

STATE OF THE ART
REVIEWS

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Why We Don't “Just Do It”: Understanding the Intention-Behavior Gap in Lifestyle Medicine

Abstract: *Intention can be a poor predictor of actual health behavior change—now termed the intention-behavior gap. In other words, although patients intend to change and maintain their behavior, the data suggest that many will not follow through with their intention. This review introduces 5 factors that could help the practitioner understand the patient intention-behavior gap: (1) the motivation, (2) the trigger, (3) the response, (4) the capacity, and (4) the process. These key factors allow the lifestyle medicine practitioner to (1) understand the difficulties in changing patient behavior and (2) apply strategies to encourage successful change and maintenance of healthy lifestyle behavior in their patients.*

Keywords: patient behavior; intention-behavior gap; motivation; self-regulation; trigger

The phrase, “Just Do It” was popularized by Nike to express the motivation to do what is needed to succeed. If we need to train harder, go the extra mile, stay after

practice, or lift a few extra repetitions, we “just do it.” From the lifestyle medicine perspective, if we need to eat healthier, move more, sleep better, and stress less, we “just do it,” right? Although the phrase sounds simple enough, we find that most of our patients, although they might have positive intentions, do not just do it. However, I think we can learn a lot about being successful by looking at why we are unsuccessful.

practitioners are passionate about these lifestyle factors, value what they can do for our patients, and presumably practice them ourselves. However, our patients might not have the same passion and value for lifestyle medicine as the practitioner, thus inhibiting their pursuit of them.

We know that lifestyle is medicine, but for many of our patients *it* is a hard pill to swallow. From our patients’

 Although intention might be high, the arduous nature of the prescription could negatively affect subsequent behavior. 

The *It*

It represents lifestyle factors, such as physical activity, healthy eating, maintaining a healthy weight, and not smoking, which have support to prevent, treat, and even reverse our leading chronic diseases, commonly presented throughout this journal. We as

perspective, the pill can be large, chalky, and not very enticing to do every day. What if our patients were given a prescription bottle that required 30 minutes of twisting the cap, each day, just to get to the medicine? Although intention might be high, the arduous nature of the prescription could negatively affect subsequent behavior.

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Table 1.

Patient Statements Made in Practice, as Theoretical Indication of Underlying Motivation Type for Exercising.

Patient Statement	Potential Underlying Motivation Type
"I have no desire to exercise"	Amotivation
"I will start exercising, only because you [practitioner] are making me do it"	Other determined
"I exercise, so I do not feel guilty"	Self-determined out of guilt/shame (introjected)
"I actually really enjoy exercising"	Intrinsic motivation
"I exercise, so I get healthier and maintain my weight"	Self-determined for a goal (identified)

Thus, as with any medication, it only works when the patient takes it.

The Intention-Behavior Gap

Of interest here, is the intention-behavior gap, which describes the failure to translate intentions into action. In other words, patients intend to do the behavior(s) prescribed to them, but many do not follow through. Data suggest that intention predicts a mere 30% to 40% of the variation in health behavior.^{1,2} As suspected, the intention-behavior gap is pervasive and has been seen in exercise and healthy eating,²⁻⁴ which is disheartening to the practitioner and a major hindrance to the effectiveness of lifestyle prescriptions.

There has been much discourse on potential variables to moderate the intention-behavior gap beyond variables commonly assessed within the theory of planned behavior (ie, attitude, subjective norms, and perceived behavioral control),^{1,5} such as personality,^{6,7} self-efficacy and action control (eg, self-monitoring, effort),⁸ and planning or implementation intentions.⁸⁻¹⁰ However, I would like to introduce 5 additional variables that could help the practitioner understand the patient intention-behavior gap: (1) the motivation, (2) the trigger, (3) the response, (4) the capacity, and (4) the process. Unfortunately, this review can only scratch the surface, and such time and space limitations prevent ample examples to apply across every particular

area of practice. Thus, I will focus the majority of examples on physical activity, diet, and weight control, but I encourage the practitioner to consider ways in which these perspectives can be implemented into each individualized practice.

The Motivation

Motivation is the general drive to change or act in a particular way. We might describe patients as motivated or not; however, there are actually different types of motivation.¹¹ *Intrinsic motivation* indicates that the patient is engaging in a task or behavior because it is inherently enjoyable. The inherent rewards are those feelings related to self-determination and competence. In other words, the person does the behavior, because he or she inherently enjoys it, alongside the feelings of autonomy and competence it provides. On the other hand, *extrinsic motivation* indicates that the patient engages in a task or behavior for a separate reward. As you might assume, this type of motivation is extremely common in lifestyle medicine, because the motivation to pursue health behaviors (eg, physical activity, healthy diet) stem from a desired outcome, such as improved health, increased longevity, or weight control.

