



Deep Dive Into

Dermatology and Health Coaching



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Executive Summary

The skin is the largest organ of the body and therefore one of the most susceptible to health threats. It plays a pivotal role in maintaining the body's temperature, protecting against harmful pathogens, and providing sensory information. It's also in regular contact with UV rays and environmental pollutants.

In the United States, skin disorders are highly prevalent, affecting 100 million people each year. Moreover, skin diseases impose a significant economic burden on the healthcare system and society as a whole, resulting in \$75 billion of direct costs annually.

Limited access to dermatological care, the high cost of dermatological treatments and medications (many of which are not as widely covered by insurance as other conditions) as well as racial and gender biases contribute to the increasing burden of these conditions.

Health coaches, through their personalized and evidence-based approaches, have proven to be valuable assets in preventing and managing skin diseases and helping clients maintain overall health and well-being. They work closely with clients to develop personalized strategies for protecting and preserving their skin, especially as it changes with age. Health coaches empower clients by providing evidence-based information on skin care routines, dietary choices, lifestyle modifications, and work with clients to implement stress management techniques.

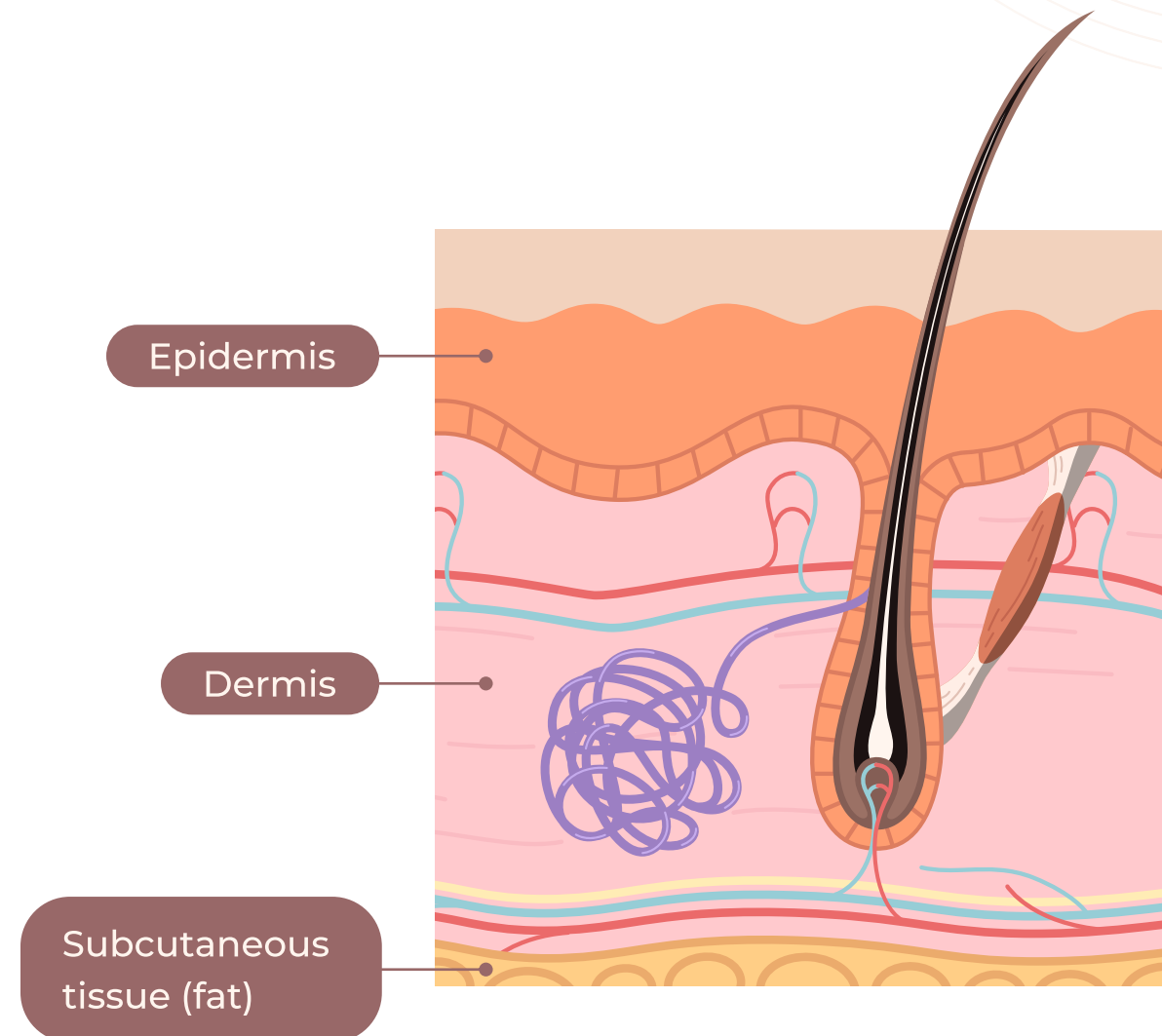
The effectiveness of health coaching interventions for skin health is supported by the latest scientific evidence. Studies have demonstrated that personalized coaching can lead to reductions in symptoms, better adherence to skincare regimens and healthier lifestyle habits—overall promoting better health outcomes across the board.

