

Combatting Temptation to Promote Health and Well-being

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Abstract

This chapter explores when pursuing good health and well-being requires combatting temptation, and the self-control process that enables success. We start by highlighting situations in which people consider the immediate rewards received during goal pursuit and are thereby able to adhere to their health goals without using self-control. We then move to situations in which people rely on self-control. We analyze the self-control response as a two-step process that requires first the identification and then the resolution of a self-control conflict. We discuss strategies that help facilitate conflict identification and the resolution of the self-control conflict.

To maintain good health, people often need to deal with conflicting desires, such as wanting to lose weight and wanting to eat a delicious dessert. Resolving goal conflicts through self-control is an important component in achieving and maintaining a healthy life. Self-control includes the formation of healthy habits, such as exercising and healthy eating, and the avoidance of unhealthy habits, such as drinking, substance abuse, and chronic stress (de Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2012). We define self-control as the capacity to resist a temptation that is in conflict with a desired, long-term goal, in order to protect this valued goal (e.g., resist alcohol to ensure safe driving). Throughout this chapter, we explore when self-control is needed for promoting health and well-being and, if it is needed, how the identification of a conflict and the exercise of self-control to resolve the conflict are jointly required to pursue a long-term health goal.

We start with reviewing research on when pursuing healthy habits relies on the exercise of self-control, and when it does not. We then address the two distinct challenges to exercising self-control in pursuing health goals: identification and resolution (Fishbach & Converse, 2010; Myrseth & Fishbach, 2009; see Figure 1). We argue that to successfully promote health and well-being through self-control, a person needs to first identify the conflict. Once a conflict has been identified, one then needs to resolve it, that is, exert self-control to adhere to a valued goal. We refer to identification as the acknowledgement of a mental link between a specific action and the hindrance of an important, healthy goal. We refer to resolution as the exercise of self-control to counteract the negative impact of temptation on goal pursuit. Specifically, resolution involves an opposite response to goals and temptations: people engage in counteractive strategies that increase the pull of a goal and decrease the pull of a temptation. Thus, self-control acts to

increase the motivation to engage in health-promoting behaviors and decrease the motivation to engage in health-undermining behaviors. We show that identification and resolution are distinct challenges, though in the absence of identifying a self-control problem, resolution of the conflict is unlikely to occur. We conclude with a discussion on the implications of this framework for helping people make healthier choices.

<Figure 1 here>

When Does Making Healthy Choices Require Self-control?

A self-control conflict is a goal conflict between an action that benefits one in the long run (“a goal”) and an action that offers an immediate benefit (“a temptation”). For many people in many cultures, making healthy choices at least partially relies on the exercise of self-control. For example, the everyday decision of what to eat for lunch may easily turn into a self-control conflict if the person is choosing between food that is healthy (offering long-term benefits) and food that tastes best in the moment (offering short-term benefits).

Importantly, whereas a tradeoff between long-term and short-term benefits is common, it is not inherent to health-related decisions and is not always present. Thus, every healthy choice, by definition, is not necessarily costly for the chooser in the short run. On the contrary, envisioning the survival of any species, humans included, would be difficult if food that is healthy did not also taste good. In addition, food that tastes or smells bad often also poses a risk to one’s health

(i.e., long-term benefits) because it is spoilt, rotten, poisonous, or at least low in nutritional value.

What then are the conditions under which healthy choices pose a self-control conflict?