Other-determined motivation is a type of extrinsic motivation where the cause of the patient's behavior is external, such as from outside pressure. In this case, the behavior is dependent on the reward, because the person is not motivated

from internal reasons. An example would be the patient who is eating healthy only because she feels her medical provider is making her do it to reduce her blood sugar. *Self-determined* motivation describes the patient whose decision to behave is internal, with the pressure coming from within. In this case, little to no coercion is needed, because the patient wants to do the behavior for the reward. We might find patients coming from this type of motivation, if they are personally motivated to act to obtain a reward, such as improved health. Ideally, this motivation is coming from a place of achieving a personal goal in order to help oneself (ie, identified regulation), rather than out of guilt or shame (ie, introjected regulation).

Why is it important to know the different kinds of motivation? First and foremost, the type of motivation should theoretically dictate the success of behavioral change and maintenance. Through their interactions with patients, practitioners should aim to develop the types of motivation theorized to be linked to improved lifestyle medication adherence. Evidence-based tips for the practitioner are provided below, and further resources on various interventions to improve these aspects can be found at <http://www.selfdeterminationtheory.org/>.

Enhancing Patient Motivation

Practitioners should use their patient conversations to diagnose what type of motivation a patient might have. Table 1 provides examples of statements that a

patient might make to the practitioner and what type of motivation such statements could indicate. Next, the practitioner should seek to enhance intrinsic motivation and self-determination of the patient, which is also an important characteristic of motivational interviewing and counseling practices.¹² To aid, the practitioner should be aware of innate human needs that we are motivated to satisfy: autonomy, competence, and relatedness.^{11,13}

Autonomy describes the need to be the origin of our own actions (ie, self-determined), and should be met during lifestyle prescriptions. The practitioner might allow the patient to choose his or her own enjoyable physical activities or healthy foods, instead of forcing a specific activity or strict dietary plan onto the patient. For example, the general health prescription for physical activity is 150 minutes of moderate-intensity activity per week (3-6 METs [metabolic equivalents]; <http://www.cdc.gov/physicalactivity/basics/>). Instead of picking one of those activities for the patient, such as a brisk walk (3 METs), the patient could refer to the physical activity compendium established by the American College of Lifestyle Medicine, which provides an extensive list of moderate-intensity activities to choose from (eg, walking the dog, low-impact aerobics, dancing, canoeing, raking lawn, vacuuming). For more on the physical activity compendium and to explore activity categories, visit the following website: <https://sites.google.com/site/compendiumofphysicalactivities/home>.

Competence is based on our need to demonstrate and exert control over our environment. When we prescribe physical activity, we might suggest those activities or starting levels that make the patient feel competent and efficacious. Self-efficacy, or confidence in one's ability to accomplish a specific task, is a well-known factor in physical activity and dietary adherence. Patients might not feel competent initially and, therefore, the need to build mastery experience in any prescribed lifestyle behavior. Accordingly, behavioral choices

should be perceived as challenging, yet attainable to develop mastery experience, alongside subsequent self-efficacy and competence. For example, if an initial prescription of 5 days a week of physical activity is too challenging, then the practitioner can adjust to something more attainable (2 or 3 d/wk). However, the prescription cannot be perceived as too attainable, with no challenge whatsoever, because mastery experience might not be built. As the patient continues in the behavior, the practitioner can provide constructive feedback on performance to further develop competence.¹⁴

Relatedness describes the need to be in caring relationships and holding a place in the social order. The perceived benefits of relatedness, social support, and being loved are nothing new to lifestyle medicine.¹⁵ The practitioner should then seek to establish activities that encourage interaction for the patient, allowing him or her to be connected to others through the process. Within lifestyle medicine practice, group visits might provide such an avenue, increasing more autonomous forms of motivation, and hopefully improving behavioral and health outcomes in the patient.

