Small Steps or Giant Leaps

What Works Best for **Health Behavior Change**?

HES™

Small Steps or **Giant Leaps**:

What Works Best for Health Behavior Change?

In the quest for weight loss, washboard abs, or peak performance, consumers often turn to products and programs touting some version of the 3 "secrets" to success — claiming behavior change is as simple as 1-2-3 and that 1 size fits all.

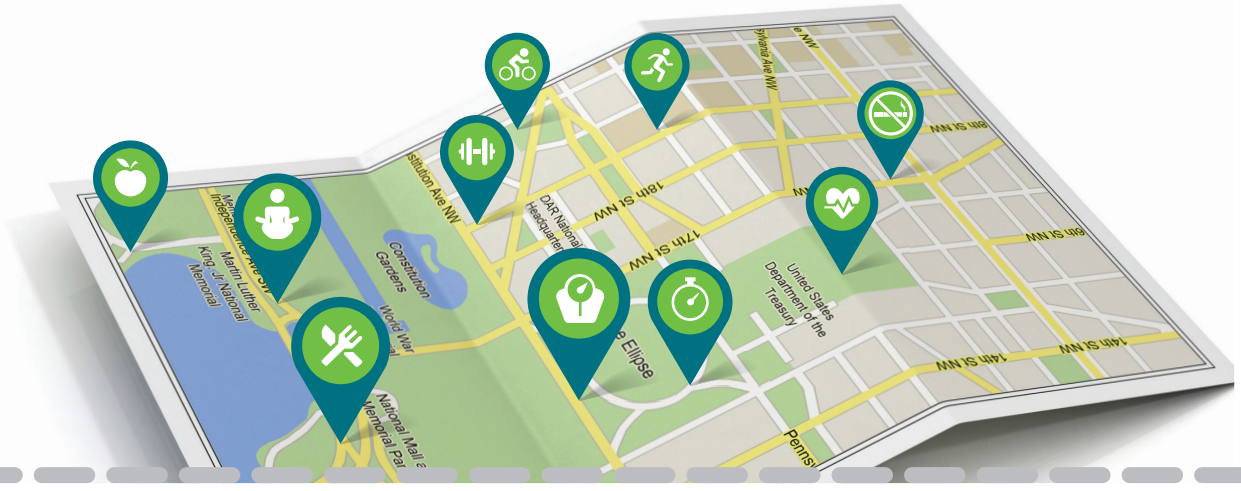
Workplace wellness programs often make things worse by perpetuating platitudes such as "little changes here and there add up" and "it's all about baby steps" or promoting drastic, 180-degree changes as featured on *The Biggest Loser*. These sound bites and transformational approaches may appeal to the masses, but they're misleading at best. Changing ingrained health behaviors is a complex, highly individualized task. It doesn't happen in a straight line; the course is dotted with hills, valleys, plateaus, u-turns, and roundabouts.

Neither small steps nor giant leaps alone are effective approaches to lasting behavior change; in this paper, we'll show you why. And we'll offer practical tips on combining elements of leading behavior change methods and research to give your participants a fighting chance at long-term success. By using behavioral science to design your wellness program, you can help them clear the hurdles to adopt healthy habits and enhance quality of life for good.

Why Is *Health* Behavior Change So Hard?

Learning a simple, concrete skill — like how to build a fence or roast a chicken — is straightforward. You follow the steps, you get it done. Changing a *habit* — any habit — is more difficult because it means replacing an automatic, repeated behavior with a new one. So if the garbage gets picked up on Thursdays, and you always set it out on Wednesday nights, you might miss a few weeks if the pickup day switches to Mondays. It takes time and effort to develop a new routine… and a new habit.

But imagine if taking out the trash involved deciding *not* to do something fun, like watching your favorite TV show, going shopping, or scrolling through Facebook or Instagram. And what if you grew up being rewarded for not taking out the trash; instead, you received *reinforcement* for letting it pile up in the yard? What if taking out the trash on Mondays wasn't cool, or somehow took 10 times as much effort as it did on Thursdays — would these conditions make it more difficult to adopt the new habit?



Why Is Health Behavior Change So Hard? *(continued)*

Clearly, changing a health behavior is exponentially more complex than taking out the trash, making a purchase decision, or clicking a link. Health behaviors are deeply personal; for better or worse, the way we eat, drink, sleep, and move through our lives is part of who we are — ingrained in our routines, embedded in self-image and identity. They're all tangled up with preferences, needs, emotions, and life experiences. So changing them is anything but easy.

Improving eating habits, for example, typically involves more than reading labels and buying produce; it requires:

- Discerning between appetite and hunger
- Weighing immediate costs vs. long-term payoffs
- Changing self-talk
- Solving problems
- Building flexibility
- Being resourceful.

In addition, food choices are affected by availability, convenience, budget, tradition, emotions, plus time and energy for planning, shopping, and cooking — to name just a few factors.

Wellness participants receive messages about health and behavior change from the media, public health challenges, health and wellness pros, their friends, chat rooms, and Pinterest boards. Too often the message is inaccurate, oversimplified, and incomplete: "for weight loss, just exercise more and eat less; to get fit, park farther from the store" — whatever the goal, *just do it* — as if we can flip a switch and be done. No wonder so many people give up… discouraged, frustrated, and even less confident after multiple misguided attempts.