What is Dermatology?

Dermatology is a medical specialty that focuses on the diagnosis, treatment, and prevention of conditions related to the skin, hair, nails, and mucous membranes.

Dermatologists are doctors who specialize in dermatology and are trained to treat a wide range of skin conditions, from ailments like acne, eczema, and psoriasis to more serious conditions such as skin cancer and autoimmune disorders.

Dermatologists undergo extensive medical training to become experts in the structure, function, and **diseases of the skin**. They can perform various procedures and interventions, including biopsies, surgical excisions, cryotherapy (freezing), laser therapy, and cosmetic treatments.



Insight: The skin is the largest organ in the human body that constantly renews itself. An average adult's skin covers an area of about 22 square feet and weighs around 8 pounds.

3 Interesting Science Facts About Skin

Fact 1 Stress can make skin unhealthy

Stress has a profound impact on skin health, and its effects are well-documented in scientific research. When we experience stress, our body's "fight or flight" response triggers the release of hormones like cortisol, adrenaline, and norepinephrine, which can wreak havoc on the skin.

Chronic stress leads to increased inflammation in the body, including the skin, exacerbating conditions like acne, eczema, and psoriasis. Moreover, stress weakens the skin's natural barrier, making it more susceptible to environmental irritants and leading to dryness and sensitivities.

The accelerated breakdown of collagen and elastin due to stress hormones can contribute to premature aging, causing wrinkles and fine lines to appear earlier.