Sources of Intrinsic Motivation

Finally, the practitioner should be aware of the 3 general sources of intrinsic motivation to guide behavioral choices of their patients: to know, to accomplish, and to experience stimulation.^{11,13} *To know* represents the human desire to learn for its own sake. *To accomplish* represents our desire to meet optimal challenges. *To experience stimulation* represents our desire to experience fun and pleasure. A good example is reading a tantalizing book, watching your favorite TV show, or playing an addicting app. Behaviors that provide these 3 sources have a greater chance of being intrinsically motivating. Many patients might find the outcomes (eg, weight loss) fun and rewarding, but not the behaviors that are required to achieve the outcomes (eg, exercising, going to the gym, passing on dessert).

Also, intrinsic motivation can be fleeting. For example, a patient might really enjoy walking on a local park trail and can easily walk without coercion. However, if it is too cold, too hot, or raining, the same walk is not as enjoyable, thus reducing the odds of the patient going for his or her daily walk. The practitioner's goal, then, is to help the patient locate other behavioral choices, to provide a source enjoyment, accomplishment, and/or knowledge. Such options might be why evidence suggests that there is up to a 6.5 increase in odds of meeting physical activity guidelines with 4 perceived options for physical activity.¹⁶

The Trigger

Self-regulation can be described as a process of monitoring and changing behavior when normalcy is interrupted. Normalcy for many patients is an inactive and stressful lifestyle, with unhealthy diets and poor sleep quality. The practitioner uses diagnoses, screenings, or self-monitoring tools (eg, pedometer, dietary log) to interrupt this normalcy by creating perceived discrepancies from a desired standard. The hope is that such actions will trigger or promote an important spark for change of behavior in the patient (ie, medical trigger). However, in practice, we realize that not everyone responds with change, even with an initial level of intention, whereas others have no intention to change.

To begin, the medical trigger is an important aspect of practice by providing a standard that the patient should ideally be striving to achieve and maintain, such as 150 min/wk of physical activity, a plant-based diet, a body mass index (BMI) <25 kg/m², and normal blood markers. By introducing these standards, the practitioner produces a perceived discrepancy in any patient who is not meeting them. However, such a discrepancy does not guarantee personal meaning and value for the patient. This might be why a practitioner can tell one patient that she is prediabetic, and she changes her entire life to reverse her condition, whereas another patient does

nothing to change her lifestyle, allowing the diabetes to progress. Accordingly, researchers have found that patients' recognition of guidelines does not signify their understanding, and nor does the perceived credibility of the source guarantee use of the guidelines.¹⁷

Personal Value and Self-worth

So, for the patient to connect their intention with behavior, the practitioner must move beyond simply relaying of standards or guidelines under an assumption that the patient will be motivated to comply. Rather, what the patient values and finds important should be harnessed to increase the probability that a diagnosis or screening will trigger behavior change.

An important indicator of such value is the hierarchical model of self-views. For example, global or overall self-esteem is made up of several other domains, such as professional competence, social competence, and of importance here, physical self-worth.¹⁸ Each of these domains contains subdomains that can be threatened by common screenings in medical practice, which could subsequently act as a threat to one's overall self-esteem. Theories of social self-preservation suggest that when threatened in this way, the patient can attempt to restore the perceived integrity or view of self.^{19,20}

For the domain of physical self-worth, the subdomains might be physical condition, sport competence, and attractiveness of one's body, physical strength, and perceived health. If a patient finds out that she is classified as obese (BMI ≥ 30 kg/m²), (1) is this obesity diagnosis a threat to any one of these subdomains, and (2) if so, which one? If the practitioner emphasizes her physical conditioning, but that is not a subdomain of value, then she might not change. However, if she values body attractiveness and health, and this obese classification is a perceived threat to those subdomains, then she might choose means of losing weight to improve her self-perceived attractiveness and health. If she only values body attractiveness and not health, then she might cope with the

distress by losing weight to improve attractiveness while potentially putting her health at risk.²¹ At first glance, such behavior seems counterintuitive, but in light of patient values and self-preservation, these behavioral choices (or lack thereof) are understandable.

Thus, medical triggers are theorized to be more effective if they transcend into a deeper meaning or reason for that specific patient.²¹ What does the patient find important? In a large survey of 2002 households, Martin et al²² found that 68% of respondents did not meet physical activity guidelines, which was related to the importance of physical inactivity as a health risk. Specifically, those who had a greater awareness of these important health risks of physical inactivity were 40% more likely to meet the guidelines for health benefits. Medical triggers (ie, diagnosis of risk and personal health concerns), improving appearance, and emotional or ongoing discontent have also been cited as important sparks for change in those who did connect intention to behavior, losing and maintaining at least 10% of their initial body weight for at least 1 year.²³

For the practitioner, then, a focus could be on conversing with patients about what they do value and how any diagnosis or outcome is related with their view of self or identity (ie, self-concept). The practitioner should also be aware that the diagnosis might redefine a patient's self-concept. In support, teachable moments are theorized to exist when the patient's self-concept is threatened or redefined, personal risks are salient, and there is an emotional response (see next section).²⁴ With the very real risk of bias, social stigma, and avoidance of health care that can come from such interactions,²⁵ the practitioner should seek to help the patient establish a more positive self-view. Behavioral choices can then be examined to ensure that patients are in line with their valued goal, as well as their health outcomes.

