

Deep Dive Into Musculoskeletal Health and Health Coaching





About YourCoach.Health

At YourCoach.Health we stand up, scale and operate best-in-class health coaching services for the health and care industry via our easily and seamlessly embedded technology, powered by the largest army of validated health and wellness coaches. If you are an organization looking to integrate or scale health coaching for your population or around your product or service, we are here for you!



Content

1	Executive Summary	7
2	What Is Musculoskeletal Health?	Я
3	Why Is Musculoskeletal Health Important?	7
4_	The State of Musculoskeletal Health in the U.S.	Z

5	Musculoskeletal Disorders
6	How Health Coaches Can and Do Help
7	The Science of Health Coaching
8	About YourCoach



Executive Summary

Musculoskeletal disorders are the leading cause of disability in the U.S. and had cost the U.S. health system an estimated <u>\$420 billion</u> in 2018 alone—more than any other chronic condition. Most importantly, they're exceptionally painful and exceedingly debilitating.

Musculoskeletal disorders encompass a wide range of conditions, including arthritis, osteoporosis, back pain, and joint injuries, with an enormous impact on quality of life and longevity, and they affect more than <u>1 in 2 American adults</u>.

What's more, chronic pain is a hallmark of these conditions, affecting more than 20% of the U.S. population, or <u>50 million</u> Americans. Nearly <u>one in every ten</u> American adults are suffering from high-impact pain, defined as chronic pain that limits life or work activities on most days or every day during the past 6 months. This, alone, costs the U.S. economy up to <u>\$635 billion</u> each year in medical treatments, disability payments, and lost productivity. Health and wellness coaches are emerging as integral partners in promoting musculoskeletal health and, even more importantly, in managing chronic pain. By employing evidence-based strategies and behavior change techniques, coaches empower clients to take an active role in preventing and managing ongoing disorders and chronic pain.

In today's Deep Dive, we take a closer look at the prevalence of musculoskeletal conditions across the country; opportunities for health coaching interventions; and the latest data that supports why health coaches are very necessary partners to those combating ongoing musculoskeletal conditions.

Studies have demonstrated that personalized coaching can lead to reductions in musculoskeletal pain severity and improvements in MSK function; lower the burden of disability and chronic pain; decrease depression and anxiety symptoms; and increase physical activity among patients with musculoskeletal disorders and/or chronic pain.



What Is Musculoskeletal Health?

Musculoskeletal health refers to the overall health and functioning of the muscles, bones, tendons, ligaments, joints, and other connective tissues in the body. It encompasses the structure, function, and well-being of the musculoskeletal system, which plays a critical role in supporting movement, maintaining posture, and protecting vital organs.

Key components of the musculoskeletal system include:

Bones

The rigid, mineralized structures that provide support, protect organs, and allow for movement through their interactions with muscles.

Muscles

The tissues responsible for movement by contracting and relaxing. They work in pairs and are attached to bones via tendons.

Joints

The points where bones come together, allowing for movement and flexibility. Different types of joints enable various movements, from simple hinge-like motions to complex rotational movements.

Tendons

Tough, fibrous tissues that connect muscles to bones, transmitting the force generated by muscle contractions to produce movement.

Ligaments

Strong, elastic bands of tissue that connect bones to other bones, providing stability and preventing excessive movement at the joints.

Insight: The musculoskeletal system works to help one stand, sit, walk, run and move. Adult bodies have 206 bones and more than <u>600 muscles</u>, connected by ligaments, tendons and soft tissues.





What Is **Musculoskeletal** Health?

Musculoskeletal pain is a broad term that refers to pain or discomfort that affects the muscles, bones, tendons, ligaments, joints, or other components of the musculoskeletal system. This pain or discomfort can be acute (short-term) or chronic (longlasting), and is a common reason for seeking medical care.

Exercise, working through muscle and bone interactions, plays an important role in maintaining good health. Studies show that lack of exercise leads to obesity and increased complications such as diabetes and metabolic disease.