Health behavior change is complex because *people* are complex. Some of the variables at play:

- **Motivation matters.** Many people attempt behavior change for extrinsic reasons: to lose weight for a wedding, please a family member, or earn a financial incentive. Others are driven by intrinsic motivators: to feel better, live out their core values, or be able to do something they used to enjoy. According to self-determination theory, a need for autonomy, competence, and connectedness is at the heart of intrinsic motivation.[1] Behavior change can also arise from an epiphany; a sudden realization that something has to change; or a spiritual awakening of sorts.[2]

- **Eat right, exercise, repeat.** For sustainable health benefits, behaviors must be integrated into daily routines; the level of effort and vigilance required can be physically and emotionally tiring, especially when habits are new. When you mop a floor, make a purchase, or paint a fence, you're done with the process until next week, next month, or next year. But to stay fit and maintain a healthy weight, you'll need to work up a sweat and make smart food choices day after day, year after year.

- **Daily face-off.** Tobacco cessation involves facing daily triggers to light up in the car, on break, and more. When you're trying to lose weight — or keep it off — each meal, snack, and doughnut-filled break room presents a challenge. In-the-moment stress, appetite, and social pressures can easily override a desire to stay on track. And a new habit of exercise means doing something that's probably uncomfortable, that you don't feel you have time for, when you'd rather do something else — so it doesn't take much to derail the plan even under the best conditions.

- **Decision fatigue.** Have you ever been so mentally weary by dinnertime that you don't care what you eat, as long as someone else cooks it? We face thousands of decisions every day — what to wear, what to do, what to say, and much more. As noted by researcher Brian Wansink, adults make over 200 decisions a day about food alone, on average.[3] Countless influences — intrinsic and extrinsic — affect these everyday decisions, like blood glucose level[4], sleep status[5,6], and any cognitive biases (subjective judgments) we happen to harbor. We encounter decision fatigue when our mental energy is sapped by the number or difficulty of decisions we've made earlier in the day.[7]

Why Is Health Behavior Change So Hard? *(continued)*

- **Self-control.** Researchers point to evidence that as we resist small and large temptations of all kinds, our self-control reserves become depleted — making caving to old behavior patterns more likely.[8,9] Another finding suggests people who believe they have unlimited willpower reserves demonstrate better self-control compared to those who believe it's a limited resource.[10]

- **Human irrationality.** Behavioral economist Dan Ariely describes people as predictably irrational; we make emotional decisions and then rationalize them; we're easily swayed by marketing tactics as simple as pricing and placement.[11] We can know what to do and have compelling reasons to do it, but still choose not to. We often prefer immediate — but smaller — rewards vs. making sacrifices for greater long-term payoffs. We change our minds from day to day and moment to moment, depending on mood, weather, or whim… even when we know better.

- **Social influences.** Family, childhood experiences, culture, plus the number and quality of social connections are strong predictors of well-being.[12] And successful behavior change depends a great deal on support from loved ones, friends, coworkers, and others in our social networks.[13]

- **Genes.** People vary in physiological responses to medicine, exercise, and nutrition. Some scientists say it's reasonable to also expect genetically based differences in the way people respond physically and emotionally to behavior recommendations. Future discoveries could lead to new behavior change strategies personalized to an individual's genome.[14]

Despite these factors and more, individuals can and do successfully change complex health habits. But unlike robots, people can't be programmed to change course. Telling wellness participants they can lose weight, quit smoking, or change any health behavior with a few simple steps cultivates false expectations and sets them up to fail, making future change attempts even less likely.

Successful wellness leaders stay informed, dispel myths, and communicate the truth about behavior change. They offer programs and services that help people set challenging yet realistic goals and move toward them at their own pace. With the right information, skill-building opportunities, and support, sustainable change is possible. In the long run, shortcuts don't work — for anyone.

Blame It on Confirmation Bias…

There's a reason even smart people are deceived by wellness hucksterism; it's called confirmation bias. We gravitate to evidence that confirms our beliefs.[15] We see what we want to see and believe what we want to believe. If we want to lose 30 pounds in 30 days, we'll believe the people and programs that say we can do it — even with scientific proof to the contrary. Wellness participants fall prey to confirmation bias… and so do wellness pros.

Small Steps A Good Start, But Not Enough

Take the stairs instead of the elevator; eat 1 vegetable serving a day; small steps add up to big changes. These worn-out wellness cliches point people in the general direction of physical activity and good nutrition, but they're terribly simplistic and misleading.