The Response

Unfortunately, the choices of behavior following a triggering event can be

complex and, as mentioned, can be counterintuitive to health. In addition, choices following the interaction with the practitioner will greatly influence whether or not the patient follows through with personal intention to change. Such responses are first dictated by the emotional response experienced by the patient when made aware of their discrepancy from a proposed standard.²⁶ For example, it has been found that body weight and fat-related screenings can produce negative emotional responses, especially in those who find out that they were outside the desired range.²⁷

Emotional and Affective Responses

Generally speaking, if patients experience a successful comparison to a standard, such as finding out that they have normal blood sugar levels below 100 mg/dL, then they will have positive feelings and motivation to keep doing what they have been doing up to that point (good or bad). If they experience an unsuccessful comparison (eg, blood sugar >100 mg/dL), then they can have negative feelings, alongside motivation to change something, try harder, or give up. As previously discussed, the importance of screenings and diagnoses within medical practice is the hope that the patient will be inspired to change or try harder. However, they might also choose to give up efforts, and the specific emotions experienced might shed light on the level of effort that the patient is willing to put forward toward change.²⁶

For example, this perspective suggests that feelings of frustration, anger, eagerness, or happiness are related to higher effort, whereas feelings of sadness, depression, or despondency might be related to lower effort. Much like with motivation, the practitioner might ask a patient how she feels following a particular diagnosis, and use the response to determine a theoretical level of effort to alter behavior. If she feels sad and very disappointed, then there might be little intention or effort, and time can be spent to improve to a more positive outlook on the situation.

Remember, the patient does not have to feel positive (ie, happy) and, most likely will not feel such a way in response to any medical diagnosis. However, the patient might get to a point of frustration or eagerness, which are related to greater effort. This effort can then be directed toward the prescribed lifestyle behaviors.

The practitioner should also be aware that the behaviors the patient is prescribed can lead to negative feelings. From a dietary standpoint, the patient might consider how good (or bad) the healthier option tastes, in comparison to a current diet. Negative feelings might also arise when a patient has to pass up fast food after work, despite a strong desire to indulge. These responses are important, because they might lead to reproach and widening of the intention-behavior gap. From a physical activity perspective, there have been excellent lines of research exploring the affective responses to exercise discomfort.²⁸ In short, the inactive patient must interpret an array of physiological feedback during a bout of exercise or physical activity, such as increased heart rate, ventilation, fatigue, sweat, and feedback from numerous receptors throughout the body. These experiences are subjective and can be measured to see how people respond to exercise, thus allowing the practitioner to adjust the prescription to maximize the patient's response. A common measure is the subjective exercise experience scale (SEES), which assesses well-being (eg, strong, positive, terrific), fatigue (eg, exhausted tired, drained), and distress (eg, crummy, miserable, discouraged).²⁹ Unfortunately, in many practices, assessment of feelings and responses are never measured, thus missing an important opportunity to understand the intention-behavior gap.

Why is it important? Williams et al³⁰ found that sedentary participants who reported more positive feeling responses during a single bout of exercise reported more physical activity at both 6 and 12 months later.³⁰ They used a simple measure called the Feeling Scale, which ranges from -5 (very bad) to 0 (neutral) to +5 (very good). Astonishingly, every unit increase in positive feelings on this

scale was associated with an increase of 41 minutes of physical activity per week 12 months later!