<u>Symptoms</u> of Musculoskeletal pain might include:

- Pain that ranges from a dull ache to severe and sharp discomfort
- Stiffness or reduced range of motion in joints or muscles
- Swelling or tenderness in affected areas
- Fatigue or muscle weakness

Causes of Musculoskeletal Pain:



Trauma, fractures, sprains, strains, and contusions can cause acute musculoskeletal pain

Overuse or Repetitive Strain

Repeating the same movements or activities, improper ergonomics, or overexertion can lead to strain and pain in the muscles and joints

Inflammation

Conditions like arthritis (e.g., osteoarthritis, rheumatoid arthritis), tendonitis, bursitis, and certain autoimmune disorders can cause inflammation and pain in the affected musculoskeletal structures

Nerve Compression

Pressure on nerves, such as in conditions like herniated discs or carpal tunnel syndrome, can result in radiating or localized pain

Posture and Alignment Issues

Poor posture, spinal misalignment or structural abnormalities can cause chronic musculoskeletal pain over time



Medical Conditions

Conditions like fibromyalgia, myofascial pain syndrome and complex regional pain syndrome can cause widespread musculoskeletal pain

Why Is Musculoskeletal Health Important?

Pain Prevention and Management

Maintaining musculoskeletal health can help prevent or reduce the incidence of chronic musculoskeletal pain, which is common and often debilitating. Strong muscles and flexible joints can mitigate strain on the body and reduce the likelihood of pain and discomfort.

Aids in Maintaining Independence

Good musculoskeletal health is crucial for maintaining independence, especially as one ages. Strong muscles and bones reduce the risk of falls and fractures. supporting an active and self-sufficient lifestyle.

Provides Structural Support

Bones provide a structural framework for the body and protect vital organs. A healthy skeletal system ensures proper support and protection, minimizing the risk of injury and damage.

Supports Mobility and Functionality

A healthy musculoskeletal system enables smooth movement. strength, and coordination. It allows one to walk, run, lift, bend, and perform various daily activities with ease and efficiency.



Enhances

Musculoskeletal health is directly tied to one's quality of life. When muscles, bones, and joints are in good condition, an individual can participate in a wide range of physical activities, hobbies, and social interactions that contribute to an enriched and fulfilling life.

Quality of Life

Why Is Musculoskeletal Health Important?



Supports Mental Health

Regular physical activity, which relies on a healthy musculoskeletal system, is linked to improved mental health. Exercise releases endorphins, reducing stress, anxiety, and depression, and promoting a positive outlook on life.



Maintaining musculoskeletal health throughout life helps an individual age healthily. Strong bones <u>reduce the risk</u> of osteoporosis and fractures in older age. Regular exercise and a healthy diet supports long-term musculoskeletal integrity.

Prevents Chronic

A well-functioning musculoskeletal system can help prevent or manage chronic conditions such as osteoarthritis, rheumatoid arthritis, and other joint or bone disorders that might significantly impact mobility and quality of life.



Productivity and Economic Impact

A healthy workforce with good musculoskeletal health is more productive and has a net positive economic impact. Healthier individuals are also absent less frequently which benefits both the individual and society as a whole.



Good musculoskeletal health is associated with a longer, healthier life. It supports active aging, promoting overall longevity and well-being.

Promotes Healthy Aging and Longevity

The State of Musculoskeletal Health in the U.S. Data:

Musculoskeletal Conditions

Data:

1 in 2 Americans live with a musculoskeletal condition.

Musculoskeletal conditions are highly prevalent in the U.S. and represent a significant burden on individuals and the healthcare system, accounting for more than <u>130 million</u> patient visits to healthcare providers annually. Conditions like osteoarthritis, back pain, rheumatoid arthritis, fractures, and other bone and joint disorders affect millions of Americans.

According to the American Academy of Orthopaedic Surgeons Report, over 50% of Americans 18+ experience musculoskeletal injuries at some point in their lives, and 22% of the workforce loses work days due to musculoskeletal conditions.

Data analysis conducted by Evernorth showed that musculoskeletal conditions cost the U.S. healthcare system

420 billion 7

in 2018 alone—more than any other chronic condition

Data:

An estimated

126.6 million 7

Americans (one in two adults) are affected by a musculoskeletal condition-comparable to the total percentage of Americans living with a chronic lung or heart condition-costing an estimated



in annual treatment, care, and lost wages.



The State of Musculoskeletal Health in the U.S.