First, some health-promoting actions are costly in the short run, such that they require the person to bear an immediate discomfort for the sake of long-term benefits. For instance, undergoing a painful medical checkup, which may be necessary for securing long-term health, is costly in the short run. Second, some health-promoting actions are relatively (rather than absolutely) costly. These actions only appear to be costly when compared to other available options, but are not costly when considered in isolation. For example, fruits and vegetables are generally desirable foods that most hungry individuals will enjoy consuming; however, when people face a buffet table offering these foods along with other less healthy but tastier options, fruits and vegetables seem less desirable by comparison. In this case, the tradeoff between long-term and short-term benefits is not absolute, but rather is limited to the choice set. Indeed, the process of choice by elimination often creates a self-control conflict, which did not exist in the set before options were eliminated. For instance, consider an option set in which a strong, positive correlation exists between the options' short- and long-term benefits (e.g., food that is tasty is generally also healthy and vice versa). The nature of choice by elimination is such that after most options are eliminated, and only the top options remain in the set, a tradeoff will emerge between short- and long-term benefits. For example, after all food options that are low on taste and health are rejected, and only top options remain in the set (e.g., a fruit cake and a fruit salad), a negative relationship might emerge such that within that final choice set, foods either taste best (fruit cake) or are the healthiest (fruit salad), but are neither both the tastiest and healthiest.

When Healthy Choices Are Intrinsically Motivated

Research on intrinsic motivation provides a good example for how pursuit of long-term health goals does not always come at the expense of immediate benefits. Generally speaking, this research addresses pursuit of long-term goals, including personal competence, relationships with others, and mastering skills (Ryan & Deci, 2000). However, by their very definition as “intrinsic,” these goals are also immediately rewarding. That is, for intrinsically motivated activities, the reward is part of pursuing the activity rather than achieving the activity (Fishbach & Choi, 2012; Heath, 1999; Kruglanski, 1975; Ryan & Deci, 2000; Wrzesniewski et al., 2014). Whenever people are intrinsically motivated to pursue activities that are associated with health and well-being, they therefore receive immediate benefits as well as long-term benefits from the same action. Under such circumstances, a health-promoting activity no longer poses a self-control conflict.

This analysis has implications for how to motivate oneself and others to pursue health-promoting activities, by choosing activities that fulfill long-term goals based on intrinsic motivation, such that they offer immediate rewards. For example, a health-conscious individual who chooses healthy food based on taste and an exercise routine based on fun might pursue these activities with minimal experience of conflict and will not be required to exercise self-control.

Specifically, this person may first create a choice set that includes only options that are compatible with the health goals (e.g., a set of healthy foods, exercise routines), and then select some options based on intrinsic interests in order to collect immediate rewards.

Research that explores these notions finds that people can facilitate persistence on long-term health goals by (a) directing attention to immediate rewards during goal pursuit and (b) selecting means based on immediate rewards (i.e., intrinsic interest; Woolley & Fishbach, 2015). Thus, in one study that tested for consumption of healthy food, participants received a choice between eating organic and non-organic carrots. We manipulated a focus on either immediate/intrinsic rewards or delayed/extrinsic rewards by asking participants to choose based on taste or health. In this choice set, the majority of people chose the organic option regardless of condition; however, they did so for different reasons: those in the immediate-rewards-focus condition chose organic carrots because they were tastier, whereas those in the delayed-rewards-focus condition chose organic carrots because they were healthier. In turn, those who chose for immediate rewards ate more of their selected carrots than those who chose for delayed rewards.

In another study that tested for the impact of introducing intrinsic incentives into means selection, we find gym-goers who brought immediate (vs. delayed) rewards into their workout selection persisted longer on their workout. In this study, participants selected an exercise to pursue from a list of six different exercises that an expert preselected to be similar in difficulty (e.g., shoulder press, bicep curl, etc.). Participants who chose based on immediate/intrinsic rewards (an exercise that they most enjoyed doing) persisted longer and did more than participants who chose based on delayed/extrinsic rewards (an exercise that they found most useful for their health goals).

This research demonstrates that pursuit of long-term interests does not always come at the expense of short-term interests. Indeed, many healthy activities are immediately rewarding and

do not pose a self-control conflict (e.g., eating fruit; riding a bicycle). Correspondingly, some unhealthy activities are also unappealing in the short run and do not pose temptation. Moreover, this research highlights that harnessing intrinsic motivation to pursue health-promoting activities while bypassing self-control is possible.

We next move to situations and activities that pose a self-control conflict whereby people are confronted with conflicting motives (i.e., goal vs. temptation). We start by addressing the first challenge in self-control: identifying these situations as posing a problem for pursuit of long-term goals.