Motivational and Behavioral Responses

In general, two motivational systems are theorized to underlie behavior and emotional responses to triggering and/or stressful events: an inhibition/avoidance system and an activation/approach system.^{31,32} These individual differences shed light on one's motivational propensity—either inhibition of movement toward goals (eg, threat or nonreward) or motivation to move toward goals, respectively. In our lab, we found that body weight and fat-related screening creates these clear individual differences in women, with some classified as becoming more approach oriented and others becoming more avoidance oriented (less approach).³³ Despite a similar decline in positive feelings following the testing, only those women classified as avoidant had a statistically significant 3 to 4 times increase in their consumption of comfort food (ie, desserts and sweets) the week following the testing session. These findings reiterate previous research that highlights the need for the practitioner to appropriately frame health messages, where positively (gain) framed messages generally appear to do better than negatively (loss) framed messages for health behavior.³⁴

These findings also reiterate the importance of emotions and motivation in behavioral responses. According to theories of coping, such as the transactional model of stress and coping,³⁵ the patient will appraise and seek to cope or deal with any emotional distress. Generally speaking, problem-focused coping refers to behaviors that are perceived to change the relationship between the patient and the environment/situation by reducing the cause of the stressor or problem. For example, following an obesity diagnosis, the patient might seek to decrease the perceived excess weight, thus hopefully fixing the cause of the problem and subsequently reducing the perceived

distress. However, weight loss can occur in a number of ways, including those that actually increase health risk, such as smoking, extreme dietary restraint, or risky supplement use.²¹

Emotion-focused coping refers to behaviors that are perceived to regulate the emotional distress that stems from the perceived discrepancy, such as disengagement, denial, acceptance, and positive reframing. As another weight loss example, individuals could disengage from or avoid situations that make them think about their weight, such as avoiding stepping on a scale, avoiding being physically active in public, or giving up on attempts to eat healthfully. Patients might also choose to avoid health care, because of emotionally laden experiences, such as gaining weight since the last health care visit, not wanting to get weighed by the practitioner's scale, or knowing that they will be told to lose weight.²⁵

Thus, the patient is not guaranteed to choose the prescribed lifestyle behavior following a medical trigger, but rather might cope in various other ways, widening the intention-behavior gap. By understanding the emotional perspective of the patient, alongside choices to cope with the distress, the practitioner can help guide the patient to a more positive outlook as well as discern more productive forms of problem- and emotion-focused coping.

The Capacity

Thus far, we have established the complexities of motivation arising from and responses to medical triggers, as well as the lifestyle factors that are prescribed to patients—who might intend to follow the prescription but do not. The psychological and behavioral complexities highlight an important need for a seemingly extraordinary capacity for our brains to control and manage our thoughts, attitudes, and behaviors. This capacity is called executive function (EF), which describes the neurocognitive perspective of higher-level supervisory abilities to control cognitive function during goal-directed behavior, with

attention on implicit nature and frontal lobe origins.³⁶ Common examples include paying attention and inhibiting responses, planning and problem solving, working memory, and being flexible in one's thinking.

The EF capacity of the patient can potentially dictate the success of connecting intention to behavior. For example, Hall et al³⁷ explored the ability of a single EF—attention/inhibition—to moderate the relationship of intention with physical activity and fruit/vegetable consumption behavior. Based on their score on the Go No-Go task, participants were classified as having strong or weak EF. When participants had weak intention to be more physically active or eat more fruit/vegetables, there was little change in behavior in both weak and strong EF participants. However, in those who had strong intention to change behavior, it was only those with stronger EF who actually followed through with their intention and achieved more physical activity and ate more fruits/vegetables. Interestingly, there were a group of participants who intended to change but did not. These results support that the intention-behavior gap could have been a result of their weakness in the EF that aids in suspending engrained, proponent responses to external cues (ie, attention/inhibition).

The latest EF research supports specific influences of different types of EF on lifestyle behavior. For example, poorer inhibitory control could be related to saturated fat intake, whereas superior updating capacity (ie, working memory) could be related to greater fruit and vegetable consumption.³⁸ Recent unpublished data from our lab examined which EFs related to goal-directed changes in participants with high intention to reach a step goal 50% above their normal step count. The results suggest that planning and problem-solving abilities, and capacity/working memory were related to increase in steps in those who were inactive (<7500 steps/d) and overweight, respectively.

