

# Discover How Your Workforce Can Overcome Depression & MSK Pain

Depression and chronic musculoskeletal (MSK) pain are deeply connected and together they create a cycle that has profound impacts on the daily lives of employees.



**U**nderstanding the connection between MSK pain and mental health is important for employers because both depression and pain are extremely prevalent, costly, and a top 5 reason for absenteeism. In fact, 1 in 2 employees are dealing with an MSK condition such as back or joint pain in a given year.

Pain and depression are very connected in regards to chronic MSK pain. Depression has been shown to increase the severity and intensity of pain, and chronic MSK pain increases the risk for depression. This feedback loop is known as the depression-pain dyad.<sup>1</sup>

Chronic pain and depression share neural pathways and affect the same regions of the brain. Of people who live with depression, 65% also have chronic pain, compared to only 25–30% in the non-depressed population.<sup>2</sup> And of people who have chronic pain, an average of 27% will experience depression compared to 5–10% of people in the non-chronic pain primary care population.<sup>1</sup>

Healthcare costs for an average employee who seeks treatment for major depressive disorder exceed \$2,000 per year,<sup>3</sup> while treatment for chronic pain can add \$2,300.<sup>4</sup> Given the high co-morbidity of mental health and MSK pain, employers are increasingly looking to holistic interventions to break the cycle of member's physical and emotional pain.

## 800%

Higher risk of depression for people who report 3 or more areas of MSK pain<sup>5</sup>

## 65%

Of people with depression also report chronic MSK pain<sup>1</sup>

## \$4,300

Employer extra spend per worker per year for those with a major depressive disorder and chronic pain<sup>3</sup>

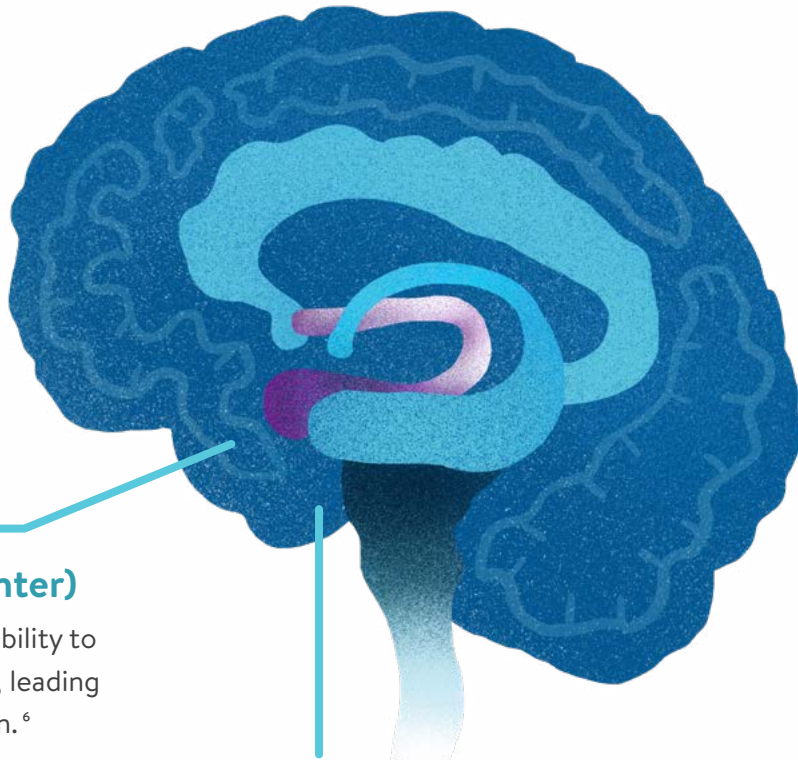
## Pain and Depression Are Linked

Fighting depression without addressing MSK pain is like fighting with one hand tied behind your back. When someone is depressed, both the perception of pain and the emotional ability to manage the pain is disrupted. Pain also blunts the effects of anti-depression medication. 95% of patients who have refractory depression (depression that does not improve after 12 months of treatment) have an underlying chronic pain condition. Essentially, difficult to treat depression is a chronic pain problem.



## Depression-Pain Dyad & The Brain

Chronic pain and depression share neural pathways and affect the same regions of the brain.



