THE **TRUTH** ABOUT 10,000 STEPS A DAY

HES™

How many steps a day should employee well-being program leaders recommend?

10,000? Fewer? *More*?

HES — the leader in immersive workplace wellness challenges that inspire action in a broad range of health behaviors — offers this White Paper to:

- Recap the most current and important research, clarifying the all-important distinction between minimal and optimal steps/day needed to support well-being
- Present insight on how many steps employees *feel they need*
- Describe tried and true programs that inspire participants to strive for the most beneficial, science-based amount of steps.

How We Got Here

It seems obvious today that regular physical activity is good for health, especially heart health. Yet this connection was more of a hunch than scientific fact until the mid-1950s, when Jeremy Morris compared the health of London's double-decker bus drivers to the conductors who collected passenger fares. The more physically active conductors, climbing up and down the stairs throughout every working day, were *half as likely* to have heart attacks or fatal heart disease compared to the sedentary drivers.

Since then, the connection between physical activity and numerous aspects of physical as well as mental well-being has been thoroughly documented. Questions remain, however, about how much activity people need.

Steps/day is a metric of growing importance to the public, wellness leaders, and researchers — it offers the prospect of a simple, memorable recommendation. And, as smart-phones and wearable trackers have become commonplace, people can more easily than ever monitor their steps across the day *and* during dedicated activities like walks, hikes, or runs.

For these reasons, walking programs — like HES's *Walktober*™ and *10K-A-Day*™ challenges — have proliferated in lockstep with employee wellness strategies. But guidelines for the optimal number of steps/day have swung back and forth.

This White Paper focuses on average steps/day — accumulated mostly by walking — to lend insight on physical activity overall. Much of what we've learned about steps applies to other types of activity. This doesn't imply that walking is the best exercise — though, for many people, it may be.

A Walk Down 10K Memory Lane

For decades, public health experts recommended 10,000 steps/day. In the 2010s, news stories pushed back, noting that the 10,000 benchmark wasn't based on evidence; it originated with a pedometer manufacturer's marketing slogan.

Adding fuel to the fire, research started uncovering that fewer than 10,000 steps/day — sometimes even under 5000 — can make a meaningful difference in personal health. Yet more recent research shows that, while lower step goals may be helpful for less active people, 10,000 steps/day *is* a solid recommendation. It may have sketchy origins, but is now backed by science.

University of Sydney, where some of the best step research is conducted, states:

"Science confirms the 10,000 steps a day goal, for the first time."

Unfortunately, media outlets and other naysayers who thought they were debunking the 10,000/day "myth" felt less compelled to spread the news that it was repeatedly being validated in rigorous studies. The facts are nuanced, and even studies that generally agree tend to contradict each other around the margins. The latest research and previously unpublished HES data get to the truth:

- How many steps are enough?
- How fast should they be taken?

In the face of research that doesn't always line up, what's a wellness manager to do?

Round-Up of the Latest

Step Research

The Questions

Confusion reigns largely because media outlets and some practitioners neglect to parse out:

- How *few steps* does it take to make a difference in health?
- What's the *optimal number of steps* to achieve the most benefit?

The Answers

Recent step-count studies aren't perfectly consistent, but together paint a picture that allows us to set guidelines with confidence:

- A major study finds that, within the investigated range of 2700-17,000 steps/day, more steps correspond to better outcomes.[1] There's a dose-response relationship between daily steps and risk of premature death (all-cause mortality).
- Another study reports that for most adults health benefits accrue up to about 10,000 steps.[2] Age matters: For those older than 60, benefits tail off after about 6000-8000 steps/day.
- A study of 78,500 people shows a link between more steps/day, up to about 10,000, and lower risk of cancer as well as cardiovascular disease.[3]
- Researchers studying outcomes beyond mortality, heart disease, and cancer support 10,000 steps/day. A study illustrating the relationship between daily steps and risk of dementia, for example, reveals the optimal number is 10,000 (9826, to be exact).

  This study — see details on the HES blog — also establishes the minimum amount of steps needed to make a difference: "... approximately 3800 steps per day, which was associated with 25% lower incident dementia."[4]
- "Ten thousand steps per day is, in fact, still a correct way of thinking if we take into account the most pronounced [death] reduction," cardiologist Maciej Banach tells *HealthDay*, based on his meta-analysis of 17 studies. Banach confirmed the more steps, the better — starting at about 2300/day with no identifiable upper limit.[5] Every 1000 steps/day increase is associated with a 15% reduction in mortality risk.

Takeaways for Wellness Leaders

- Promoting 10,000 steps/day is solid practice. The goal is not only easy for participants to remember and understand, but also is linked to better health.
- Participants can benefit from fewer than 10,000/day.
- Modest goals make sense for people who are just starting out, have health risks, or are older than 60.