Musculoskeletal Conditions

The aging population in the U.S. contributes to the prevalence of musculoskeletal conditions across the country. Age-related changes, including loss of bone density, muscle mass, and joint degeneration, increase the risk of musculoskeletal issues in older adults.

Data:



of all women older than 50 are expected to suffer at least one osteoporotic fracture in their lifetime, and osteoporotic fractures are associated with increased mortality.

Chronic Pain

Data:



One in five (20.9%) adult Americans, or

50 million 7

people, are suffering from chronic pain, which is defined as pain on most days in the prior 6 months.

Musculoskeletal disorders cause long-term pain, physical disability, psychological distress, and reduced quality of life. According to the latest data, every fifth American adult experienced chronic pain on most days in the prior half of the year. High-impact pain, defined as chronic pain that limited life or work activities on most days or every day during the past 6 months, has reportedly affected <u>8%</u> of the U.S. population, or <u>19.6 million</u> people.



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The State of Musculoskeletal Health in the U.S.

Chronic Pain

Data:

Chronic pain costs the U.S. up to

each year in medical treatments, disability payments, and lost productivity.

Moreover, studies have found that chronic pain is substantially more common in the U.S. than diabetes, depression, and high blood pressure. A recent 2023 study, published in <u>JAMA Network</u> <u>Open</u>, looked at data on more than 10,000 participants through the National Health Interview Survey, which is conducted annually by the CDC's National Center for Health Statistics.

Among people who reported being pain-free in 2019, the annual rate of chronic pain the next year was 52.4 per 1,000 people, and there were 12 cases of high-impact chronic pain per 1,000 people.

<u>By comparison</u>, the researchers found, there are 7.1 cases of diabetes, 15.9 cases of depression, and 45.3 cases of high blood pressure per 1,000 people per year.

Researchers also found that two-thirds (<u>62.3%</u>) of participants who reported chronic pain in 2019 said they still had it a year later. Only 10% of people with chronic pain in 2019 were pain-free in 2020.







Here are some of the most common *musculoskeletal disorders* in the United States:

Name	Description	Prevalence	Symptoms
<u>Osteoarthritis</u> (OA)	Degenerative joint disorder causing cartilage breakdown in joints, especially weight-bearing ones.	Over <u>32.5 million</u> adults	 Joint pain Stiffness Reduced range of mo Swelling
<u>Back Pain</u>	A widespread condition often due to muscle strain, herniated discs, or spinal issues, resulting in varying levels of discomfort in the back.	<u>8.2%</u> of American adults have chronic severe back pain	 Dull or sharp pain in t Muscle stiffness Limited movement
<u>Rheumatoid</u> <u>Arthritis</u> (RA)	Chronic autoimmune disorder affecting joints, causing inflammation, pain, and potential joint damage.	Around <u>1.3 million</u> adults (as of 2021)	 Joint pain Swelling Stiffness Fatigue
<u>Osteoporosis</u>	Weakening of bones, making them brittle and prone to fractures, especially common in postmenopausal women and older adults.	Approximately <u>10 million</u> Americans (as of 2021)	Fractures (hip, spine,Loss of height
<u>Fibromyalgia</u>	Chronic disorder characterized by widespread musculoskeletal pain, tenderness, fatigue, and sleep disturbances.	Estimated <u>4 million</u> adults (as of 2021), or 2% of population	 Widespread pain Fatigue Sleep disturbances Cognitive difficulties
<u>Gout</u>	Type of arthritis caused by uric acid crystal accumulation in joints, resulting in severe pain and inflammation, often affecting the big toe.	Over <u>8 million adults</u> (as of 2021)	 Sudden intense joint Swelling Redness

tion

the back

wrist) with minor trauma

pain



Musculoskeletal Disorders

Here are some of the most common *musculoskeletal disorders* in the United States:

	Name	Description	Prevalence	Symptoms
	<u>Carpal Tunnel</u> <u>Syndrome</u>	Compression of the median nerve in the wrist, leading to numbness, tingling, and weakness in the hand and fingers.	Approximately <u>50 cases per</u> <u>1000 people</u> in the general population	 Numbness Tingling Weakness Pain in the hand and find
	<u>Tendinitis and</u> <u>Tendinosis</u>	Tendinitis is inflammation of a tendon, usually due to repetitive use. Tendinosis involves chronic tendon degeneration without inflammation.	Prevalence varies, estimated thousands of cases yearly	 Pain Stiffness Swelling near the affect
Scoliosis Abnormal sideways curvature of the spine, often diagnosed during growth, causing postural problems and, in severe cases, breathing difficulties.			Overall prevalence of 0.47-5.2% in the current literature.	 Uneven shoulders or hi One shoulder blade stick

fingers

cted tendon

nips icking out more than the other



How Health Coaches Can and Do Help

Health coaching can be a keystone to ensuring important behavior changes become incorporated into daily routines, which is essential when protecting and promoting musculoskeletal health. Coaches leverage an <u>evidence-based approach</u> to help with managing disease catalyzing changes in nutrition, behavior, physical activity levels, self-acceptance, mental health improvements, enhanced quality of life, and more.

At the heart of health coaching is a holistic approach, which considers the person as a whole, rather than focusing on an individual illness or health concern.

Health coaches maintain a client-centered approach, wherein the client is the expert in choosing their goals, engaging in self-discovery or active learning processes, and self-monitoring behaviors to increase accountability, all with the support and help of a health coach, until the desired outcomes are achieved. Instead of telling clients what they should or shouldn't do, coaches help clients to discover their own power and path to change.





A Health Coach is ...



A highly skilled and certified professional



Knowledgeable in human behavior, motivational techniques and health outcomes



A change agent helping clients set and achieve health goals and build new habits



Trained in helping a client maintain a positive and healthy mindset while working towards health and wellness goals by focusing on their strengths





NOT A Health Coach is

Although health coaches can and do work alongside patient care teams or in collaboration with other health care professionals to help clients enact health change day-to-day, it's important to understand their scope of practice.



A health coach is NOT a Doctor

Health coaches can not diagnose or prescribe. Health coaches are integral members of the health and care team and work with patients in helping them reach their health & wellness goals and adhere to a plan prescribed by their doctor.



Health coaches don't need to be therapists or psychologists, and great coaches don't try to mimic what a mental healthcare professional does. These professionals can complement one another and often work together.



A health coach is NOT a Personal Trainer

While health coaches encourage physical activity, they focus on many other aspects of a person's wellbeing including emotional and mental wellness. They do not typically create fitness regimens in the same way that personal trainers do. However, some health coaches do hold fitness certifications and can help those who are seeking both a health coach and a personal trainer.

Insight: <u>Demystifying Health Coaching: Unpacking the Differences</u> Between Dieticians, Nutritionists & Health Coaches



A health coach is NOT a Nutritionist or Dietitian

Health coaches can help clients establish action plans for generalized healthy eating behaviors, whereas nutritionists and dietitians can prescribe meal plans and give specific nutritional advice to clients according to their medical needs or goals.

How Health Coaches Can and Do Help Maintain Musculoskeletal Health

Assessment and Personalized Planning

Health coaches take into account a client's lifestyle, daily activities, and any existing musculoskeletal conditions. They work closely with them to develop personalized plans that align with their specific needs, goals, and abilities.

Education on Musculoskeletal Health and Chronic Pain

Health coaches educate clients about the *musculoskeletal system*, chronic pain risk factors, and lifestyle choices that can negatively or positively impact musculoskeletal health. They empower clients to better understand the factors that might contribute to musculoskeletal conditions or exacerbate pain and make informed decisions to achieve better outcomes.

Exercise Healthscription and **Movement Education**

Health coaches can help clients stick with regular exercise programs that focus on flexibility, strength, mobility, and functional movements. They can educate clients about proper movement techniques and habits (often in collaboration with physical therapists, personal trainers and other trained professionals) to help manage chronic pain and improve musculoskeletal function.

Nutrition Guidance for Musculoskeletal Health

Studies have shown optimal and healthy nutrition are associated with improved musculoskeletal functioning and reduced musculoskeletal pain, specifically in adults with osteoarthritis. Health coaches can help clients develop a balanced diet (often in collaboration with nutritionists and dietitians) that supports bone health, reduces inflammation, and aids in tissue repair and maintenance.