The truth is, little changes here and there *don't* add up to a significantly healthier lifestyle. Making a meaningful dent in existing conditions or risk factors — like overweight, obesity, metabolic syndrome, pre-diabetes, tobacco use, inactivity, poor nutrition, or a high-stress lifestyle — takes a lot more than a few small steps in the right direction. When was the last time someone told you they lost their spare tire — or went from desk potato to completing a 10K race — by simply vacuuming vigorously? Never; because small steps — done randomly or without being tied to a larger goal — don't work. Here's why:

- When participants follow "small steps" advice without setting a larger goal and pushing toward it, they won't see much — if any — progress. As a result, their trust in your wellness program, your expertise, and their own ability to make changes erodes.
- Making steady progress doing meaningful work is a huge influence on how people feel and perform on the job, according to researcher Teresa Amabile.[16] The same is true for health behavior change; seeing steady progress is a powerful motivator. Unless goals are adequately challenging, participants will experience little success.
- Locke and Latham's goal-setting theory shows how big or challenging goals lead to greater effort, persistence, and performance compared to small or easy goals.[17] Likewise, Tracy and Robins advise that boosts in self-esteem arise only from going after difficult, challenging tasks; mediocre goals don't help.[18] When people set challenging goals, a bigger discrepancy exists between current and target behavior; this causes dissatisfaction, while increasing motivation at both the conscious and subconscious level.[19] Big efforts lead to better results, improve self-efficacy, and help pave the way toward lasting change.
- To a large extent, emotions drive human behavior;[20] for most people, it's hard to get inspired or energized about taking tiny steps. and eating a carrot a day doesn't do a whole lot for self-efficacy or satisfaction.[21]
- Serving up "baby steps" to adults is not only misleading, it's patronizing — and communicates a lack of confidence in their ability to handle bigger challenges.

Granted, small steps can play a role in building momentum and making progress toward a larger goal — as long as they're big enough to be challenging *and* produce a real sense of accomplishment. If they're too easy, they contribute little or nothing to lasting change.

Giant Leaps Results Not Typical

We're naturally impatient when embarking on a big lifestyle change; it may have taken 15 years to gain 50 pounds, but we want to lose it as fast as possible. While drastic change is usually short-lived, we're prone to see ourselves as the exception. TV, print, and social media frame dramatic transformation as both desirable and within reach; these portrayals cultivate unrealistic expectations of the pathway to lasting change:

- Researchers found *The Biggest Loser* contestants preserved lean mass with exercise, but experienced a drastic drop in metabolic rate — about 500 calories a day more than predicted — making weight regain more than likely.[22]
- Cold turkey attempts are often more successful than medication and counseling-assisted gradual efforts to quit smoking. A large global study found people who quit cold turkey were twice as likely to quit for a month or more.[23] But according to the American Cancer Society, only 4%-7% of smokers successfully quit without medication or other assistance, and most require several attempts.[24]
- Every year, optimism reigns on New Year's Eve as revelers resolve to lose weight, get fit, and quit smoking. But after 6 months, only 46% are still on track, according to researcher John Norcross. Still, he found resolution-setters are 10 times more likely to accomplish their goals compared to those who don't zero in on a target.[25]

180-degree turnarounds are inspiring to read about — and thrilling to envision — but in most cases they're extraordinarily hard to maintain. For some, the idea of making such a huge change is overwhelming enough to stop them from trying. For those not getting the dramatic results they're expecting — or who get hurt trying — aiming for an unrealistically high goal further reduces self-confidence, hope, and interest in future change attempts.

Can Change Be Immediate… and Permanent?

Quantum change, a phenomenon described by Miller and C'de Baca, occurs when people experience a personal revelation, and are "changed forever in a matter of moments." These events are typically vivid, sudden, and felt to be "profoundly positive." They often happen when people hit a low point in their lives, and are perceived as new realizations or ways of thinking — even dramatic mystical or spiritual events. Remarkably, people who experience quantum change describe it as "passing through a 1-way door" or a new level of understanding.[26] Looking beyond SMART goals and stages of readiness to change — being open to the possibility of quantum, spontaneous change — is worthwhile for wellness pros and participants alike.

Gearing Up for Lasting Change

Whether it's finding a fitness buddy and a convenient, safe place to walk or planning weekly menus and stocking up on vegetables, successful lifestyle change usually calls for preparation. The following are examples of how participants can get their behavior-change ducks in a row:

- **Choose the right targets.** People often get stuck in a self-defeating cycle of tackling the same goals over and over in a series of unsuccessful attempts. With each failure, confidence takes a hit and makes success less likely. If focusing on fitness always leads to disappointment, suggest choosing another big target they're more ready to change — like eating 5 servings a day of produce, or getting 8 hours of sleep each night. Success in one area of well-being often leads to simultaneous success in another; researchers call it *coaction* (see sidebar on page 8).[27]

- **Reflect on core values and quality of life.** Big-picture thinking helps people connect the dots from daily habits to well-being. Identifying discrepancies between current and desired health status can shape goals and motivation, especially in relation to core values. Research points to *affirmation priming* — reflecting on core values before beginning a behavior change effort — as a way to reduce resistance and improve outcomes.[28,29]

- **Identify and leverage strengths.** Traditional HRA-based wellness programs focus on finding what's wrong and solving problems; a strength-based approach emphasizes expanding what's right. When participants concentrate on the positive — like available resources, past successes, skills, and character strengths — they build momentum. *Appreciative inquiry* is a powerful strength-based approach used by health practitioners and wellness coaches to facilitate lasting change in individuals, organizations, and communities.[30,31]

- **Learn and develop maintenance behaviors — before embarking on change.** In a groundbreaking study, Stanford researchers found participants were more successful in keeping off weight if they applied maintenance behaviors before starting the weight loss program.[32] Self-monitoring, problem solving, and stress management are examples of skills that help people sustain nearly any health habit.