### Amygdala (Emotional processing center)

Depression lowers the amygdala's ability to control emotional response to pain, leading to feeling helpless to overcome pain.<sup>6</sup>

### Neurotransmitters

Pain and depression decrease critical neurotransmitters. MSK pain depletes the levels of the neurotransmitter GABA, which leads to increased stress, hypersensitivity, and higher risk of depression.<sup>7</sup>

### Hippocampus (Learning & memory center)

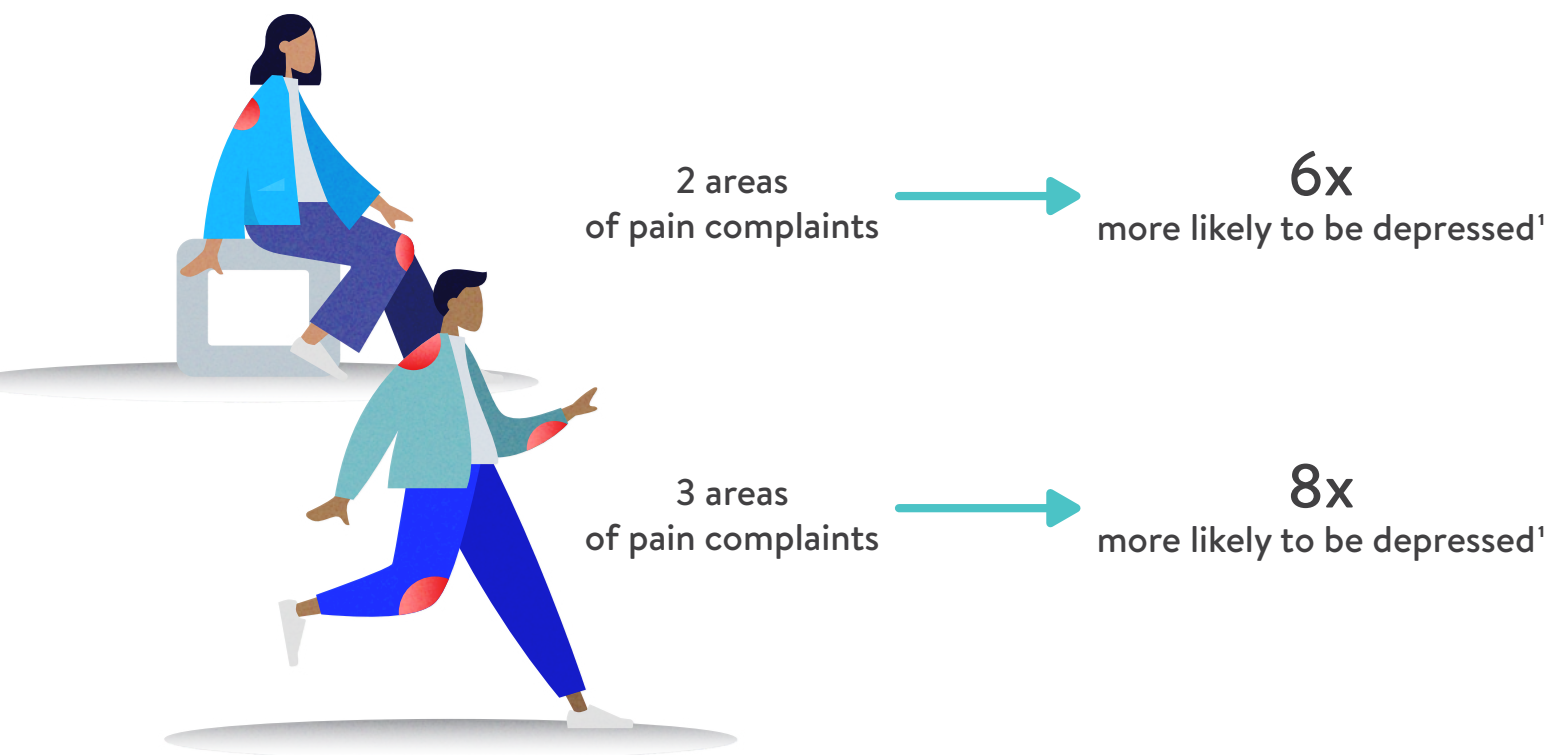
Depression raises the intensity of both physical and emotional pain, causing the hippocampus to create a cycle of pain that becomes learned and chronic.<sup>8</sup>

I’ve battled with depression. It’s a vicious cycle of pain and stiffness and isolation. And then comes along Hinge Health and then you feel the progress — I just feel better...I’m doing things with people that I used to have to say “no” to because of knee pain.