Identifying a Self-control Conflict

Although much psychological research has focused on the implementation of self-control strategies, success at self-control depends first on conflict identification. Of course, identifying conflict is not always a central issue. Take, for instance, a diabetic diner facing a sugary dessert. Knowing that eating the dessert could trigger dangerous insulin levels, she is aware she should not have it. However, recognizing conflict is often less obvious. For example, for most people under most circumstances, eating one sugary dessert will have a trivial impact on their health. These people might not identify a self-control conflict; therefore, they will not exercise self-control to override the temptation. However, the consideration of dessert for multiple occasions might make them aware of the conflict with staying healthy and slim.

In general, the probability of identifying a self-control conflict decreases as the cost associated with indulgence in temptation decreases. Myrseth and Fishbach (2009) have coined the term “epsilon-cost temptation” to describe situations in which the cost of a single indulgence is negligible but that of extended consumption may prove serious—for instance, cookies for the dieter or cigarettes for the smoker. Epsilon-cost temptation is common in modern life and characterizes the majority of health-related temptations, and it poses the problem of conflict identification.

When facing epsilon-cost temptation, conflict identification depends on whether individuals with long-term health goals consider multiple, similar decisions to indulge. In this way, identification is more likely when one is considering multiple decisions together and for those expecting little personal change over time, because individuals foresee themselves making the same choice again and again.

Broad Bracket

One way to increase the likelihood of identifying a self-control conflict is to group multiple decisions together into a broad frame or “bracket” (Myrseth & Fishbach, 2009; Rachlin, 2000; Read, Loewenstein, & Rabin, 1999). A person with a health goal who considers eating a single donut in isolation may not see the harm to their health of this one donut, and therefore may not perceive a conflict. However, this person may be more likely to identify the dilemma after considering eating donuts every day for a month.

As an example of the impact of broad brackets, consider research on ethical decision making. Self-control may play a role in promoting ethical behavior (Barnes, Schaubroeck, Huth, & Ghumman, 2011); however, most ethical violations do not involve self-control, because the person perceives her actions as common (“everyone does it”) or as a onetime violation, in which case, the harm is negligible. In one study, Sheldon and Fishbach (2015) examined whether viewing ethical temptations through a broad bracket facilitates the perception that these temptations are interrelated and pose a self-control conflict, leading to a reduction in future unethical behavior. Participants reported their behavior across six different work-related ethical dilemmas, each describing an ethically questionable behavior (e.g., downloading copyrighted materials on company time without paying). Participants who made decisions about these dilemmas in isolation on separate screens (narrow bracket) reported a greater inclination to behave unethically than those who first read the entire set of dilemmas before making decisions about each one (broad bracket). Thus, when considering multiple decisions together, participants made more ethical decisions.

Moving to the health domain, Myrseth and Fishbach (2009) invited people to help themselves to an assortment of carrots and chocolates. In one condition, participants saw a sign at the food stand reading “April 12th Stand” (narrow bracket), and in the other condition, the sign read “Spring Food Stand” (broad bracket). The narrow bracket led to greater consumption of chocolates (vs. carrots) compared with the broad bracket. When individuals foresaw a predictable pattern of repetition, they identified a self-control problem.

Psychological Connectedness

In line with viewing a decision through a broad frame, research finds that people who perceive greater connection to their future selves (psychological connectedness) are more likely to pursue long-term interests and overcome momentary temptation. Psychological connectedness increases with the perceived stability in one's personal identity, such that people who anticipate little change in the future feel closer to their future selves and care about their future selves' benefits (Bartels & Rips, 2010; Parfit, 1984). Sheldon and Fishbach (2015) argued that the more stability people see in their own personal identity, the more likely they are to view what they currently find tempting as related or connected to what they will find tempting in the future. In this way, connectedness is associated with a broad frame—people see their present actions as connected to multiple similar actions in the future. As a result, those who are highly connected to their future selves should be more likely to identify a conflict and exercise self-control.