Deficits in EF are presumably common in medical practice, because EF deficits have been found in adults and children

classified as obese,^{39,40} older adults,⁴¹ and cancer survivors.⁴² Subsequently, these individuals might be at higher risk of failure to follow through with their intention, and future research is aimed at uncovering such potential. However, EF can be improved. For example, Kesler et al⁴² used a computerized, home-based intervention to successfully improve EF in long-term breast cancer survivors. Exercise and plant-based diets have also been shown to improve EF in children, adults, and older adults.⁴³⁻⁴⁶ Researchers have also found that prayer,⁴⁷ tai chi and meditation,⁴⁸ positive feelings,^{49,50} self-affirmation,⁵¹ and even a short visit with nature⁵² can provide acute enhancement of various aspects of EF and self-control. On the other hand, more Westernized diets and inactivity can negatively affect EF.⁵³⁻⁵⁵

As the research continues to provide insight into EF in practice, the practitioner can prescribe such tactics to enhance EF when it is needed, while also using EF training. Computer-based software packages can be purchased, in addition to a growing list of apps to assess and train various EFs. There are also a few simple questionnaires to provide a quick assessment of any potential executive dysfunctions, such as the Web-Exec⁵⁶ or the Executive Function Index.⁵⁷

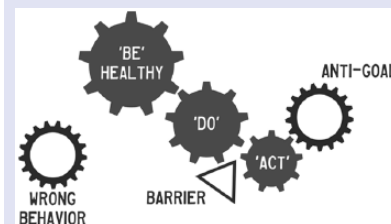
Finally, it is also feasible to provide behavioral prescriptions to accommodate EF decrements. For example, if decrements in attention/inhibition are suspected, simpler self-monitoring systems can be used to enhance awareness and attention (eg, pedometer, simple food log); environmental cues can be used to help remind patients to behave (eg, leaving gym bag by the door); habitual cues for unhealthy behavior can be removed (eg, removing snacks from home pantry); and healthy behaviors can be practiced alongside everyday routines (eg, eating a piece of fruit when sitting down at the computer).⁵⁸

The Process

To conclude the discussion on the intention-behavior gap, I think it is

Figure 1.

An example hierarchical structure of goals, depicted as gears.



important for practitioners to understand the process that patients go through to change their behavior. We have already discussed the complex nature of motivation, emotions, and behavioral responses, revealing that the practitioner cannot simply screen, diagnose, and prescribe lifestyle behaviors and expect the patient to “take their medicine.” Rather, I like to conceptualize the process as a system of gears (Figure 1), which is derived from previous thoughts on goal hierarchies.^{26,59} At the top of the hierarchy is the “Be” goal, or the principles that drive who a patient wants to be (eg, being healthy, being kind, being attractive). The hierarchical structure allows these principles to drive the next level goal (ie, “Do” Goals), which is less of an abstraction, until we reach a set of more specific behaviors (ie, “Action” Goals) that coincide with each initial principle.

Commonly, patients and practitioners focus on the Be goal, such as being healthy. However, stopping here is not fruitful. The practitioner gives the patient an outcome goal and sends him on his way to reach it, increasing the probability that the patient will not reach his goal, despite having the intention to do so. Next, the focus can be placed on the Do goals, including the behaviors the patient has to follow to reach the Be goal, such as being more physically active or changing dietary habits. This scenario should be much more common in lifestyle medicine practice, because the prescription is the Do goals. However, this scenario will also fall short of

connecting intention to behavior in patients. Why? Because exercise, physical activity, eat healthier, and other lifestyle behaviors are still a bit too abstract for the patient. Thus, there are many Action goals that must be under way for one to Do a particular behavioral goal. To Do exercise, the patient might need to put on her shoes and clothes, buy a gym membership, fill her car with gas, drop children off at day care, go to the gym, and choose what exercises to do.

In the meantime, the patient has to navigate barriers (eg, time cost, knowledge, feeling tired, busyness, intimidation at the gym) to complete these Action goals. In addition, the patient must manage conflicting goals or antigoes, such as relaxing on the couch after a long day instead of going to the gym. From a dietary perspective, the patient might want to prepare a healthy meal as her Action goal, but must override urges to choose a quicker and unhealthier option in her pantry. This common scenario is why I ask patients, “How difficult is it for you to eat unhealthy in your house or work?” If it is not difficult, then I know the patient will have to face the challenge of managing conflicting goals and stimuli. In addition, with the vast information patients can get from the Internet, media, and other unreliable sources, they might be choosing Action behaviors that do not actually help them get to their Be goal, despite the perception that such behaviors should work.

The goal of the practitioner, then, is to do what is needed to help the patient keep the bottom, action gear spinning. This means that the practitioner must help the patient set proper Action goals that are in line with the Do and Be goals, as well as provide understanding and resources for all the potential barriers and issues that could stop the Action goal gear from spinning day-to-day, moment-to-moment. It is hoped that this brief review of moderating aspects of the intention-behavior gap in lifestyle medicine will help guide these efforts. In addition, practitioners, if not doing so already, can focus attention on improving patient medication adherence when lifestyle is the medicine.

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