- **Cultivate a flexible, growth-oriented mindset.** Narrow, rigid, all-or-nothing thinking rarely works in the long run. And there's no single best behavior change method that works for everyone. Encourage participants to experiment with different strategies to discover what works best for them. Trying new tactics builds a repertoire of skills and abilities. As we move through seasons of life, we face new challenges and priorities; strategies for maintaining a healthy lifestyle may need to change, too.

- **Practice self-compassion.** Self-criticism comes easy for most; we even seek feedback from others that confirms the negative views we have of ourselves.[33] People often mistakenly believe that criticism from self or others motivates change. Ironically, research shows that shaming and self-criticism have the opposite effect of making lasting change more difficult.[34] In contrast, self-compassion enhances both intention-setting and health behaviors.[35,36]

- **Gather social support.** Lasting change is more likely when people have a strong support network in place from the start.[37] Enlist the help of family members, friends, coworkers, friends, and even neighbors. By intentionally involving others in the behavior change process, participants cultivate their own communities of like-minded people, which makes maintaining a healthy lifestyle much easier.

A Better Route to Lasting Change

Here's the bottom line: One-size-fits-all approaches end up being one-size-fits-just-a-few. When a single method, theory, or product is proclaimed — or believed — to be the only way to go, there's trouble. Of the many valid approaches to behavior change, with more insights continually gained from research, none works for all people, every goal, every time. Let's face it — finding out what works for any individual is often a process of trial and error.

SMART goals are a case in point. Many wellness pros hold this method up as the holy grail for behavior change, but it can be stifling and short-sighted. Goal setting doesn't have to be rigid or limiting to be effective. According to Miller and Frisch, the best goals are:

> ***"…challenging and specific, approach-oriented (vs. avoidance), intrinsic vs. extrinsic; create feelings of independence, connectedness, and competence; measurable and produce feedback; nonconflicting and leveraged; written; include pre-commitment and accountability; and capable of stimulating 'flow' states."*** [38]

As wellness leaders we'll have a more positive, far-reaching influence when we:

- Teach participants about the process of change — and its non-linear nature — as well as the mechanics
- Guide them in discerning between science and hearsay, and put to rest common myths and cliches
- Equip them with practical skills, reliable resources, and a flexible approach so they can discover what works best — when *they're* ready
- Help participants understand themselves better.

Mighty Goals, Dynamic Steps

An approach that distills the best of current evidence in behavioral psychology and well-being, called mighty goals/dynamic steps, urges participants to:

1. Set a mighty goal. Choose a big behavioral target that's doable, but far enough out of reach to get you fired up about the challenge. Examples: complete a 10-mile round-trip hike in 3 months; prepare 3 Mediterranean-style meals a week this month; go tobacco free for 6 weeks.

2. Take dynamic steps. Create a sequence of active steps — daily, weekly, monthly — that progressively propel you forward, allowing for occasional setbacks and speed bumps. Forget baby steps and other cliches. To get significant results, you need to make substantial changes. Keep your mighty goal front and center as you power through each step.

3. Get ready. Invest time and energy into gearing up for lasting change. Get organized practically, mentally, and emotionally; practice maintenance behaviors. This process looks a little different for everyone, depending on resources, needs, preferences, past change attempts, life experience, family situation, work schedule, social support, and more.

4. Go. Launch your plan; move through your dynamic steps with confidence and a clear focus on your mighty goal, knowing you've set yourself up for success. Track your progress and connect with support partners; learn to shake off your setbacks, overcome obstacles, draw on your strengths, and build on your wins. Adjust your plan as needed, but don't overanalyze the process — if you stay focused and flexible, while moving steadily in the direction of your goal, you'll get there.

5. Modify and integrate. Your dynamic steps will help develop the skills to maintain your new behaviors once you reach your goal. Allow for an adjustment period; you may need to tweak your fitness routine, nutrition plan, or other variables to settle into an improved version of normal. Integrate your new healthy habits into everyday living: Walk, bike, or take public transportation to work; enjoy active recreation; visit the farmers' market weekly; reach for fruits and vegetables if you're hungry between dinner and bedtime. Cultivate friendships and social activities with people who share your commitment to healthy living.

This approach allows for a wide range of individual priorities, abilities, and preferences. Some participants will need more support, some will need less; some goals require more steps, some fewer; the pace of change will be faster for some, slower for others. Most important, it encourages personalization, critical thinking, positive focus, and resilience — vital factors in making lifestyle changes stick.

Lead the Way

Guiding participants as they move through the process of behavior change may be our most important role as wellness professionals; it's a high privilege — and not to be taken lightly.

Integrating current knowledge and theory while putting misinformation to rest is vital for the well-being of those you serve. The growing field of health promotion is fortunate to have top-notch scientists and practitioners who contribute a great deal to our profession, but there are also some false prophets. Effective wellness leaders steer participants away from trendy schemes and formulaic approaches that promise big results with minimal effort.