—Lenell H.  
Hinge Health participant



## Correlation of Pain and Depression



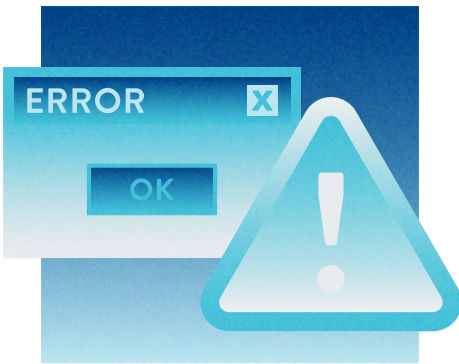


# Pain and Depression Negatively Impact The Workplace



## Lower productivity

- 60% of depressed workers report functional impairment.<sup>9</sup>
- Chronic MSK pain and depression are the top reasons that employees use sick days or PTO.<sup>10</sup>
- Up to 40% of sick days are for mental health issues.<sup>11</sup>
- Employees that continue working at a reduced ability indirectly cost employers 3 times more than those who call in sick.<sup>12</sup>
- Costs associated with termination, recruiting, and re-training.



## Job errors

- Injuries related to lack of focus in service and manufacturing.
- Increased workplace conflict.
- Poor customer service.



## Higher healthcare utilization

- Employee treatment for major depressive disorder exceeds \$2,000 annually.<sup>3</sup>
- Employee treatment for chronic pain exceeds \$2,300 annually.<sup>3</sup>
- The average short-term disability claim for chronic MSK back pain costs employers about \$10,000 in benefits and wage replacement and 50 lost work days.
- Long-term disability increases to about \$35,000 in benefits and wage replacement and 169 work days.<sup>5</sup>



## Employer Approaches to Pain and Depression

MSK pain impacts mental health outcomes. Employees with both MSK pain and depression increase healthcare utilization, disability claims, and absenteeism. Health and benefit executives at leading employers recognize that comprehensive, holistic interventions are needed to tackle the co-morbid conditions of MSK pain and mental health.

A comprehensive approach is supported by multiple research publications. *Global Spine Journal* states, “cognitive behavioral therapy has been shown to be just as effective as surgery for chronic low back pain”.<sup>13</sup> And research from the *Archives of General Psychiatry* reported “improved lower back pain at 7 weeks and 2 years were associated with significantly fewer depressive symptoms.”<sup>14</sup>

Employers are looking to provide support for their hardest to reach and engage employees with a digital solution, like Hinge Health. Hinge Health is the only evidence-based, digital MSK solution that breaks the cycle of pain and depression by addressing behavioral health with mental health

screening, behavioral therapy intervention, 1:1 coaching, and social support. Addressing MSK pain can impact depression without the typical stigma of addressing mental health. As a result, across the Hinge Health book of business, participants report a 60% reduction in pain coupled with 50% reduction in anxiety and in depression.

### 3 Steps for employers to tackle pain and depression

1. Recognize the co-morbidity of mental health & MSK pain
2. Consider the emotional impact on your workforce, it's more than just back or joint pain
3. Approach MSK and mental health care more holistically



## Hinge Health Case Study

### Reducing MSK Pain, Surgery, and Absenteeism

In 2018, Southern Company, a large, self-insured employer, partnered with Hinge Health to address their #2 medical cost driver, musculoskeletal conditions. Southern Company is America's premier energy company with employees across 18 states. Clinical outcomes included decreases in: pain, likelihood of surgery, and absenteeism.

#### Enrollment and Activation

To ensure a successful launch, the Hinge Health Client Success team partnered with Southern Company to reach over 50,000 members. Together, a comprehensive enrollment and activation campaign was developed to include health fairs, on-site print marketing, direct mail and email, which drove 1 out of 7 eligible members to a co-branded website to determine clinical eligibility.



HQ: Atlanta, GA

Industry: Energy & infrastructure



#### Workforce:

- National Fortune 200 company
- 50K adult health plan members
- Mixed field & office workforce
- Predominantly male

#### The Challenge

- Traditionally difficult to engage, dispersed workforce
- MSK conditions account for 15% of medical spend

”  
We’ve seen a reduction in absenteeism and presenteeism... I wish we had more programs like Hinge Health that were as easy to implement and as successful right out the gate.