How Health Coaches Can and Do Help Maintain Musculoskeletal Health

Stress Management and **Relaxation Techniques**

Chronic pain and musculoskeletal disorders can be exacerbated by stress. Health coaches empower clients with stress reduction techniques, relaxation exercises, and mindfulness practices to help them manage stress effectively, which can lead to reduced pain and improved musculoskeletal well-being.

Pain Management Strategies

Health coaches collaborate with clients to develop effective pain management strategies. This may include techniques such as mindfulness-based stress reduction, breathing exercises, progressive muscle relaxation, and guided meditation.

Promotion of Active Lifestyle and **Physical Activity**

Studies have confirmed that a low level of physical activity is associated with a higher prevalence of musculoskeletal disorders. Health coaches help clients find enjoyable and appropriate activities that align with their abilities and preferences, promoting musculoskeletal health and reducing the risk of chronic pain.



<u>Studies show</u> that pain intensity is highly correlated with sleep quality and duration, which means that unhealthy sleep patterns can increase chronic pain in adults. Health coaches assist clients in developing healthy sleep routines and habits that support recovery and pain reduction.

How Health Coaches Can and Do Help Maintain Musculoskeletal Health

Collaboration with Healthcare Professionals

Health coaches work collaboratively with healthcare and medical professionals, such as physical therapists, chiropractors, and pain specialists, to implement a comprehensive approach to managing musculoskeletal disorders and chronic pain.

Monitoring Progress and Adjusting Plans

Health coaches can help clients develop systems to monitor their progress, pain levels, functional improvements, and lifestyle habits. This fosters awareness and selfefficacy in the client and empowers them to make strategic adjustments to ensure continued progress and success.

Medication Adherence

Health coaches can assist clients by providing education on medication use, helping with adherence strategies, and offering emotional support. They play a crucial role in ensuring patients understand their medications, manage side effects, and stay motivated to follow their prescribed treatment plans.

Joint Protection

Health coaches can support clients in adopting joint protection techniques by educating them on posture and ergonomics to minimize joint stress during daily activities. They can also provide strategies for pacing activities, using assistive devices, and making lifestyle adjustments to reduce the risk of joint damage and improve overall joint health.

The Science of Health Coaching



Improving Musculoskeletal **Pain Severity and Function**

<u>A 2022 observational and longitudinal study of digital MSK</u> program participants versus nonparticipants (n = 2570) examined pain, function, depression, and anxiety at 3, 6, and 12 months, and health care use at 12 months.

The intervention group engaged in a digital MSK program that included exercise, education, and coaching for at least 3 months. The nonparticipant group registered, but never started the program.



MSK Pain Improvements

Study results showed that pain improvements were significantly higher for the intervention group when compared with the nonparticipant group:



Percent achieving minimally clinical important difference (MCID) in pain, by follow-up time point





MSK Function

Moreover, results from secondary outcomes showed statistically significant improvements in functional improvement for intervention group, and those results were higher when compared to control group:



Percent achieving minimally clinical important difference (MCID) in function, by follow-up time point



Depression

Among those with moderate to severe depression at baseline, the percentage with moderate to severe depression at follow-up was significantly higher for the nonparticipant group versus the intervention group by 34.7% at 3 months, 43.5% at 6 months, and 35.7% at 12 months.

Percent with moderate to severe depression, among those with moderate to severe depression at baseline, by follow-up time point



Notes: Nonparticipant group denominator was n = 21 at 3 months, n = 19 at 6 months, and n = 26 at 12 months. Intervention group denominator was n = 175 at 3 months, n = 118 at 6 months, and n = 89 at 12 months. Differences between comparison and intervention group were statistically significant at * p < =.01 and ** p < =.001

Source: Wang G, Yang M, Hong M, Krauss J, Bailey JF. Clinical outcomes one year after a digital musculoskeletal (MSK) program: an observational, longitudinal study with nonparticipant comparison group. BMC Musculoskelet Disord. 2022 Mar 11;23(1):237



Anxiety

Among those with moderate to severe anxiety at baseline, the percentage with moderate to severe anxiety at followup was significantly higher for the nonparticipant group versus the intervention group by 26.8% at 3 months, 40.5% at 6 months, and 19.8% at 12 months.