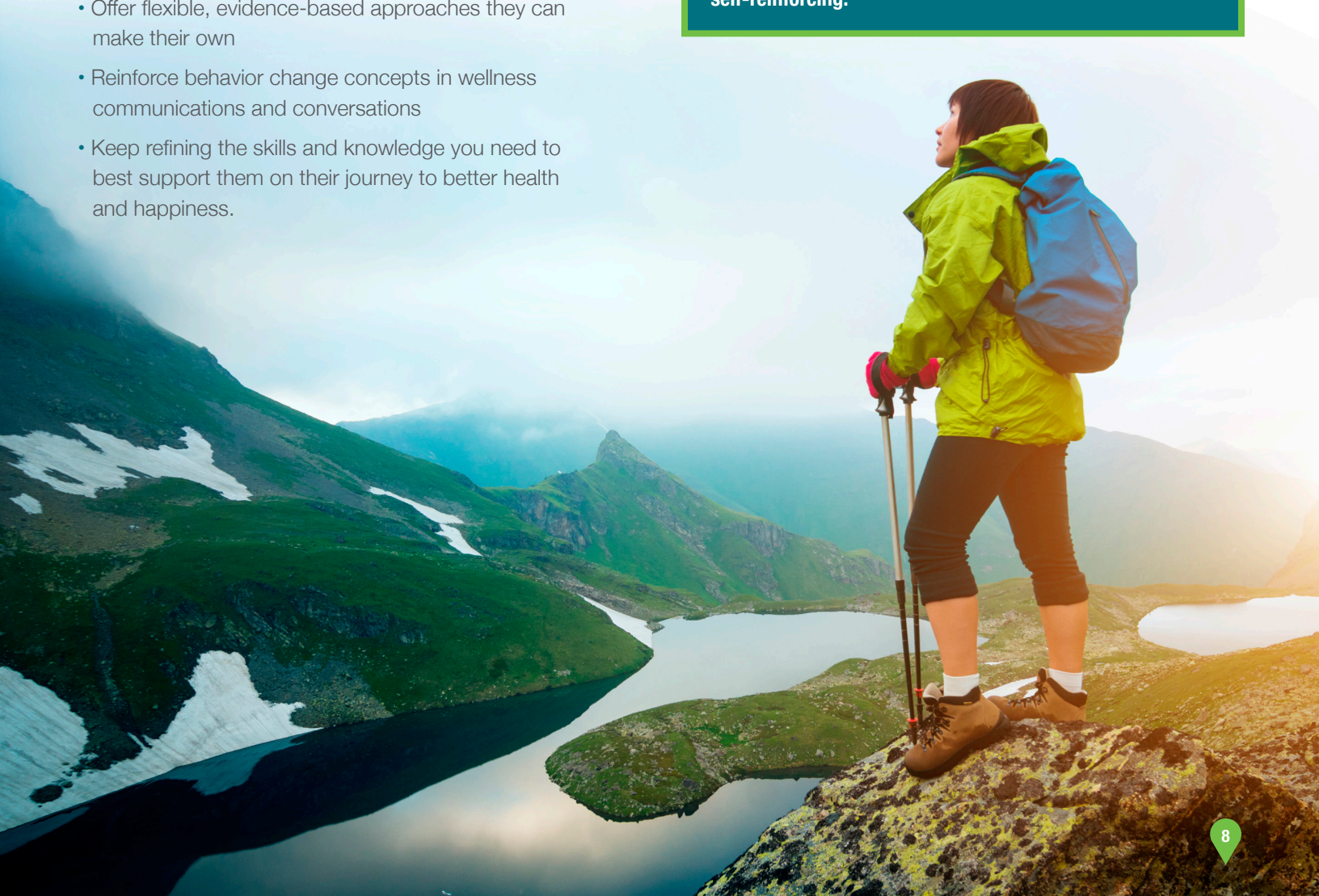
To thrive, people need to be treated as individuals and given opportunities to take on growth-enhancing challenges. Earn participant trust and commitment to behavior change by telling the truth about what it takes to get real, lasting results.

- Offer flexible, evidence-based approaches they can make their own
- Reinforce behavior change concepts in wellness communications and conversations
- Keep refining the skills and knowledge you need to best support them on their journey to better health and happiness.

Is It Better to Focus on 1 Goal at a Time?

Leticia wants to lose weight, get fit, and reduce stress; she's ready to overhaul her lifestyle. Is she better off tackling 1 goal at a time, or all 3 at once? Wellness pros have traditionally advised changing habits separately. But recent evidence points to the power of coaction — success in a certain area often leads to success in others at the same time [39] — observing that self-efficacy and skills from changing a behavior in turn have positive effects on others.[40] It makes a lot of sense; Cardiac rehabilitation staff have seen this concept play out for decades. When patients gradually increase exercise, nutrition habits often spontaneously improve; as a result, the mood and confidence levels rise, and they feel less stressed.

So if participants want to tackle multiple goals, they should go ahead and try; chances are their efforts will be self-reinforcing.