3 Interesting Science Facts About Skin

Fact 2 Water is essential, but you might not need as much as you think

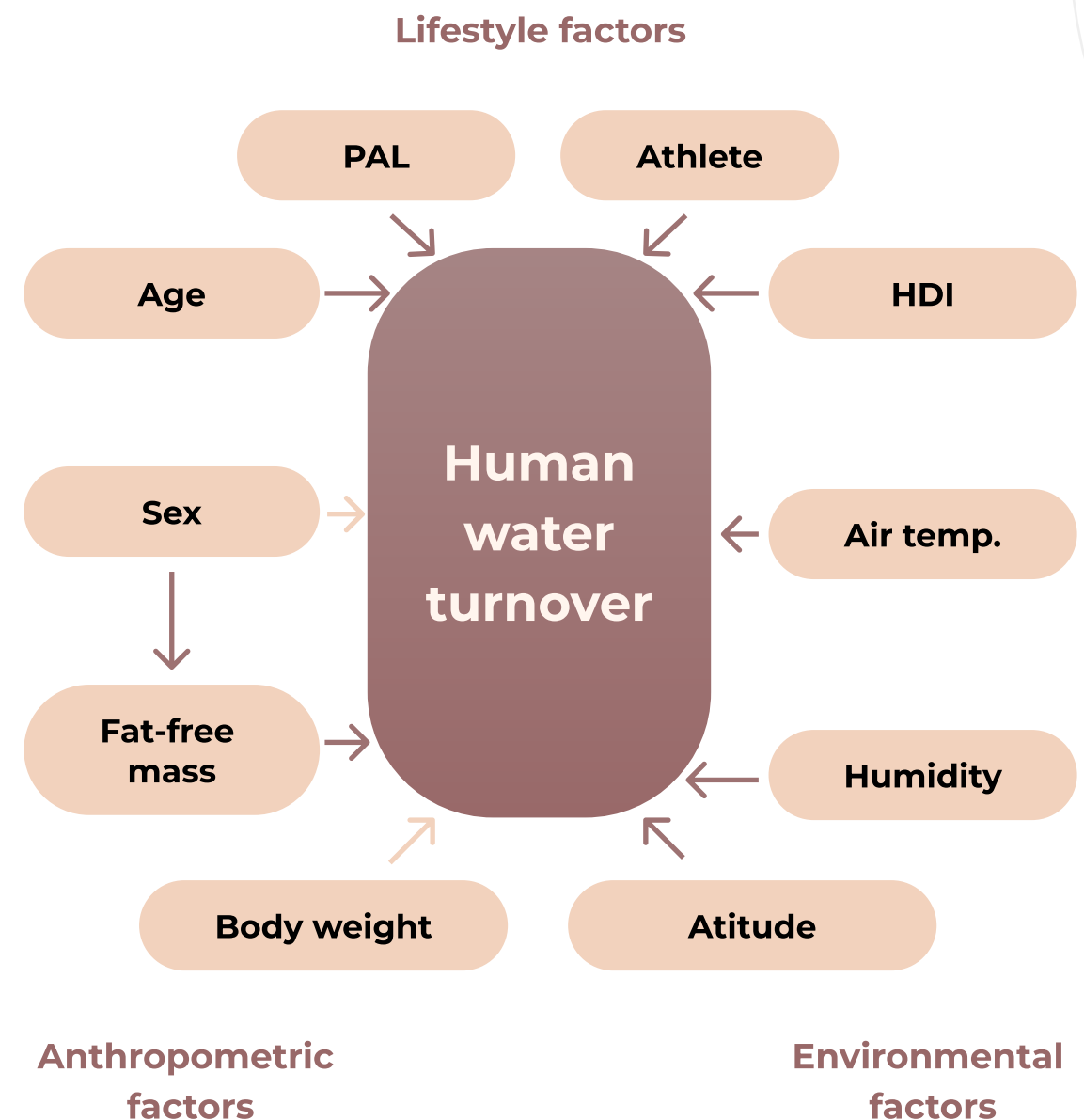
Hydration is vital for maintaining healthy skin, as it helps to keep the skin's barrier intact and supports various physiological processes. When the body is well-hydrated, it can efficiently regulate its temperature, transport nutrients and oxygen to cells, support the proper functioning of organs, aid in digestion and maintain a healthy balance of bodily fluids.

The recommended daily consumption of 8 glasses of water has never been supported by science, and new research has shown that it could be a myth.

Scientists from the University of Aberdeen, in collaboration with other researchers, studied water intake and water loss among 5,604 people from across 23 different countries, aged between eight days and 96 years old.

Findings, published in the Science Journal, suggest people only require about 6 or 7 glasses of water per day, and those who live in hot, humid settings or at high elevations, as well as athletes, pregnant and nursing mothers, may require more than that.

Researchers concluded the amount of water each individual needs can vary depending on various factors like age, weight, activity level, climate, and overall health. While some people may need more water to stay adequately hydrated, others might need less.



Source: Yosuke Yamada et al., Variation in human water turnover associated with environmental and lifestyle factors. *Science* 378,909-915(2022)

3 Interesting Science Facts About Skin

Fact 3 The sun can be as good as it is bad for your skin

Sunshine can have both positive and negative effects on our skin, depending on your sun habits.

On the positive side, sunlight is a natural source of vitamin D, which is essential for bone health, immune function, and various other physiological processes. Sunlight can uplift our mood and promote a sense of wellbeing by stimulating the release of serotonin, the "feel-good" neurotransmitter. It's no wonder many people associate sunny days with improved mood and energy levels.

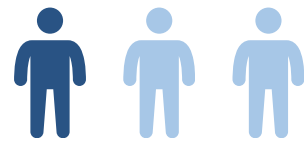
However, excessive or unprotected sun exposure can lead to adverse effects on the skin. Sunburn is one of the immediate consequences of overexposure to harmful ultraviolet (UV) rays, which can also accelerate the breakdown of collagen and elastin in the skin, contributing to premature aging, wrinkles, and sagging skin.