Percent achieving minimally clinical important difference (MCID) in pain, by follow-up time point



Notes: Nonparticipant group denominator was n = 38 at 3 months, n = 37 at 6 months, and n = 45 at 12 months. Intervention group denominator was n = 297 at 3 months, n = 205 at 6 months, and n = 166 at 12 months. Differences between comparison and intervention group were statistically significant at * p < =.01 and ** p < =.001.

Source: Wang G, Yang M, Hong M, Krauss J, Bailey JF. Clinical outcomes one year after a digital musculoskeletal (MSK) program: an observational, longitudinal study with nonparticipant comparison group. BMC Musculoskelet Disord. 2022 Mar 11;23(1):237

Managing Low Back Pain and Hip and Knee Osteoarthritis

A 2023 systematic review with meta-analysis, published in the Pain Medicine journal, set out to determine if working with a health coach could help people who suffer from chronic pain. Scientists searched databases for trials that fit the criteria they were looking for, which included health coaching programs or motivational programs that were used to support adults with chronic hip, knee, and low back pain.

The research included 17 published studies that met the criteria to be included. They found a significant decrease in mid-term pain, short-term disability, mid-term disability, and low back pain. They also found a substantial improvement in chronic pain due to knee osteoarthritis and long-term functional disability.

Overall, studies showed that **by working with a health coach, individuals are able to reduce disability and pain from chronic low back pain**, as well as reduce disability in knee osteoarthritis.

Managing Chronic Non-cancer Pain in Older Adults

<u>A 2022 study</u> aimed to test the efficiency of mHealth intervention that combines symptom, diet, and behavior tracking via a smartphone application with data analytics to detect associations between symptoms and lifestyle factors along with weekly health coaching sessions with a goal to mitigate chronic non-cancer pain (CNCP) in adults 55 years of age and older.

Study results showed that:

- Pain intensity scores decreased by 31% in intervention participants but only by 9% among control arm participants.
- Pain self-efficacy scores also increased by 29% in the intervention group vs. 16% in the control group.
- Pain-related disability scores decreased by 22% among intervention participants (vs. by 9%) in the control arm.
- Anxiety symptoms decreased by 55% in the intervention arm vs. 22% among control arm participants.

• Finally, the proportion of participants with General Anxiety Disorder (GAD-7) scores at follow up decreased by 0.35 to 0, whereas controls did not change at all.

Examination of the effects of the intervention

	Baseline estimate (SE)	Follow-up estimate (SE)	Follow-up -baseline (p-value)
Pain intensity (0-10)			
Control	4.90 (1.08)	4.53 (1.10)	-0.35 (0.605)
Intervention	3.83 (0.92)	2.62 (0.10)	-1.21 (0.136)
Intervention-control	-1.07 (1.18)	-1.93 (1.26)	p=0.412
Pain related disability 24-item (0-24)			
Control	13.70 (3.33)	12.42 (3.35)	-1.28 (0.249)
Intervention	11.84 (2.85)	9.02 (2.90)	-2.81 (0.042)
Intervention-control	-1.86 (3.58)	-3.40 (3.64)	p=0.367
Pain self-efficacy (0-60)			
Control	31.61 (5.68)	36.67 (5.62)	5.06 (0.284)
Intervention	37.61 (4.66)	48.59 (5.28)	10.98 (0.047)
Intervention-control	6.01 (6.23)	11.92 (6.65)	p=0.400
General anxiety disorder-7 total (0-21)			
Control	7.07 (2.71)	5.53 (2.75)	-1.54 (0.350)
Intervention	6.87 (2.31)	3.07 (2.49)	-3.80 (0.057)
Intervention-control	-0.20 (2.96)	-2.46 (3.13)	p=0.372

Source: Kaul U, Scher C, Henderson CR Jr, Kim P, Dyhrberg M, Rudin V, Lytle M, Bundy N, Reid MC. A mobile health + health coaching application for the management of chronic noncancer pain in older adults: Results from a pilot randomized controlled study. Front Pain Res (Lausanne). 2022 Jul 25;3:921428.

Managing Chronic Non-cancer Pain in Older Adults

Analysis of the qualitative data from the exit interviews revealed 3 major themes documenting positive aspects of the experience:

- 1. Participants valued the support/encouragement received by health coaches
- 2. Participants' self-monitoring behaviors were enhanced.