6 Ways to Equip People for Lasting Behavior Change

1 Ditch the "small steps" nonsense.

Challenging goals lead to greater efforts and better results, which in turn are naturally motivating. When people knuckle down and achieve something difficult, they get a self-efficacy boost as well as a sense of pride and accomplishment. Setting mighty goals and taking dynamic steps give people something big to aim for and practical, progressive actions so they experience true progress.

2 Let them own the process.

Support their need for autonomy, competence, and connection. Any program or guidelines should have plenty of flexibility, opportunities for learning, and social support. A get-fit program could offer ideas, tips, resources, and a venue for connecting with others — but participants decide where and when they'll do the fitness activities of their choice.

3 Encourage better thinking.

Lasting success and continued growth demand good thinking skills — nurtured by promoting reflection, journals, discussions, and problem solving. Ask what-if questions to get participants contemplating and talking about how to respond to everyday challenges. Start an onsite or virtual book club that meets monthly or quarterly; address planning and personal organization skills in your program content.

4 Promote a strength-based approach.

Help participants focus on what's working by highlighting everyday wins along with milestone achievements. Challenge them to use their strengths — like love of learning, perseverance, courage, creativity, or curiosity — to move past obstacles. Recognize those actively engaging in healthy behaviors; give a high five to a group of lunchtime walkers; award an "I Got Caught" wellness prize ticket to someone eating an orange.

5 Cultivate positive conversations.

Challenge participants to eliminate negative behavior-change language — such as fat-talk, cheat days, punishment, shaming, and deprived — which attaches moral judgments to food and other wellness behaviors. Saying "I was bad; I skipped my workout," isn't helpful. Remind people to practice self-compassion, treating themselves with the same kindness they give to loved ones.

6 Foster social connections.

A healthy, supportive community is essential for long-term success. Provide tips on asking for — and giving — effective behavior change support. Plan wellness activities that bring people together, like team challenges, walking groups, and after-hours fun; empower wellness ambassadors to do the same. Support the formation of onsite affinity groups — like new moms or dads, runners, or those who want to volunteer. As employees spend social time together and connect around common interests, the work culture will naturally spiral up toward being more positive and supportive.

Big Changes, Bigger Rewards: Geoff's Passage to Better Health

A Wellness Story… by Dean Witherspoon

Geoff reached an all-time high weight of 222 in March of his Junior year in high school. It was on the trip home from spring break that he decided, along with his parents, to try losing weight by participating in the *NutriSum* program. "I had tried some things, but always went back to my old habits because they were just diets, and not a real change. *NutriSum* was different because it taught me what kinds of food to eat without feeling like I was on a diet. **And it really emphasized exercise, something I never did consistently.**"

Geoff began *NutriSum* the first week in April with the goal of getting to 180 — a total weight loss of 42 pounds. By the second week in July, he had reached his goal. "I was surprised at how fast it came off. The program said to expect to lose a half pound to 2 pounds a week, but some weeks I lost 3 pounds. I also had a spot in the middle of the program where my weight didn't move for 2-3 weeks, but I stuck with it, and eventually the weight started coming off again."

With a lifelong dislike of vegetables, plus a love of Slurpees™ and fried foods, Geoff had to **completely change the way he ate**. "I really didn't do anything different than what *NutriSum* taught. I started eating a lot more vegetables, protein, and whole grains. I also cut down on my portions. But I don't ever remember being hungry. **I *do* remember craving foods and that was hard at first**, especially when I'd go out with my friends for pizza. Before I started *NutriSum* I'd have 3 or 4 slices and a big glass of pop. But when I was in the middle of losing weight I'd only have 1 slice and water. I might have 2 slices now, but still water. I hardly ever drink pop anymore."

"It's weird… I actually *like* vegetables now. And I used to order the sampler platter whenever we went out for dinner — which is nothing but fried foods. Now I look for broiled or grilled and always get at least 1 vegetable with my meal. Before, you couldn't get me to eat anything but white bread with sandwiches or toast. Now if it doesn't say 100% whole grain on the label I won't eat it."

Not eating after dinner was a big change for Geoff too. "I was in the habit of snacking before going to bed. **Breaking that habit was hard at first**, but it's important because that's where the calories really start to add up and make it hard to lose weight. You'll hear people on TV say it doesn't matter when you eat your calories, that just the total calories count. But I'm convinced — for me, anyway — not eating after dinner made all the difference."

Geoff also went from having cereal and a big glass of orange juice for breakfast every morning to an egg, whole wheat toast with butter, and half a glass of juice. "I really think having protein and a little fat for breakfast keeps me from overeating later in the day. The whole family got into it. We stopped buying sugary cereals and snacks, started packing lunches, and had dinner together — always with at least 2 servings of vegetables and protein."

Daily exercise was new for Geoff as well. "When I first started I'd take my dog Lucy on long walks. I did that for probably the first month. Then I started jogging and lifting weights. I couldn't even jog a mile; but now I can run over 4 miles with no problem. I'm convinced the discipline I gained with consistent exercise also helped me eat healthier."

When asked what he **liked the least** about *NutriSum*, Geoff replied without hesitation: "**Logging activity. It really is annoying**. **But I also think it's what kept me on track.** So I weighed myself in the morning and logged all of my *NutriSum* points and exercise minutes every day. As much as anything I think writing it down helps it become a lifestyle change… if I hadn't done that I think it would have been easy to slip back."