Moreover, exposure to UV radiation is the primary cause of skin cancer, including both melanoma and non-melanoma cancers, making sun safety a critical aspect of skin health.



Skin Health & Skin Disease Prevalence in the U.S.

Data:

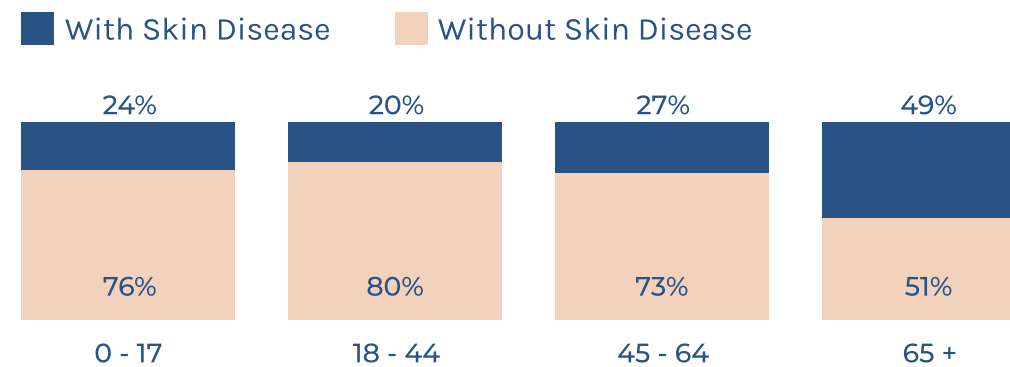


One in three Americans **suffer** from skin diseases such as acne, psoriasis, melanoma and others.

In the United States, skin conditions are highly prevalent, affecting millions of people across the country. According to the American Skin Association, **100 million** Americans suffer from skin cancers, diseases and disorders each year.

Among older populations, skin diseases occur more often. Nearly **50%** of the adults aged 65 and over have had at least one skin disease that requires further treatment or follow-up, with an average of 2.2 skin diseases each.

Prevalence of Skin Disease in the U.S. by Age



Source: Lim, Henry W.; Collins, Scott A.B.; Resneck, Jack S.; Bolognia, Jean L.; Hodge, Julie A.; Rohrer, Thomas A.; Van Beek, Marta J.; Margolis, David J.; Sober, Arthur J.; Weinstock, Martin A.; Nerenz, David R.; Smith Begolka, Wendy; Moyano, Jose V. (2017). The burden of skin disease in the United States. *Journal of the American Academy of Dermatology*, 76(5), 958-972.e2.

Data:

Skin diseases cost the American economy

\$75 billion ↗

each year

Skin Health & Skin Disease Prevalence in the U.S.

Skin diseases have a substantial economic impact on individuals, the healthcare system, and society as a whole. According to a study published in [*JAMA Dermatology*](#), the direct annual cost of skin disease in the US was estimated to be around \$75 billion. Additionally, patients and caregivers with skin disease cost \$11 billion in lost productivity.

Main burdens to addressing skin diseases in the US include limited access to dermatological care in rural and underserved areas, leading to delayed diagnosis and treatment. Additionally, the cost of dermatological treatments and medications can be a substantial burden for patients, impacting affordability and timely care.


Moreover, health disparities contribute to higher rates of skin conditions in certain populations, exacerbated by barriers to healthcare access, cultural factors, and lower health literacy. For instance, an analysis of dermatology textbooks, published in [*the Journal of the American Academy of Dermatology*](#), found that images of dark skin account for only 4% of all images, and such racial biases lead doctors to distrust patients' descriptions of symptoms and pain.



Skin Health & Skin Disease Prevalence in the U.S.