To demonstrate how psychological connectedness affects self-control, Sheldon and Fishbach (2015) had people read a passage that described their future selves as either more or less connected to their present selves (Bartels & Rips, 2010), before assigning them to complete a series of computer-based proofreading tasks. For each task, participants had to assign themselves to a short or long version of a passage, by privately flipping a coin, ostensibly to ensure random allocation. This paradigm posed a self-control dilemma: give in to the temptation to assign oneself to a short version of a task (involving less work) even when one's coin flip might not warrant it, or assign oneself to whatever task version one's coin flip indicates (Batson, Thompson, Seufferling, Whitney, & Strongman, 1999; Touré-Tillery & Fishbach, 2012). These researchers documented that people who felt a strong (vs. weak) psychological connection to

their future self displayed more honesty (i.e., completed more long tasks), although only when these individuals received advanced warning that they would be tempted to lie.

Importantly, beyond introducing a broad frame, psychological connectedness also increases self-control because it influences the degree to which people care to provide for the person they will be in the future. The more connected people feel to a future self, the more they will attend to their future self's interests and concerns. The less connected they feel to a future self, the more impatient they will be about benefiting their present self (Bartels & Rips, 2010; Parfit, 1984).

Under this account, connectedness increases the extent to which a person cares to provide for his or her future self. If people do not care about their future self as much as their present self, they also care relatively less about their future self's benefits (e.g., health), and feel free to indulge in more immediately beneficial activities (e.g., smoking). In this case, lack of self-control stems from lack of identification that the long-term costs matter for the present person.

Other research on psychological connectedness suggests people need not only identify their connection to their future self, but also identify the opportunity costs of their actions (Bartels & Urminsky, 2015). For example, in one study, participants rated psychological connectedness to their future self before deciding to spend \$14.99 on a DVD purchase. For half the participants, the salience of the opportunity cost of buying the DVD was highlighted; participants were reminded that if they did not buy the DVD, they could use that money for other purposes, whereas the other half of participants did not receive this reminder. Results indicated that people were better able to exercise financial restraint (turn down the DVD purchase) when they were

both highly connected to their future self, and had received a reminder to consider opportunity costs.

Consistency

For a broad frame to be most successful in promoting conflict identification, people need to perceive their present action as similar to their future actions. Thus, a person needs to see himself or herself over time as consistently exercising restraint, rather than at times exercising restraint and at other times giving in to temptation. “Highlighting” reflects this behavioral pattern whereby people see consistency in their actions—resisting temptation at Time 1 promotes efforts to exercise restraint at Time 2. For example, if a person sees consistency in his actions, choosing a healthy entrée for dinner can encourage the choice of a healthy dessert. Alternatively, if he does not perceive his actions as consistent over time, a broad frame could lead to “balancing” (or licensing), whereby exercising restraint at Time 1 leads to justifying an indulgence at Time 2 (Fishbach & Dhar, 2005; Fishbach & Zhang, 2008). For example, choosing a healthy entrée for dinner could lead a diner to then choose an unhealthy item for dessert.

Different cues in the environment can promote a highlighting (vs. balancing) choice dynamic, leading people to more easily identify a conflict. When goals and temptations are presented separately, in two displays, highlighting is promoted and people are more likely to identify a self-control conflict. However, presenting these two options together in a single display hinders conflict identification by promoting balancing; therefore, restraint is less likely to be exercised. Fishbach and Zhang (2008) demonstrated this effect by presenting healthy items (carrots) and

unhealthy items (chocolates) in one of two ways. When the carrots and chocolates were presented in separate bowls, participants were better able to identify the self-control conflict and consumed more carrots and fewer chocolates than when the items were presented together in a single bowl. Indeed, individual differences in the strength of a weight-watching goal (i.e., how much participants wanted to lose weight) predicted whether participants selected the healthy option only when the options were presented in separate bowls (i.e., identifiable conflict), but not when they were presented jointly in a single bowl.