Intervention participants described their interactions with the health coaches using terms:





I really liked the encouragement [name of health coach] provided on a weekly basis



I really liked her upbeatness and level of attentiveness

Increasing Physical Activity and Reducing The Burden Of Chronic Low Back Pain

A 2019 randomized controlled trial with a blinded outcome assessment included 68 participants with chronic low back pain after treatment discharge. The intervention group received a physical activity information booklet, plus one face-to-face and 12 telephone-based health coaching sessions. The control group (standard care) received the physical activity information booklet and advice to stay active.

Study results showed that intervention group participants had a 38% reduced rate of care-seeking when compared to the control group. Among secondary outcomes the intervention group self-reported more walking at follow-up than the control group - the difference was 183.1 min per week. In addition, a higher proportion of the intervention group attained their physical activity goals at 6 months compared to the control group - 20 participants vs. 5. Moreover, participants were largely satisfied with the intervention, giving an 8.7 mean score out of 10.

Outcomes	Intervention Baseline	Intervention Follow-Up	Control Baseline	Control Follow-Up	Intervention vs Control*	Intervention Baseline	
	n=34	n=31	n=34	n=24	Coef./OR ^β	95% Cl	р
Pain intensity, score/10ª	5.3 (1.9)	3.8 (2.4)	5.1 (1.4)	4.0 (3.4)	-0.14	-1.34 - 1.06	0.815
Disability, score/24 ^b	8.9 (5.4)	5.7 (5.3)	9.0 (6.1)	6.0 (5.7)	-0.47	-3.13 - 2.18	0.722
Self-reported walking, min/week ^c	340.3 (688.9)	453.0 (942.5)	250.8 (221.2)	254.5 (390.8)	183.1	48.53 - 317.68	0.009
Self-reported moderate PA, min/week ^c	109.7 (379.1)	60.9 (96.1)	93.5 (273.0)	159.7 (343.5)	61.0	-46.05 -1 68.12	0.256
Self-reported vigorous PA, min/week ^c	89.4 (363.5)	77.3 (174.1)	35.3 (165.8)	71.2 (163.3)	50.5	-63.83 - 164.81	0.377
Objective light PA, min/week ^d	1984.9 (712.2)	2065.7 (529.5)	1936.7 (655.5)	1941.2 (546.2)	133.5	-169.6 - 436.6	0.378
Objective MVPA, min/week ^e	202.2 (152.4)	187.7 (138.5)	200.5 (166.2)	169.2 (131.8)	35.7	-38.2 - 109.6	0.334
Step count /week ^f	51,613 (27007)	51,659 (25389)	50,684 (29072)	49,141 (24883)	6301	0.347 - 19,719	0.347
Goal attainment ⁹ , number (%) ^β	-	20 (65)	-	5 (22)	6.54	1.90 - 22.48	0.003

Examination of the effects of the intervention

Source: Amorim AB, Pappas E, Simic M, Ferreira ML, Jennings M, Tiedemann A, Carvalho-E-Silva AP, Caputo E, Kongsted A, Ferreira PH. Integrating Mobile-health, health coaching, and physical activity to reduce the burden of chronic low back pain trial (IMPACT): a pilot randomised controlled trial. BMC Musculoskelet Disord. 2019 Feb 11;20(1):71.

We are here for you!

We stand up, scale and operate best-in-class health coaching services for the health and care industry via our easily and seamlessly embedded technology, powered by the largest army of validated health and wellness coaches. If you are an organization looking to integrate or scale health coaching for your population or around your product or service, we are here for you!





About YourCoach

YourCoach.Health is the only operating system for behavior change, powered by health coaches. Our industry partners entrust us to stand up or augment their health coaching operations utilizing our APIs, widgets and techaugmented army of validated and credentialed health coaches to surround their existing product or service. We're the premier virtual home for health and wellness coaching, an ecosystem built to empower health coaches while expanding access to their services through our industry partnerships. Join us on the Health Coaching Revolution as we strive to deliver the power of health coaching to the 8.5 billion global population by 2030.

Our mission

By the year 2030 our mission is for the projected 8.5 billion people in the world to have access to Health Coaches, creating even more Happy and Healthy Humans.







Health Coaching Industry Report V2.0

