women at all stages of life — from early adulthood to after menopause — providing clinical care for the full continuum of pelvic floor disorders.

### Pelvic strength

**Focus on pelvic muscle strengthening**

Stress incontinence  
Pelvic organ prolapse  
Fecal incontinence  
Diastasis

### Bladder control

**Focused on mind-body connection to reduce incontinence**

Urge incontinence  
Mixed incontinence

### Pelvic pain

**Focused on pelvic muscle relaxation and control**

Dyspareunia (pain with intercourse)  
Pelvic girdle pain  
Bowel dysfunction

### Pregnancy & postpartum

**Supporting women through pregnancy and postpartum**

Pubic symphysis pain  
Pregnancy specific low back, hip and pelvic girdle pain  
Stress incontinence  
Diastasis

**Myth #4: “Digital MSK care is not clinically effective.”**

# How to review clinical outcomes

When reviewing clinical outcomes, look for data that demonstrates reductions in the following:

- Pain
- Function
- Absenteeism
- Depression
- Anxiety
- Surgery likelihood
- Pharmaceutical prescriptions



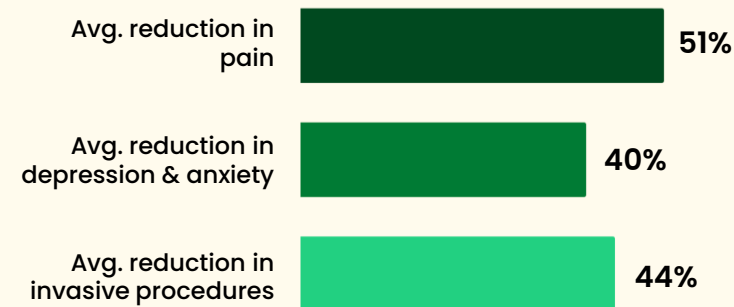
# Choose a digital MSK solution based on large-scale, long-term clinical outcomes

## Hinge Health has large-scale clinical outcomes



Bailey JF, et al. Digital Care for Chronic Musculoskeletal Pain: 10,000 Participant Longitudinal Cohort Study. J Med Internet Res 2020;22(5):e18250.

## Hinge Health has the most comprehensive, proven one-year outcomes



Wang G, et al. BMC Musculoskeletal Disorders Clinical outcomes one year after. BMC Musculoskelet Disord. 2022 Mar 11;23(1):237.

**Myth #5: “Digital care  
can’t reduce the costs  
of MSK.”**

# How to evaluate ROI

What to look for when evaluating ROI?



## Validated methodology

Is the methodology validated by third parties?

How many different entities have validated the methodology?



## Rigorous approach

What is the data source?

Is the data blinded?



## Proven results at scale

Are results proven at enterprise scale?

Is the study representative of your population?

# Proven medical claims reduction

2023 Industry-specific claims study<sup>1</sup>

Global benefits consultant

**2.0–2.7x ROI**

Manufacturing & Services Clients

**54%**

cost savings per member from surgery claims reduction

2022 Largest multi-employer claims study to date<sup>3</sup>

Global actuarial firm

**2.4x ROI**

**136** different employers

**46** different industries

2022 Medicare claims study<sup>2</sup>

Optum

**2.7x ROI**

**87%**

reduction in hospital utilization spend

2021 Multi-employer claims study<sup>4</sup>

Validation Institute

**2.3x ROI**

**68.7%**

fewer invasive procedures than control group

Additional \$410 in reduced costs related to co-morbid conditions such as diabetes & cardiac

Sources: <sup>1</sup>Hinge Health Manufacturing and Services Industries Medical Claims ROI Study, 2023

<sup>2</sup>Hinge Health Medicare Cost and Utilization Study, 2022 <sup>3</sup>136 Employer Medical Claims ROI Study, 2022

<sup>4</sup>Hinge Health Multi-Employer Control-Matched Medical Claims Analysis, 2021

# How does this compare with other studies?

## Large-scale

- 136 employers
- 46 industries
- Over 8,000 participants
- Largest digital MSK claims study to date
- Other MSK studies: a few hundred members

## Longer timeframe

- Only medical claims study with 12 month pre AND post
- Other MSK studies: 9 months

## Real-world population

- Represents the diverse population of the U.S.
- Including members from YOUR industry

# The largest digital MSK claims study to date

Medical claims reduced per Hinge Health participant in the study:

## \$2,387 (2.4x ROI)

Control-matched MSK medical claims analysis:

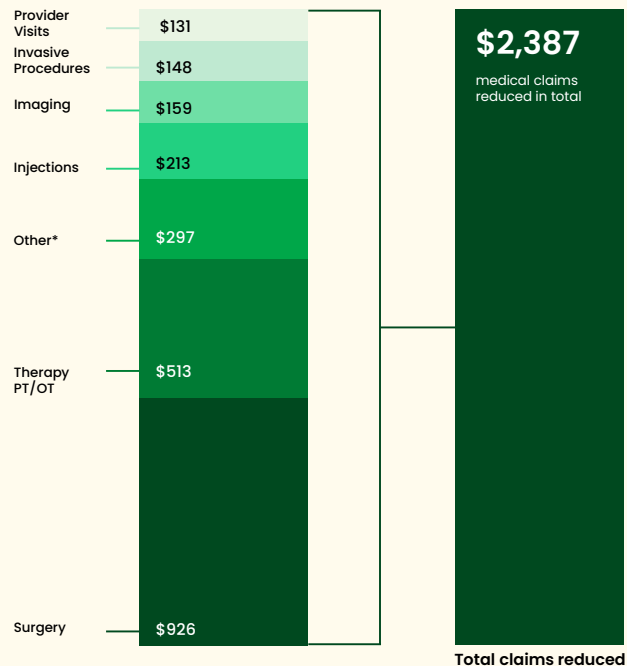
- 2 years
- 136 employers across 46 industries
- 8,000+ participants

Study methodology independently validated by global actuarial firm

Source: 136 Employer Medical Claims ROI Study

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Hinge Health participants vs. control group savings per member by service type



\* includes DME, Testing (e.g. laboratory), Emergency Department, and all other services

## MSK Myths Debunked

All MSK pain is the same.

Traditional physical therapy is the best option.

MSK is limited to back and joint pain.

Digital MSK care is not clinically effective.

Digital care can't reduce the costs of MSK.

**Pain is complex and everyone experiences it differently.**

**Digital MSK care is accessible, clinically effective, and personalized to treat the whole person.**

**Women's pelvic floor disorders are MSK conditions.**

**Digital MSK care is proven to drive positive clinical outcomes.**

**Digital MSK care is proven to drive ROI.**

**Thank you**