Whereas a highlighting dynamic promotes conflict identification, a balancing dynamic leads to psychological licensing and indulgence (Khan & Dhar, 2006; Monin & Miller, 2001). In these situations, people use past or future virtuous choices to justify giving in to temptation in the present. For example, research has documented that engaging in physical activity can increase subsequent food intake (Martins, Morgan, Blom, & Robertson, 2007), and even imagining exercise can increase food consumption (Werle et al., 2011), as does exposure to messages promoting exercise (Albarracin, Wang, & Leeper, 2009). Psychological licensing reflects a failure to see a particular choice or action as posing a self-control conflict, because a person assumes her behavior in the present is different than her past or future behavior.

Self-diagnosticsity

Related to consistency (highlighting) is the degree to which an individual perceives an action as diagnostic, and hence as revealing something about the self and as likely to be repeated in similar contexts. The self-diagnosticsity of an action, the degree to which an action reflects a person's

self-concept, is thus another factor that leads to conflict identification. In line with this analysis, Dhar and Wertenbroch (2012) documented that people make healthy choices partially to signal to themselves that they have strong willpower. When the choice is diagnostic of one's self-control ability, identification of a healthy-unhealthy conflict choice is more likely. Another example comes from Bodner and Prelec (2001) who studied self-signaling. They distinguish between more or less diagnostic actions, arguing, for example, that a person who takes a daily jog despite the rain (vs. on a sunny day) is more clearly signaling her identity as a jogger. Whenever an action signals one's identity, a self-control conflict is more likely to be identified.

A major cue that an action is diagnostic is that this action is salient. Actions at the beginning and end (vs. middle) of goal sequences are often seen as more salient (Greene, 1986); therefore, people perceive these actions as more diagnostic of their own traits and abilities (Touré-Tillery & Fishbach, 2012; 2015). Accordingly, identification of a self-control conflict, and exercise of self-control, occur more often during beginning and end (vs. middle) actions. For example, in one study, participants were asked to choose between an indulgent (Kit-Kat) and a healthy snack (raisin packets) when the decision was framed as being in the beginning, middle, or end of a given time frame (Touré-Tillery & Fishbach, 2015). Depending on the condition, participants saw a message reading, "Start your afternoon! Grab a snack" (beginning / high self-diagnosticity), "End your morning! Grab a snack" (end / high self-diagnosticity), or "Keep your day going! Grab a snack" (middle/low self-diagnosticity). Participants in the middle time frame (i.e., low self-diagnosticity) were more likely to succumb to the temptation to choose an indulgent snack than participants exposed to the beginning or end messages (high self-diagnosticity).

Exercising Self-control to Resolve a Conflict

When a conflict has been identified, people act to resolve the self-control conflict. Our main focus is on self-control strategies that people evoke when they expect a temptation, and that act to counteract the influence of an upcoming temptation on goal adherence. The presence of temptation has both direct and indirect effects. Thus, the presence of temptation directly decreases the likelihood of goal adherence; however, indirectly, temptation activates a self-control response, which in turn increases the likelihood of goal adherence (i.e., counteracting temptation). These two influences of temptation—the direct and indirect—can cancel each other out so that overall, the temptation is not enacted and successful self-control ensues: the individual is no less likely to adhere to the goal when confronting temptation than in the absence of temptation (Fishbach & Trope, 2005; Trope & Fishbach, 2000).

Importantly, by canceling out the impact of temptation, people act on their baseline motivation to pursue a goal, which in the absence of any threat should promote goal-directed behavior. That is, as long as temptation strength is X and the counteractive response's strength is X , then the person will act in line with their goals, because their “total” goal motivation is Y (baseline) $- X$ (temptation) $+ X$ (counteractive control).

For example, a health-conscious eater who is watching an ad for unhealthy food may face a temptation to indulge, which directly decreases her motivation to eat healthily. However, indirectly, this ad triggers the exercise of self-control, which increases her motivation to eat

healthily. When these two influences of the ad—the direct and the indirect—cancel each other out, the conscious eater successfully resolves the conflict by adhering to her long-term goal and maintaining the motivation to eat well when watching an ad for unhealthy food.