What have all these big changes meant for Geoff? "The biggest thing is **I have a *lot* more self-confidence**. I'm more outgoing and can hang out with anyone without being self-conscious about… anything. It's funny, some people see me now and say I really got taller, when in fact I'm the same height I was when I started. I had gotten really good at hiding my weight with baggy clothes before I started *NutriSum*. And that was another thing — I had to buy all new clothes!"

Geoff started his personal journey to well-being in 2008. A little over 7 years later he's an Area Manager for Amazon and is within 3 pounds of his original goal weight of 180. In 2014 he participated in his first MudStache race in Lawrenceburg IN — and came in ninth out of more than 1000 participants. "I knew I was in good shape, but I wasn't expecting a top 10 finish, that's for sure. I was too pudgy to be a good athlete in high school, but now I'm having a blast seeing what I can accomplish. **And it spills over to work too. I'm confident in my abilities and am not afraid to tackle tough challenges — and help others do the same."**

End Notes

[1]Deci E, Flaste R. Why We Do What We Do, Penguin, 1995

[2]Resnicow K, Page S. Embracing Chaos and Complexity: A Quantum Change for Public Health, *American Journal of Public Health*, Vol. 98(8): 1382-1389

[3]Wansink B. Mindless Eating: Why We Eat More Than We Think, Bantam, 2006, p. 1-2

[4]Wang X, Dvorak R. Sweet Future: Fluctuating Blood Glucose Levels Affect Future Discounting, *Psychological Science*, February 2010, Vol. 21 No. 2 183-188, *http://pss.sagepub.com/content/21/2/183.abstract*

[5]Chen M, Wang E, Jeng Y. Adequate Sleep Among Adolescents Is Positively Associated With Health Status and Health-Related Behaviors, BMC Public Health, 2006, 6:59, *www.biomedcentral.com/1471-2458/6/59/*

[6]Alhola P, Kantola P. Sleep Deprivation: Impact on Cognitive Performance, *Journal of Neuropsychiatric Disease and Treatment*, October 2007; 3(5): 553–567

[7]Tierney J. Do You Suffer From Decision Fatigue? *The New York Times Magazine*, August 17, 2011

[8]Baumeister, R, Bratslavsky E, Muraven,M, Tice D. Ego Depletion: Is the Active Self a Limited Resource? *Journal of Personality and Social Psychology,* 1998, 74(5), 1252-1265

[9]American Psychological Association. Is Willpower a Limited Resource? What You Need to Know About Willpower: The Psychological Science of Self-Control, 2015, *www.apa.org/helpcenter/willpower.aspx*

[10]Job V, Walton G, Bernecker K, Dweck C. Implicit Theories About Willpower Predict Self-Regulation and Grades in Everyday Life, *Personality and Social Psychology Bulletin*, April 2015, 108(4):637-47. doi: 10.1037/pspp0000014

[11]Ariely D. Predictably Irrational: The Hidden Forces That Shape Our Decisions, HarperCollins, 2009

[12]Seppala S, Rossomando T, Doty J. Social Connection and Compassion: Important Predictors of Health and Well-Being, *Social Research*, Summer 2013, Vol. 80 No.2, *http://ccare.stanford.edu/article/social-connection-and-compassion-important-predictors-of-health-and-well-being/*

[13]Reblin M, Uchino B. Social and Emotional Support and Its Implication for Health, *Current Opinion in Psychiatry*, March 2008, 21(2): 201–205. doi: 10.1097/YCO.0b013e3282f3ad89

[14]McBride C, et al. Health Behavior Change: Can Genomics Improve Behavioral Adherence? *American Journal of Public Health*, March 2013, Vol. 102(3): 401-405

[15]Grant Halvorson H. No One Understands You and What to Do About It, Harvard Business Review Press, 2015

[16]Amabile T, Kramer S. The Power of Small Wins, *Harvard Business Review*, May 2011, https://hbr.org/2011/05/the-power-of-small-wins

[17]Locke E, Latham G. New Directions in Goal-Setting Theory, Associaton for Psychological Science, Vol. 15(5): 265-268

[18]Tracy J, Robins R. Emerging Insights Into the Nature and Function of Pride, *Journal of Personality and Social Psychology*, 2007; cited in Miller C, Frisch M. Creating Your Best Life: The Ultimate Life List Guide, Sterling, 2009

[19]Locke E, Latham G. Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35-Year Odyssey, *American Psychologist*, Vol. 57(9): 705-717

[20]Heath C, Heath D. Switch: How to Change Things When Change Is Hard, Broadway Books, 2010

[21]Strecher V, Seijts G, Kok G, et al. Goal Setting as a Strategy for Health Behavior Change, *Health Education Quarterly*, May 1995, Vol. 22(2): 190-200

[22]Knuth N, Johannsen D, et al. Metabolic Adaptation Following Massive Weight Loss Is Related to the Degree of Energy Imbalance and Changes in Circulating Leptin, *Obesity,* December 2014, Vol. 22, Issue 12, p. 2563–2569, *http://onlinelibrary.wiley.com/doi/10.1002/oby.20900/abstract*