How Fast?

The studies summarized above offer mixed results regarding *step intensity* (usually measured as the subjects' speed during their fastest 30 minutes of steps, regardless of whether those 30 minutes were sequential). Some studies indicate step intensity — or step rate — results in extra gains. Others attribute added benefits to the additional steps fast walkers fit into their day.

In either case, it makes sense to encourage healthy participants to walk briskly. If speed doesn't make the difference, the opportunity to take more steps may. Of course, they should be reminded to factor in their own health status and pay attention to their bodies.

Researchers advise:

"The take-home message here is that for protective health benefits people could not only ideally aim for 10,000 steps a day but also aim to walk faster."

HES doesn't shy away from 10,000 steps/day goals. We support personal motivation and individual needs, advising:

"Walk as far as you comfortably can, as fast as you comfortably can."

Walktober Data: Beware of Baby Steps

HES data demonstrates challenging goals produce the best results.

Our *Walktober* program motivates participants with an intermediary goal (we call it a "base threshold") of 6000 steps/day, followed by a threshold of 8000 as they build up to 10,000.

Clients can customize certain program features, and some prefer a 5000-step base threshold. But our aggregated data from 80,000+ participants in 2023 illustrates how lowering the base from 6000 to 5000 *de*motivates participants — reinforcing our recommendation to set challenging yet achievable goals for meaningful change.

Participants in *Walktober* implementations with the 6000-step base threshold were 17% more likely to complete the 31-day program and 19% more likely to achieve their goal compared to those in 5000-step implementations.

Participants with the higher threshold get more out of the experience.

At the end of the program, we asked *Walktober* participants how many steps a day they need to feel their best:

- **20% of respondents in programs with a 5000-step base threshold say they require only 5000 or fewer steps**
- **In contrast, just 8% of those with the 6000-step base threshold feel 5000 or fewer steps are enough.**

In summary: Aspirational *external* expectations, signified in *Walktober* by a more ambitious goal, lead to:

- More physical activity
- Increased motivation
- Participant acceptance of the premise — consistent with science — that more steps generate higher levels of well-being.

"When you set lower goals, people adjust their expectations to meet those goals."

Dean Witherspoon,
HES founder and CEO

Post-Pandemic, Participants Need Step Programs More Than Ever

"But 10,000 steps a day is hard."

For wellness program participants with sedentary jobs, averaging 10,000 steps/day is, indeed, difficult when relying on "incidental activity" — the quick fixes some wellness programs advocate, like parking farther from destinations, choosing stairs over the elevator, and taking a 5-minute walking break during prolonged desk work.

It's not only difficult, but has become less likely. One study reports:

> "... a consistent, widespread, and significant decline in activity following the onset of COVID-19 in the US... We found a statistically significant decline in daily step counts that persisted even after most COVID-19-related restrictions were relaxed, suggesting COVID-19 affected long-term behavioral choices."[6]

Transportation analytics firm StreetLight data confirms:

> "Annual average daily walking trips in the US declined by 36% between 2019-2022."

Recognizing 10,000 steps/day as a valid goal for healthy adults, especially when people are walking less than they used to, begs the question:

Do we make it harder for participants to reach their optimal goal by emphasizing tiny behavior changes at the expense of more intentional activities, like purposeful, longer walks?

World Health Organization's Director of Health Promotion notes:

> "Physical activity of any type and any duration can improve health and wellbeing, but more is always better, and if you must spend a lot of time sitting still, whether at work or school, you should do more physical activity to counter the harmful effects of sedentary behaviour."

Walking Programs
Step Into the Picture

The published evaluation of a 100-day 10,000-step workplace challenge offers a glimpse into potential outcomes overlooked by cardiovascular health, cancer, and mortality studies:

> "... engaging in a workplace-based step program improved stress levels by 8.9%, signs of depression by 7.6%, anxiety by 5.0% and wellbeing by 2.1%..."[7]

These outcomes aren't based on the number of steps, leading study authors to highlight other ways walking programs enrich participants' lives:

- Teamwork
- Belonging
- Friendship
- Fun.

This reinforces HES's findings across decades of providing effective walking challenges:

- Participants on teams of 4 or 5 are 60% more likely to reach their goals compared to those who go it alone
- In *Walktober*, having 1 or more program friends increases participants' chance of success by 52%.