The nature of self-control operations involves shifting the motivational strengths of conflicting motivations in opposite directions. Specifically, goals are strengthened so they may override temptations. Temptations are weakened so they may be overridden by goals. One can achieve these shifts in motivational strength by modulating the situation (e.g., imposing penalties, rewards) or by modulating mental representations of the situation (e.g., devaluing or bolstering the value of activities). These shifts may further involve explicit or implicit operations. However, regardless of the specific self-control operation, the function is similar: it either increases the tendency to operate on a personal motive or decreases the tendency to operate on it, depending on whether the motive is a goal or temptation (see Table 1).

<Table 1 here>

Changing the Choice Situation

Rewarding Goal Pursuit and Penalizing Temptation Pursuit

People use self-imposed penalties to decrease the motivation to give in to temptation, and self-imposed rewards to increase the motivation to pursue the goal. This principle governs self-

control tools, such as the website www.stickk.com, which invites people to preset penalties on themselves for failing to act in accordance with their long-term goals.

In a study that demonstrated self-imposed rewards, Trope and Fishbach (2000) found participants made a bonus contingent on completion of a medical procedure, but only when the procedure involved an hour of strenuous exercise and painful hormone sampling. Specifically, participants facing a difficult medical procedure requested to receive their compensation after they completed the procedure, thus making the bonus contingent on them following through with the procedure, whereas those facing an easy medical procedure chose to receive their compensation before the procedure, such that it was not contingent on actually completing the entire procedure. By making the reward contingent on completing the test, participants risked losing the reward bonus, but also increased the likelihood of completing the more painful test.

Pre-committing to Pursue Goals and Avoid Temptations

When individuals wish to behave in ways aligned with long-term health goals, they can pre-commit to adhere to their goal by eliminating some choice options in advance. For example, by buying more healthy food and less unhealthy food than what they would later like to consume, shoppers limit the amount of unhealthy food they will later be exposed to when at home and wanting a snack, increasing the likelihood they will choose a healthy option to eat. A pre-commitment strategy restricts the individual's options to the pursuit of goal-consistent behavior by eliminating other options from one's environment (Schelling, 1984; Thaler, 1991).

As an example of these shifts of choice availability, Wertenbroch (1998) found that smokers prefer to buy their cigarettes by the pack, rather than in 10-pack saving cartons. Having one pack at most at a given time guarantees the smoker cannot consume more than that amount. Similarly, people may choose smaller portions of fast-food meals, even when they cost the same as larger portions, because they want to limit consumption of unhealthy food (Schwartz, Riis, Elbel, & Ariely, 2012).

Approaching Goals and Avoiding Temptations

People can also increase motivational strength by drawing closer to objects that are associated with their goals and avoiding temptations that could derail these pursuits. Indeed, individuals who resist temptations repeatedly may develop associations between approaching goals and avoiding temptations. Thus, Fishbach and Shah (2006) found that participants automatically approached goal-related stimuli (through faster pulling responses) and avoided temptation-related stimuli (through faster pushing responses). Using goal and temptation words (e.g., exercise vs. alcohol), the authors found faster responses to goal-related (vs. temptation) words when participants responded with pulling, and faster responses to temptation-related (vs. goal) words when participants responded with pushing.

As this study demonstrates, the opposite response to goals and temptations can be implicit and plays an important role in adherence to high-order goals. Thus, the dieter who ushers a waiter to take away her half-finished dessert plate can be mindless of the self-control function of her behavior. People further implicitly pull themselves toward others who facilitate their goals, and

move away from those who hinder these goals. For example, someone with a health goal may draw closer to others who are instrumental in achieving this goal, especially when they have not made much progress on their health goal (Fitzsimons & Fishbach, 2010).