Here are some of the most prevalent skin conditions in the U.S.:

| Disorder | Description | Prevalence | Symptoms |
|--------------------------------------|---|--|---|
| <u>Acne</u> | Chronic inflammatory skin condition that causes spots and pimples, especially on the face, shoulders, back, neck, chest, and upper arms. It occurs when oil and dead skin block hair follicles, causing inflammation. | <u>85%</u> of people aged 12-24 years old experience at least minor acne | <ul style="list-style-type: none"> • Comedones (blackheads and whiteheads) • Crusting of skin bumps • Cysts • Papules (small red bumps) • Pustules (small red bumps containing white or yellow pus) • Inflammation - redness and swelling around acne lesions • Scarring of the skin |
| <u>Eczema</u> (Atopic Dermatitis) | Chronic skin inflammation condition in which patches of skin become inflamed, itchy, cracked, and rough. Some types can also cause blisters. | <u>25%</u> of children and 2-3% of adults | <ul style="list-style-type: none"> • Blisters with oozing and crusting • Dry skin all over the body, or areas of bumpy skin on the back of the arms and front of the thighs • Ear discharge or bleeding • Raw areas of the skin from scratching • Skin color changes, such as more or less color than normal skin tone • Skin redness or inflammation around blisters |



Skin Health & Skin Disease Prevalence in the U.S.

Here are some of the most prevalent skin conditions in the US:

| Disorder | Description | Prevalence | Symptoms |
|--------------------|--|--|--|
| <u>Psoriasis</u> | Autoimmune condition <u>resulting</u> in rapid skin cell growth, causing thick, scaly patches, with <u>plaque psoriasis</u> being <u>the most common form</u> . It occurs when cells develop rapidly on the skin, causing overgrowths. | <u>2-3%</u> of American population, being more common for those aged 45-64 | <ul style="list-style-type: none"> • Rashes that vary in color, tending to be shades of purple with gray scale on brown or black skin and pink or red with silver scale on white skin • Small scaling spots (commonly seen in children) • Dry, cracked skin that may bleed • Itching, burning or soreness • Cyclic rashes that flare for a few weeks or months and then subside |
| <u>Rosacea</u> | Chronic inflammatory skin condition that <u>can cause</u> flushing, blushing, and skin irritation, usually on the face. People may mistake rosacea for acne, eczema, or an allergic skin reaction. | <u>1-10%</u> of American population, being most common among ages 30-60 and women during menopause | <ul style="list-style-type: none"> • Facial redness • Visible blood vessels • Acne-like skin bumps and pimples • Persistent skin discoloration • Skin thickening • Burning or stinging sensation on the skin • Facial swelling, due to excess fluid and proteins leaking out of blood vessels |
| <u>Skin Cancer</u> | Abnormal growth of skin cells, with melanoma being the deadliest form. Some people are <u>at higher risk</u> of skin cancer than others, but anyone can get it. | The most common cancer in the U.S. - <u>9,500</u> people are diagnosed with skin cancer every day | <ul style="list-style-type: none"> • Skin growths, scabs or sores that don't resolve • Changes in existing skin spots in color, shape or size • A pearly or waxy bump on face, ears or neck • Pale or waxy skin patches • Red or flesh-colored moles |

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 skin health. Coaches leverage an evidence-based approach 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



A Health Coach is **NOT** ...

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.

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.

A health coach is NOT a Therapist

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 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.

Insight: *Demystifying Health Coaching: Unpacking the Differences Between Dieticians, Nutritionists & Health Coaches*

How Health Coaches Can and Do Help

Education on Skin Health

Health coaches provide clients with resources to foster better understanding of their specific **skin condition** and support the client in identifying its causes, triggers, and **potential risk factors**. They can further provide resources and work with the client to understand how to cleanse, moisturize, and protect the skin from harmful **UV rays** to maintain optimal skin health.

Goal Setting and Monitoring Progress

Health coaches empower clients to take ownership of their skin health by setting realistic and achievable goals and helping them track progress all along the way. They encourage clients to celebrate successes, fostering motivation and self-confidence. Coaches also can help clients identify any barriers that may be preventing them from achieving their health goals.

Personalized Care Plans

Health coaches work with clients to implement individualized care plans from their clinician, taking into account their unique needs, preferences, and health goals. These plans may include recommendations for skincare routines, lifestyle adjustments, and dietary modifications.

Lifestyle Modifications

Health coaches advocate for healthy lifestyle habits, including a balanced diet rich in skin-supporting nutrients like antioxidants, vitamins, and essential fatty acids. They also encourage regular exercise, hydration, and adequate sleep, which can all contribute to healthier skin.

