Today in the United States, 35.7% of the population is classified as being obese (Ogden, Carroll, Kit, & Flegal, 2012). The percentages in Canada (24%; Shields, et al, 2010) and Mexico (30%; Organization for Economic Co-operation and Development, 2012) are not far behind. Some of the reasons for these numbers lie in terms of the availability of relatively higher-calorie food, larger serving sizes, and a population that is increasingly sedentary. Whatever the reasons, the health risks associated with obesity are serious and cost millions in health-care related expenses each year (cf. Birmingham, Muller, Palepu, Spinelli, & Anis, 1999; Long, Reed, & Lehman, 2006). Clearly, gaining control of our eating and exercise habits is an important key to changing both the obesity statistics and reducing health care costs.

The good news is that these are exciting times in terms of methods being made more readily available for people to gain control over their healthy behaviors. For example, you may notice that there has been a fair bit of interest in mobile phone apps for keeping track of what you eat (Melnick, 2012; van Grove, 2012), how much you exercise, and your blood sugar levels (“Glucose Buddy”, 2011). These apps provide a source for good usability, and can be more or less seamlessly integrated into one’s life. As many of our habits concerning eating and activity tend to get away from us precisely because they are mindless habits (Coatley, 2012), these apps can help you to become more mindful and develop new habits. As mentioned in a recent article by Freedman (2012), these apps have really made the science of behavior as described by Skinner more immediately available to everyone.

Why is our Eating Out of Control?

Why should we keep track of what we eat, and how much we exercise? As a species, humans have evolved into a mainly tertiary society in which food is readily available, and we exercise less. In past generations, food was less readily available and the caloric output was much higher. All of our labor-saving devices and modern work have made this evolution in our culture possible, while at the same time reducing our need for caloric density. However, as humans evolved to prefer historically scarce food containing fat and fructose (sugar), we essentially have a difficult time resisting these very foods even when they are readily available.

So it is that we need to change our eating and exercise habits. Simply stated: We need to eat less and exercise more. To maintain weight, the caloric intake must equal the caloric output (or, what we eat and drink has to equal what we burn off). To lose weight, the caloric intake must be lower than the caloric output. There are several ways to achieve this balance: (1) via reducing intake, and keeping output the same; (2) keeping intake the same, and increasing output; or (3) both reducing intake and increasing output.

One other thing that we know is that we tend to underestimate the caloric content of what we eat, and overestimate how many calories we burn (Lichtman, et al, 1992). It is for this reason that weight loss programs tend to ask clients to keep a food diary. Food diaries require one to write down everything that they eat and drink, and then the dietician or nutritionist will help you to estimate how many calories are consumed per day. Keeping track of exercise can also be done, with estimates calculated based on the duration and type of activity. The research shows that people start consuming less merely by keeping track, and that those who keep track are more successful in the long run (Kong, et al., in press). It is also likely that keeping track of exercise leads to a similar increase in physical activity. The problem was that information about daily caloric intake and exercise caloric output was not immediately available. Having that feedback immediately available is one of the key benefits of using a mobile phone app of this sort.

Essentially, keeping track through the convenience of your cell phone provides an opportunity to obtain a real-time, ongoing record of daily intake. There are several apps from which one can choose, such as myfitnesspal (myfitnesspal.com) and livestrong (livestrong.com) or Weight Watchers (weightwatchers.com), and these apps provide users with various types of feedback and information, such as the exercise output subtracted from calorie intake, nutritional intake, and graphs of your weight over time.

Why is Feedback Useful for Gaining Control?

Peterson (1982) reminded us that “feedback” is not really a precise term. While we use it every day in many situations, feedback itself takes many different forms. For example, it might cue us to engage in some behavior (calories over limit = more exercise), or even
elicit an immediate reflex from us (calories over limit = emotional response). Feedback can also serve to reinforce our behavior, or even punish it. Speaking from the point of view of having used myfitnesspal to lose 40 pounds over the past two years, here is how the feedback that I experienced appears to work (it should be noted that this review does not constitute medical, nutritional, or dietetic advice, and that readers should consult with a health care professional before starting any diet or exercise program).

- **Goals**: The program goals are tailored to the individual in that the program takes into account one’s gender, age, height, weight, current physical activity, and goals for weight loss. This initially sets up a goal for each day in terms of caloric intake and weekly exercise activity. As one loses weight, the program adjusts the daily caloric intake accordingly.

- **Caloric Intake**: If one stays within the caloric intake limit, the immediate feedback (after entering my food) provides reinforcement for meeting my daily goal. If one is near or above their limit at lunch, the feedback acts as a cue to either slow down eating, engage in more exercise than usual, or both. (For example, if I see that I went over my calorie limit, I might go out for a 20 minute walk; or, if I see that I overate at lunch, then I plan to have a smaller supper.)

- **Nutritional Information**: This section provides feedback on the nutritional intake, based on the reported food that you have per day. This type of feedback provides both reinforcement for keeping within recommended daily intakes, and can serve as a cue to make different food choices for the remainder of the day. (For example, when I see that my carbohydrates are met, but that I still need to fill in some protein and fat, then I will make a choice to snack on nuts or seeds to round out my daily intake.)

- **Exercise Calories**: Once a cardiovascular or strength activity has been entered, the calories burned are subtracted from the intake calories, resulting in a “net calorie” report. These values are prominently displayed on the screen, and again provide immediate reinforcement for staying within one’s goal. This is also true when one has consumed more calories than the daily goal, and the exercise calories burned now result in a net caloric intake that is consistent with the daily goal.

- **Newsfeed**: On the home screen, there is a newsfeed that reports things like how many calories you have burned today, and whether there is any weight loss; however, it does not report weight gain or lack of exercise. Thus, this type of feedback can be viewed as praise when one engages in desired behavior, and for results that are consistent with one’s goals. The lack of commentary when one gains weight or does not exercise can be perceived as non-judgmental, which can be useful in a weight loss regime.

- **Social Networking**: The program allows you to share your newsfeed with a friend. Myfitnesspal claims that doing so usually results in greater weight loss allowing you and your friends to view successes in weight loss and exercise; however, the newsfeed will also report when a person has not logged in for several days. (For example: “…has not logged in for 3 days. She might need some encouragement.) At any point, friends can leave comments on the newsfeed to provide additional praise or encouragement. (Some examples include “Way to go!” in response to logging in for some number of days or for weight loss, and “Man…what a slacker – get back on it!” in response to someone not logging in for a week.)

The above points are only the main features used in Myfitnesspal, but are the most important ones for why it may be effective. All of the online apps have somewhat similar features, and if you are planning to use one, explore their features to determine which one is the best choice for you. Keeping track, especially with one or more friends, is a great way to change the mindless habits that lead to losing track and defeating our goals into mindful habits that keep us on track.

**References:**