Changing the Psychological Meaning of Choice

Bolstering Goals and Devaluing Temptations

By increasing the value of goals and/or decreasing the value of temptations, the likelihood of making a goal-congruent choice increases. People can increase the value of high-order goals by linking the attainment of these goals to their self-standards (Bandura, 1989) or by elaborating on what makes these goals important (Beckmann & Kuhl, 1985; Fishbach, Shah, & Kruglanski, 2004; Kuhl, 1984). People can further decrease the value of temptations by disassociating these motives from the self or by ignoring aspects that make them positively value temptations (Zhang, Huang, & Broniarczyk, 2010).

In one study examining such counteractive evaluations, Myrseth, Fishbach, and Trope (2009) presented gym-goers with a choice between receiving a health bar or a chocolate bar. Whereas a large majority selected the health bar, the authors were interested in how these individuals evaluated the choice set. For those who evaluated the two food options before making their choice, the chocolate bar represented a tempting alternative to the health bar. These choosers accordingly devalued the chocolate bar in comparison to the health bar. By contrast, those who were asked to evaluate the two food options after having already made their choice rated the

health and chocolate bars as similarly attractive. Because the chocolate bars no longer threatened people's long-term goals after they had chosen a health bar, they no longer devalued this tempting option.

In addition to explicit counteractive evaluations, evidence also suggests counteractive evaluations can take place outside of conscious awareness, and people implicitly can bolster goals and devalue temptations. For example, Fishbach, Zhang, and Trope (2010) used an implicit evaluation task to document implicit positive evaluations of healthy foods and negative evaluations of unhealthy foods, after participants viewed food temptations they wanted to forgo (e.g., ice cream, fried chicken). People devalued unhealthy foods and bolstered healthy foods only after they considered the various foods that tempted them away from their goals.

Hot Goals and Cold Temptations

Abstract thinking can facilitate self-control (Fujita & Carnevale, 2012; Fujita, Trope, Liberman, & Levin-Sagi, 2006). In general, the mental representation of actions varies between “cool” and abstract (less actionable), and “hot” and concrete (more actionable; Kross, Ayduk, & Mischel, 2005; Metcalfe & Mischel, 1999). Thus, when confronting temptations, one can decrease the likelihood of acting on the temptation by applying an abstract construal and “cooling down” the tempting stimulus. Indeed, in the classic delay-of-gratification paradigm, children were better able to resist the temptation of eating a single marshmallow in order to receive a larger-later reward if they thought of the marshmallows as “white, puffy clouds” or “round, white moons”

(an abstract, cool construal) than if they thought of the marshmallows as “sweet and chewy and soft” (a concrete, hot construal; Mischel & Baker, 1975).

Conversely, a hot, concrete construal of a goal facilitates goal pursuit. For example, research on implementation intentions documented that forming concrete behavioral plans to study increased the likelihood of students studying (Gollwitzer, 1999). As with other strategies, construal can influence action tendency in opposite directions: people think concretely about their goals to increase their motivational strength and think abstractly about temptations to decrease their motivational strength.

Goal Activation and Temptation Inhibition

Another aspect of self-control involves the activation of goals and the inhibition of temptations (Fishbach, Friedman, & Kruglanski, 2003). By activating constructs related to a goal in response to temptation, people can increase the accessibility of goal-consistent behaviors. Further, by inhibiting temptation-related constructs in response to goal reminders, individuals can decrease the accessibility of temptation-related behaviors. Regardless of the activation pathway, the outcome is the same.

One example of these activation patterns comes from a study in which participants recognized goal-related words (e.g., class) more quickly after subliminal presentation of relevant temptation-related words (e.g., sleep) than after subliminal presentation of irrelevant temptation. In addition, participants took longer to recognize temptation-related words (sleep) after subliminal

presentation of relevant goals (class) than irrelevant goals, suggesting temptations (vs. control primes) activate goals, and goals (vs. control primes) inhibit temptations.