Top Tips
for Well-Being Leaders

The science, combined with HES's experience, reveals essential ingredients in helping employees progress toward 10,000 steps/day:

- **Motivation:** Empower them with program design and communications that inspire intrinsic motivation and high levels of achievement.
- **Inclusiveness:** Offer more modest stepping stones, like *Walktober*'s 6000- and 8000-step thresholds; 10,000 steps may not be a realistic goal for those just starting out. All participants can experience progress while building endurance and adopting healthy behaviors.
- **Social support:** Facilitate teams and interpersonal connection, organize group activities, and create online forums where participants can share progress and encourage each other.
- **Gamification:** Use techniques like points, badges, and unlocking milestones to make step tracking fun.
- **Competition:** Allow participants to opt into leaderboards and friendly team competition.
- **Device integration:** Enable smartphones, watches, and wearable trackers to automatically upload step data, so they can focus on the activity and esprit de corps.

For more tips, see the HES blog post, 10 Ways to Get Employees Walking for Better Health.

Stepping Outside Yields Benefits

Exercising outdoors compounds the advantages of physical activity and time in nature. In fact, people who walk outdoors whenever possible experience greater satisfaction, improved outlook, and are more likely to stick with a 10,000-step program. Learn more here: A Healthy Dose of Nature Is Good for Business: Promoting Green Exercise for Employee Well-Being.

Some walkers simply prefer to be indoors — on a treadmill or walking in a commercial space like a mall. While their dedication to physical activity should be supported, learning the value of outdoor exercise through your program messages may motivate them to give it a try.

9 Ways to Enhance Your Media Literacy

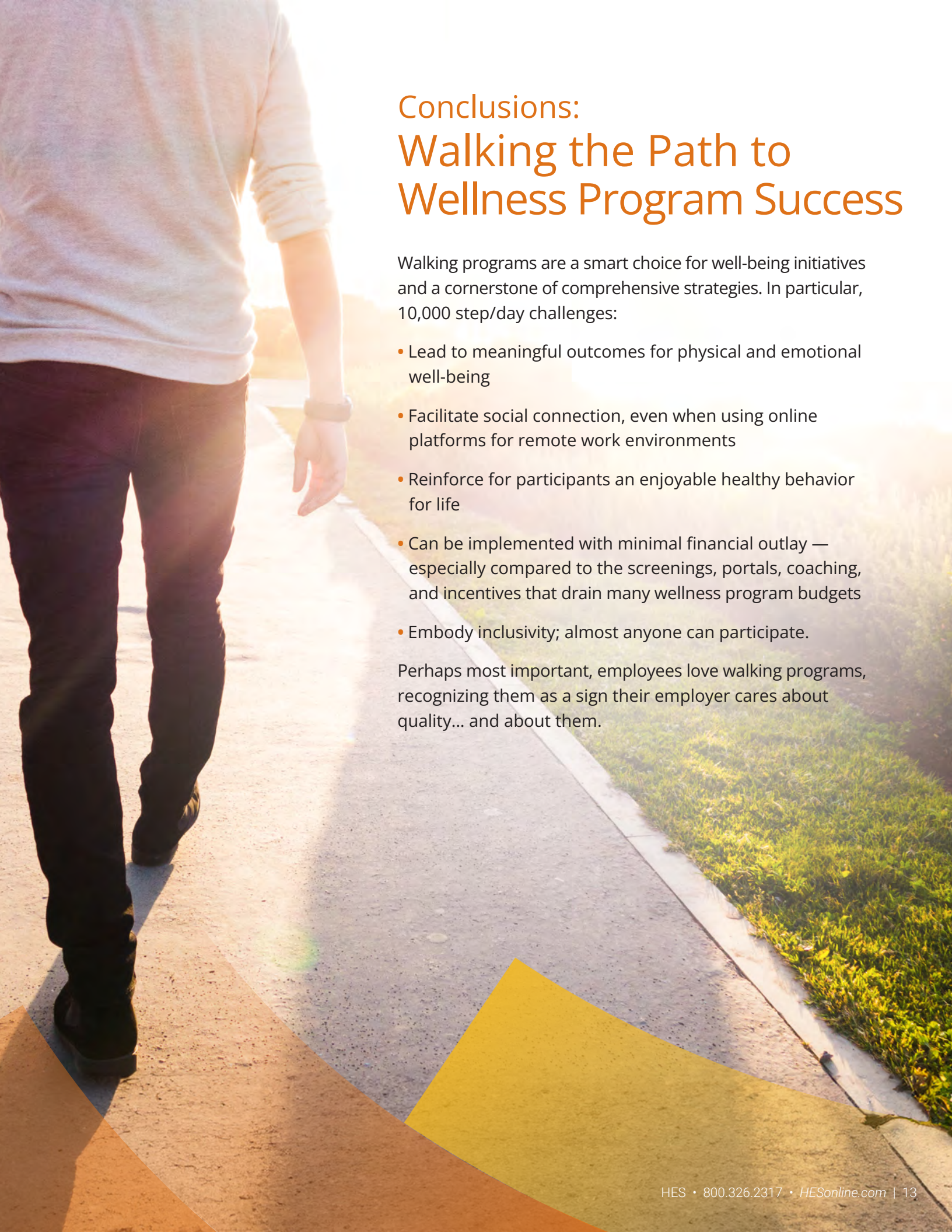
Widespread access to wearable step counters and ongoing commitment to nail down physical activity guidelines have inspired a new wave of research about steps/day — bringing about pervasive media coverage. Unfortunately, the lay press often misrepresents research with sensational headlines and careless interpretations of data.