[23]Cheong Y, Yong H, Borland R. Does How You Quit Affect Success? A Comparison Between Abrupt and Gradual Methods Using Data From the International Tobacco Control Policy Evaluation Study. *Nicotine & Tobacco*, 2007, Research 9 (8): 801-810. doi: 10.1080/14622200701484961

[24]American Cancer Society. A Word About Success Rates for Quitting Smoking, Guide to Quitting Smoking, 2014, *www.cancer.org/healthy/stayawayfromtobacco/guidetoquittingsmoking/guide-to-quitting-smoking-success-rates*

[25]Norcross J, Mrykalo M, Blagys M. Auld Lang Syne: Success Predictors, Change Processes, and Self-Reported Outcomes of New Year's Resolvers and Nonresolvers, *Journal of Clinical Psychology*, April 2002, Vol. 58, Issue 4, p. 397-405 *http://onlinelibrary.wiley.com/doi/10.1002/jclp.1151/abstract*

[26]Miller W, C'de Baca J. Quantum Change: When Epiphanies and Sudden Insights Transform Ordinary Lives, The Guilford Press, 2001

[27]Johnson S, Paiva A, Mauriello L, Prochaska J, Redding C, Velicer W. Coaction in Multiple Behavior Change Interventions: Consistency Across Multiple Studies on Weight Management and Obesity Prevention, *Health Psychology*, May 2014, 33(5):475-80. doi: 10.1037/a0034215, Epub 2013

[28]Falk E, O'Donnell M, et al. Self-Affirmation Alters the Brain's Response to Health Messages and Subsequent Behavior Change, *Proceedings of the National Academy of Sciences*, February 17, 2015, Vol. 112 No. 7, *www.pnas.org/content/112/7/1977.abstract*

[29]Epton T, Harris P, et al. The Impact of Self-Affirmation on Health-Behavior Change: A Meta-Analysis, *Health Psychology*, August 18, 2014

[30]Moore S, Charvat J. Promoting Health Behavior Change Using Appreciative Inquiry: Moving From Deficit Models to Affirmation Models of Care. *Family & Community Health*, January 2007, Vol. 30 No. 1, Supplement: January/March 2007 *www.nursingcenter.com/lnc/journalarticle?Article_ID=691996*

[31]Tschannen-Moran B. Appreciative Inquiry in Coaching, *Coaching Psychology Manual*, 2010, Chapter 4, p. 52, Lippincott Williams and Wilkins

[32]Kiernan M, Brown S, et al. Promoting Healthy Weight With "Stability Skills First": A Randomized Trial, *Journal of Consulting and Clinical Psychology*, 2013; 81 (2): 336-346, *http://psycnet.apa.org/?&fa=main.doiLanding&doi=10.1037/a0030544*

[33]Swann W, Pelham B, Krull D. *Journal of Personality and Social Psychology*. Agreeable Fancy or Disagreeable Truth? Reconciling Self-Enhancement and Self-Verification, November 1989, Vol. 57 (5):782-91

[34]Jackson S, Beeken R, Wardle J. Perceived Weight Discrimination and Changes in Weight, Waist Circumference, and Weight Status, *Obesity*, 2014, 22, 2485-2488. doi:10.1002/oby.20891

[35]Sirois F. A Self-Regulation Resource Model of Self-Compassion and Health Behavior Intentions in Emerging Adults, *Preventive Medicine Reports*, 2015, Vol. 2, p. 218-222, *www.sciencedirect.com/science/article/pii/S2211335515000315*

[36]Adams C, Leary M. Promoting Self-Compassionate Attitudes Toward Eating Among Restrictive and Guilty Eaters, *Journal of Social and Clinical Psychology*, 2007, Vol. 26 No. 10, p. 1120–1144, *http://self-compassion.org/wp-content/uploads/publications/AdamsLearyeating_attitudes.pdf*

[37]Wing R, Jeffery R. Benefits of Recruiting Participants With Friends and Increasing Social Support for Weight Loss and Maintenance, *Journal of Consulting and Clinical Psychology*, February 1999, Vol. 67(1), 132-138

[38]Miller C, Frisch M. Creating Your Best Life: The Ultimate Life List Guide, Chapter 4: Life-Changing Goals, Sterling, 2009, p. 49-60

[39]Prochaska J. A Review of Multiple Health Behavior Change Interventions for Primary Prevention, published online before print January 7, 2011, doi: 10.1177/1559827610391883; *American Journal of Lifestyle Medicine*, May/June 2011, Vol. 5 No. 3 208-221

[40]Johnson S, Paiva A, Mauriello L, Prochaska J, Redding C, Velicer W. Coaction in Multiple Behavior Change Interventions: Consistency Across Multiple Studies on Weight Management and Obesity Prevention, *Health Psychology*, May 2014, 33(5):475-80. doi: 10.1037/a0034215, Epub 2013

2501 Washington Street
Midland MI 48642
800.326.2317

HESonline.com

For more white papers to support wellness at your organization, free from HES, go to:
HESonline.com/white-papers