Setting Expectations to Pursue Goals and Disengage from Temptation

To achieve their goals, individuals often consider the discrepancy between their current and ideal states, and plan their actions in advance. For example, in a week-long experiment, Fishbach and Hofmann (2015) had participants list daily goal pursuits and, for some of these goals, anticipate temptation (i.e., obstacles) and envision resolutions. These participants reported more successful pursuit of the daily goals for which they listed obstacles and planned resolutions than for their other goals. Similarly, research on mental contrasting and implementation intentions (MCII; Duckworth, Kirby, Gollwitzer, & Oettingen, 2013) developed an intervention to improve self-regulation by having people contrast their current state with an ideal state and to generate implementation intentions in the form of if-then plans for how to achieve a goal (i.e., “If situation XX is encountered, then I will perform the goal-directed response YY.”).

Self-control research identified that optimistic plans can serve as a self-control strategy in which people make optimistic predictions to motivate effort investment. That is, people strategically and counteractively predict better or faster future goal attainment when they anticipate obstacles to successful goal pursuit (Zhang & Fishbach, 2010). These expectations are set such that people expect greater goal pursuit and less pursuit of temptations in the face of temptation. Because optimistic predictions act as performance standards, they implicitly motivate effort investment to achieve the self-imposed standard (Locke & Latham, 1990). For example, Zhang and Fishbach

(2010) found that participants who optimistically predicted a lower personal risk of having high cholesterol subsequently reported a higher intention to reduce their risk by exercising more.

Conclusions

The framework presented here has implications for helping people make healthier choices and improve well-being. In general, it suggests interventions involving (a) intrinsic and immediate incentives, (b) self-control conflict identification, and (c) self-control conflict resolution through the exercise of self-control. As such, these interventions offer different ways for people to make healthier choices.

First, people can focus on intrinsic/immediate rewards when selecting means to pursue long-term goals. Thus, when choosing a snack among a set of healthy foods, they can incorporate immediate rewards by choosing a healthy item that they will most enjoy eating, or when selecting an exercise routine, they can select the exercise that will lead them to have the best experience. Similarly, people can emphasize positive experience when choosing an activity to pursue to reach a long-term goal. For example, they can focus on the taste of a healthy food or the pleasantness of a workout. To the extent that these activities provide positive experiences in the moment, emphasizing immediate rewards should increase healthy food consumption and workout persistence. In this way, people can harness immediate rewards to facilitate pursuit of their long-term goals, without needing to exercise self-control.

However, when short-term desires are pitted against long-term goals, and people need to identify and exercise self-control, they can take a number of steps to increase identification and therefore resolution. One way to increase identification is to use a broad frame when making decisions.

Thus, when considering engaging in a behavior that may not seem unhealthy in isolation, such as drinking a soda at lunch, people can think about making the same decision every day for a month, rather than making a single decision in isolation.

Lastly, once people have identified a self-control conflict, they can employ a number of strategies to ensure they successfully resolve the conflict. For example, a person can pre-commit to eating healthfully by only going to a restaurant that offers healthy food options, or by passing on buying unhealthy food when grocery shopping. In this way, she limits the choice set so that when she is at the restaurant, she is only presented with healthy foods, and when she is at home, she does not have the temptation to eat unhealthy food, enabling her to better adhere to her health goals. Alternatively, consider a person who wants to get a full night's rest. To promote this goal, he can reflect on how the temptation to stay up late watching television will be strong, and therefore recruit resources to overcome this tempting option to ensure he goes to bed early.

Overall, the processes and strategies outlined here can help people more successfully pursue their goals to help ensure greater health and well-being. They can also help those who wish to influence (or help) others, to better design interventions that promote healthy choices in others.

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Table 1. Self-control strategies that create a shift in motivational strength: Increasing the pull of goals and decreasing the pull of temptations

	Goals	Temptations
Changing the choice situation	Rewarding goal pursuit	Penalizing temptation pursuit
	Pre-commitment to pursue	Pre-commitment to forgo
	Approach	Avoidance
Changing the psychological meaning of choice options	Bolster	Devalue
	Hot and concrete construal	Cool and abstract construal
	Activation	Inhibition
	Expectation to pursue	Expectation to disengage

Figure 1: Two challenges of self-control: Identification and resolution