How Health Coaches Can and Do Help

Supporting Treatment Adherence

Health coaches assist clients in adhering to prescribed treatment plans provided by dermatologists or healthcare providers. They can help clients understand the importance of consistency in applying medications or following recommended therapies.

Stress Management

Stress *can exacerbate* certain skin conditions. Health coaches guide clients in adopting stress-reduction techniques such as mindfulness, breathing, relaxation exercises, and other coping strategies to improve overall skin health and reduce stress and anxiety.

Emotional Support

Coping with chronic skin conditions can be emotionally challenging. Health coaches provide emotional support, addressing clients' concerns and helping them cope with the emotional impact of their condition.

Collaboration with Healthcare Professionals

Health coaches can facilitate referrals to specialized healthcare professionals, such as dermatologists, to address specific skin conditions that require expert evaluation and treatment. They can collaborate with dermatologists and other healthcare providers to ensure coordinated care and support clients in navigating their treatment journey.

The Science of Health Coaching

Improving Patient Outcomes and Medication Adherence for Patients with Psoriasis

A **2019 study** aimed to measure the impact of digital health coaching on the mental and physical outcomes and key health behaviors for patients with psoriasis reported significant improvements for the intervention group compared to baseline.

During the 12-week digital health coaching program, 104 participants with diagnosed psoriasis received health coaching via text, phone and e-mail.

- The post-intervention assessment showed statistically significant increases for all measurements for both physical and mental health using Patient-Reported Outcomes Measurement Information System (PROMIS) Global-10 scores
- The number of patients with “controlled symptoms” as measured by the Psoriasis Symptom Assessment increased by 16%
- A demonstrated increase of 14% in medication adherence

Change in pre- and post-interventions within the coached study participants

| | Pre-intervention | Post-intervention |
|---|------------------|-------------------|
| Patient Reported Outcomes Measurement Information System (PROMIS) Global-10 | | |
| Physical health | 43.5 | 47.8* |
| Mental health | 43.7 | 47.9* |
| Psoriasis Symptom Assessment | 21% | 37%* |
| Medication adherence | 62% | 76%* |

*Significantly higher than preintervention level (P < .01)

Source: B. Stephen Burton, Matt Allison, Uma Srivastava, Mazi Rasulnia, and Dhiren Patel. The Impact of Digital Health Coaching Intervention on Patients With Psoriasis. Abstracts From 2019 Cure Symposium The Future of Psoriatic Disease: Prevention, Precision Medicine, and Cure. Journal of Psoriasis and Psoriatic Arthritis. 2019;4(3):155-168.

The Science of Health Coaching

Improving Clinical Outcomes and Adherence for Patients with Atopic Dermatitis

A 2022 prospective study revealed significant improvements for patients with mild-to-severe atopic dermatitis after working with a health coach.

Throughout the 6-week study period, participants received disease education materials, medication reminders, and health coaching sessions through a mobile app.

According to the study results, all clinical outcomes improved significantly from pre- to post-intervention: a 44% decrease in AD symptom severity and a 41% decrease in the Dermatology Life Quality Index (DLQI), a ten-item questionnaire assessing the impact of skin disease on quality of life, which met the minimal clinically important difference criteria for all outcomes. Researchers also saw high retention rates among coaching study participants.



The Science of Health Coaching

Change in pre- and post-interventions within the coached study participants

| | Pre-intervention | Post-intervention | % change |
|--|------------------|-------------------|------------|
| SCORAD-TOT Scoring Atopic Dermatitis (Total score) | 53.1 | 31.2* | 44% |
| POEM Patient-Oriented Eczema Measure | 15.7 | 8.5* | 46% |
| DLQI Dermatology Life Quality Index | 7.9 | 4.6* | 41% |
| Treatment Adherence | | | |
| Regular skincare | 43% | 70%* | 27% |

*Significantly higher than preintervention level (P < .01)

Source: Gudmundsdóttir, S.L., Ballarini, T., Ámundadóttir, M.L. et al. Clinical Efficacy of a Digital Intervention for Patients with Atopic Dermatitis: a Prospective Single-Center Study. *Dermatol Ther (Heidelb)* 12, 2601–2611 (2022)

Study conclusion:

This study showed that an AD-focused digital intervention can significantly improve clinical outcomes for patients. Our findings support the use of digital intervention to promote behavioral modifications toward higher disease awareness, treatment adherence, and self-efficacy and, in turn, help improve disease symptoms.