For example, *Newsweek* recently posted "What Science Says About Walking 10,000 or 20,000 Steps a Day." The article's source is "a reader in exercise and health physiology" and quotes: "[T]here has been research which has shown around 4400 steps can cause a reduction in morality rate in women..." Beyond the egregious typographical errors, the article — contrary to the headline — says little about walking 20,000 steps.

Carelessness aside, news reports often favor clickbait over facts. Though you don't have to read original journal articles, keep these tips in mind when learning about any aspect of well-being through mass media:

1. **Identify sources.** Favor information from experts with a track record of research in the topic.
2. **Cross-reference claims.** Look for multiple sources that confirm a conclusion, especially when it's based on complex data.
3. **Assess the evidence.** Find out whether information was recorded by researchers or self-reported. How long was the measurement period? How were outcomes determined?
4. **Check for recent data.** Ensure all details are current.
5. **Beware of sensationalism.** Watch out for headlines or claims designed to shock or provoke.
6. **Understand context.** Consider a study's sample size and demographic. Results may not apply to everyone.
7. **Look for peer review.** Give weight to articles based on published, peer-reviewed research.
8. **Examine funding sources and other potential bias.** Consider conflicts of interest when weighing a study's credibility and validity.
9. **Maintain healthy skepticism above all.** Remember not all studies are conclusive. And science writers frequently misinterpret findings.

HES offers resources like this White Paper (and others) to help you separate fact from fiction.



Conclusions:
Walking the Path to Wellness Program Success

Walking programs are a smart choice for well-being initiatives and a cornerstone of comprehensive strategies. In particular, 10,000 step/day challenges:

- Lead to meaningful outcomes for physical and emotional well-being
- Facilitate social connection, even when using online platforms for remote work environments
- Reinforce for participants an enjoyable healthy behavior for life
- Can be implemented with minimal financial outlay — especially compared to the screenings, portals, coaching, and incentives that drain many wellness program budgets
- Embody inclusivity; almost anyone can participate.

Perhaps most important, employees love walking programs, recognizing them as a sign their employer cares about quality… and about them.

[1]Jayedi, A., Gohari, A., & Shab-Bidar, S. (2022). Daily step count and all-cause mortality: a dose–response meta-analysis of prospective cohort studies. *Sports Medicine*, 52(1), 89-99.

[2]Paluch, A. E., Bajpai, S., Bassett, D. R., Carnethon, M. R., Ekelund, U., Evenson, K. R., ... & Fulton, J. E. (2022). Daily steps and all-cause mortality: a meta-analysis of 15 international cohorts. *The Lancet Public Health*, 7(3), e219-e228.

[3]del Pozo Cruz, B., Ahmadi, M. N., Lee, I. M., & Stamatakis, E. (2022). Prospective associations of daily step counts and intensity with cancer and cardiovascular disease incidence and mortality and all-cause mortality. *JAMA Internal Medicine*, 182(11), 1139-1148.

[4]del Pozo Cruz, B., Ahmadi, M., Naismith, S. L., & Stamatakis, E. (2022). Association of daily step count and intensity with incident dementia in 78 430 adults living in the UK. *JAMA Neurology*, 79(10), 1059-1063.

[5]Banach, M., Lewek, J., Surma, S., Penson, P. E., Sahebkar, A., Martin, S. S., ... & Bytyçi, I. (2023). The association between daily step count and all-cause and cardiovascular mortality: a meta-analysis. *European Journal of Preventive Cardiology*, 30(18), 1975-1985.

[6]Desine, S., Master, H., Annis, J., Hughes, A., Roden, D. M., Harris, P. A., & Brittain, E. L. (2023). Daily step counts before and after the COVID-19 pandemic among all of US research participants. *JAMA Network Open*, 6(3), e233526-e233526.

[7]Hallam, K. T., Bilsborough, S., & de Courten, M. (2018). "Happy feet": evaluating the benefits of a 100-day 10,000 step challenge on mental health and wellbeing. *BMC Psychiatry*, 18, 1-7.

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3 Challenges With Proven 10,000-Step Success

Wellness managers can inspire employees to strive for 10,000 steps a day with HES's most popular walking challenges, including ***10K-A-Day***, ***Go Gold***, and ***Walktober***, now in its 22nd season.

10K a day™ GO GOLD™ WALKTOBER™

HES™