— Katie Kirkland, Director of Benefits  
Southern Company



## Southern Company Clinical Outcomes



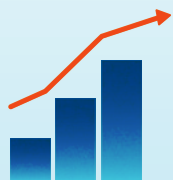
### Reduced back & knee pain

68% reduction in pain relative to screening



### Avoided 2 out of 3 surgeries

Elective surgery utilization was reduced by two-thirds in Year-1 and 60% in Year-5



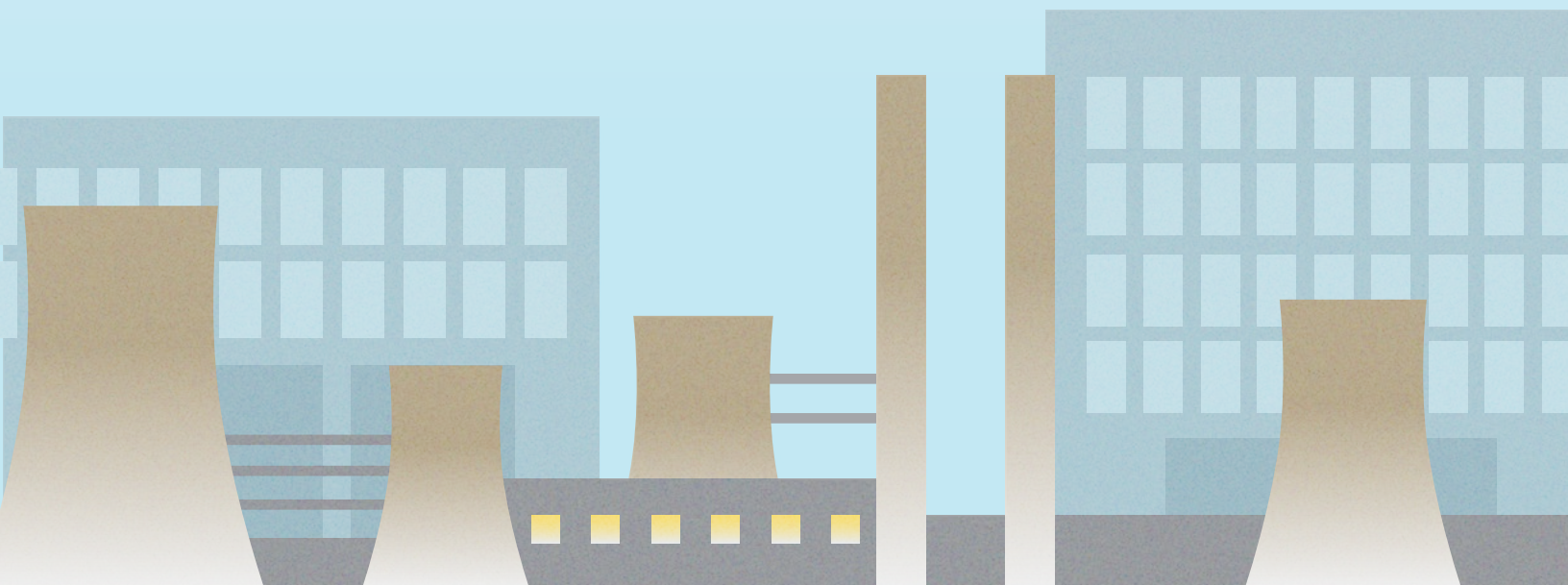
### Improved productivity

Hinge Health participants reported 53% decrease in absenteeism related to back and knee pain



### Decreased depression & anxiety by one-third

Clinical anxiety decreased 37% and clinical depression decreased 33%



# Hinge Health's Approach to Behavioral Health



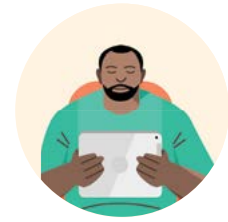
## Exercise Therapy

Free tablet and wearable sensors for real-time feedback on movement



## Behavioral Health

Mental health screening, behavioral health intervention, and unlimited 1:1 coaching



## Education

Personalized and interactive education curriculum

## Our Guaranteed ROI

- Utilization-based pricing, not PMPM
- Guaranteed 1:1 ROI
- Successful track record with multiple Fortune 500 companies and dispersed, traditionally hard-to-reach workforces
- Direct billing through insurance claims

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