The Science of Health Coaching

Incorporating Lifestyle Modifications to Support Those Afflicted with Skin Disease

A 2019 study on primary care-based health coaching showed that 12 months of coaching intervention with the goal of improving nutrition and exercise behavior change showed a loss of 7.24% from initial weight in overweight and obese adults.

A 2021 randomized controlled trial showed that a 6-month health coaching intervention improved the quality of diets and increased daily vegetable intake.

Another 2021 study tested the effectiveness of an intensive obesity treatment program delivered within primary care clinics in Louisiana by trained health coaches. After 2 years, patients who participated in health coaching interventions lost 4.5% more weight, had lower total cholesterol, improved quality of life, self-esteem, fatigue and social functioning compared with participants receiving usual care.

Study conclusion:

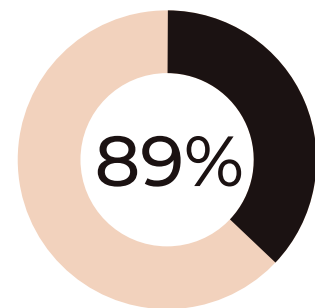
We believe that the keystone of this outcome is the addition of a trained health coach to the collaborative care team to administer a high-intensity lifestyle, patient-centered intervention program”

A recent randomized control trial examined the effects of health coaching on weight loss for obese adults. After 12 weeks of working with a personal health & wellness coach, participants demonstrated a 16% weight loss compared to 3% in the control group.

The Science of Health Coaching

Incorporating Lifestyle Modifications to Support Those Afflicted with Skin Disease

Results from a [2021 study](#), which included 1496 participants from the U.S., showed significant decreases in symptoms among clients with moderate levels of anxiety and depression during the initial weeks of coaching.



89% of study participants with anxiety and/or depression demonstrated significant improvements in the Generalized Anxiety Disorder-7 scale (anxiety) or Patient Health Questionnaire-9 (depression) after working with a health coach.

[2019 randomized control trial](#) aimed to examine the effect of coaching plus weekly recommendations on depression and anxiety demonstrated coaching effectiveness through reductions in anxiety and depression symptoms.

A [2023 randomized controlled trial](#) demonstrated decreases in symptoms of depression (-26%) and anxiety (-36%) among women with mild to moderate postpartum depression and/or anxiety after working with a health coach.



The Science of Health Coaching

Increasing Quality of Life & Well-being to Support Those Afflicted with Skin Disease

A study on wellness coaching for improving the quality of life among 100 employees, conducted by Mayo Clinic in 2014, found that 12 weeks of wellness coaching led to improvements in overall quality of life, the five domains of quality of life, depressive symptoms, and perceived stress levels.

- ✓ Stress levels decreased from a mean of 14.3 at baseline to 11.0
- ✓ Depression scores (PHQ-9) also decreased from a mean of 4.6 to 2.1
- ✓ The percentage of participants in the moderate to severe range decreased from 12% to 1%, and in the mild range decreased from 32% to 11%
- ✓ The number of participants who reported having at least one troubling symptom on the Patient Health Questionnaire-9 at baseline was also reduced by half at 12 weeks.

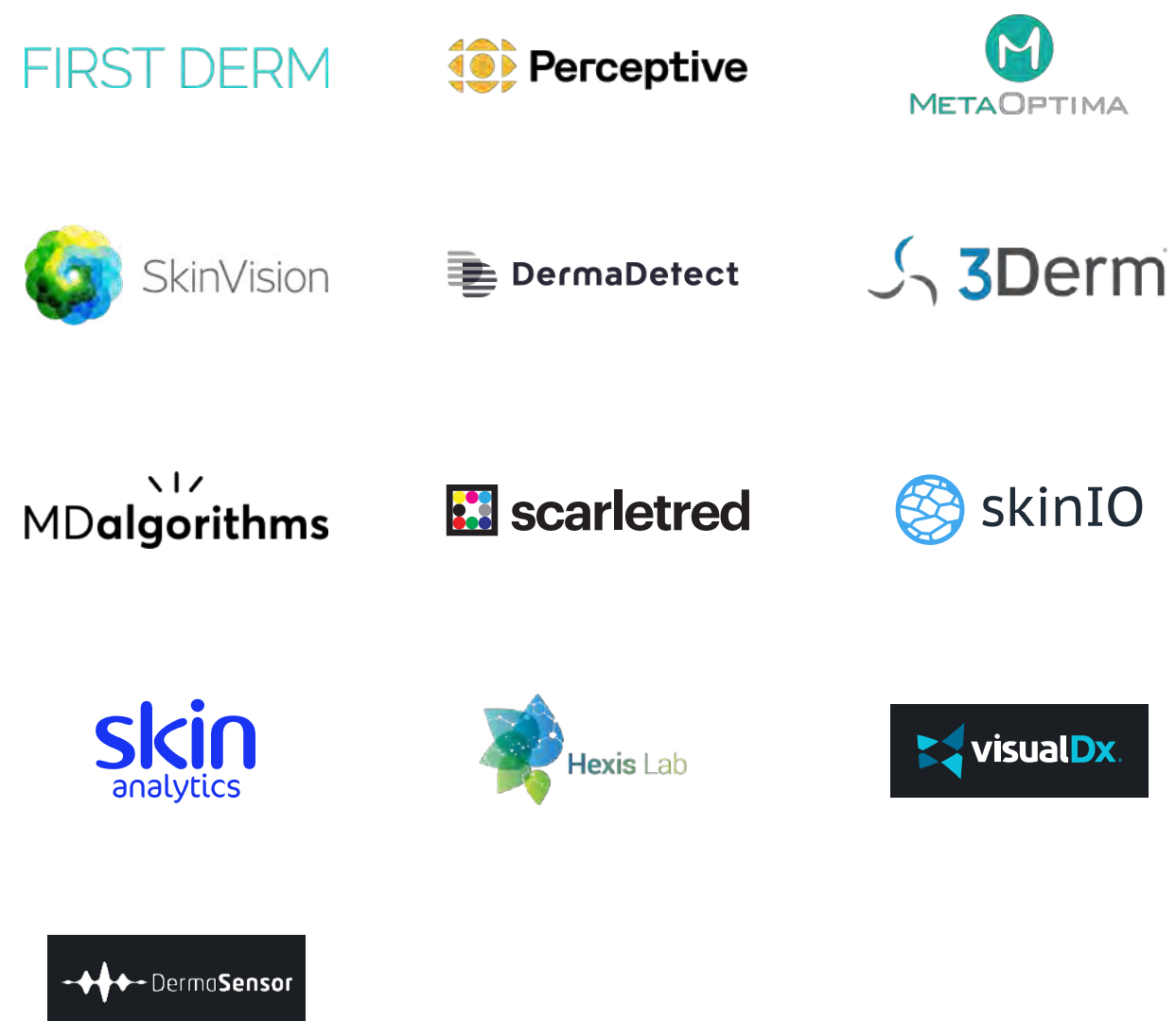
Another study, published April 2022, confirmed the significance of telecoaching on employee mental health that was delivered as part of an employer sponsored platform.

- ✓ After 2-3 sessions with a health coach, wellbeing scores significantly increased by an average of 2.12 points, and after 4+ sessions - by 5.27 points
- ✓ Among participants who began care with elevated levels of burnout, there was a significant decrease (21%) in burnout
- ✓ Other results showed significant reductions in presenteeism and absenteeism among those who worked with a health coach.

US Market Map: Dermatology and Health Coaching

Below is just a small sampling of digital health, digital therapeutic and device companies delivering solutions related to dermatology.

HEALTH DIAGNOSTICS AND AI



VIRTUAL CARE



NON-MOLECULAR THERAPEUTICS



About YourCoach

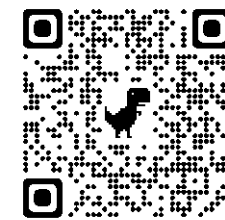
[YourCoach.Health](#) is the only operating system for behavior change, powered by health coaches. Our industry partners entrust us to stand up or augment their health coaching operations utilizing our APIs, widgets and tech-augmented army of validated and credentialed health coaches to surround their 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



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 a health and care company looking to integrate or scale health coaching around your product or service, we are here for you!

