Behavioral Medicine REVIEW

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The Importance of Creating Habits and Routine

Abstract: *One of the greatest challenges to lifestyle medicine is patient adherence. Lifestyle diseases inherently require lifetime prevention and treatment. Therefore, adherence to lifestyle medicine recommendations must also be long-term. Long-term adherence implies that a routine incorporating health recommendations has been developed. Instead of focusing on the immediacy of adherence in lifestyle changes, health care providers could consider helping patients develop a routine to slowly incorporate those changes. This perspective may enable greater long-term adherence to lifestyle change recommendations.*

Keywords: long term; maintenance; habit; personalization; structure; adherence

An apple a day keeps the doctor away. This popular expression indicates that apples are good for one's health, and highlights the importance of routinely eating them. Often the message individuals take away from the apple-a-day health advice is to eat more apples. However, perhaps the more important take away message is to eat nutritious foods *regularly*. The term *lifestyle change* inherently means that changes are made such that they can be followed for the *lifetime* of an individual. Implementation of a lifestyle change implies that a routine is followed and habits are formed. A healthy lifestyle includes habitual consumption of nutritious foods, regular physical activity, and consistent sleep. In this issue, Weaver and colleagues[1] discuss the structured day hypothesis as an explanation for the trend in children gaining weight over the summer. When days are less structured, such as the summer months when school is out of session, children are more prone to engage in obesogenic behaviors.[2] As a result, most children—irrespective of their weight status—gain weight over the summer.[3]

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Routine is consistently found to be important for children. A bedtime routine is associated with increased family functioning and improved sleep habits.[4,5] Family routines have been linked to the development of social skills and academic success,[6] and adherence to family routines has been identified as important for family resilience during times of crisis.[7] However, the importance of routine is not unique to children. Observational research indicates that individuals in good health engage in highly routine health behaviors. For example, those successful at maintaining weight loss often eat the same foods, engage in consistent exercise, and do not skip meals.[8-10] While the preponderance of observational-level research points to the importance of routine, little attention has been paid to the role routine may have in lifestyle medicine. Instead, health behavior research often focuses on patient adherence.

According to the World Health Organization, adherence refers to "the extent to which a person's behavior—taking medication, following a diet, and/or executing lifestyle

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changes—corresponds with agreed recommendations from a health care provider."[11] Patient adherence is one of the greatest challenges in lifestyle medicine. In the short term, many patients are able to adhere to recommendations. However, it has been estimated that only about 50% of patients adhere to their long-term treatment plan.[11] Nonadherence to medication, for example, can lead to poor management of chronic disease and a higher health care burden.[12] This is a critical issue for lifestyle medicine as chronic disease is, by definition, long term.

It is evident from low adherence rates that adherence does not always lead to routine. A routine can be defined as a repeated behavior involving a momentary time commitment task that requires little conscious thought.[7,13] If health recommendations were to become routine, adherence would likely occur. A novel way to approach the issue of patient adherence is to assist patients in creating a routine around the health recommendation. However, there are many challenges to the creation of routine.

Forming a Routine

Forming a routine can take a long time and is highly variable between individuals. Experimental research regarding routines is scant. One reason for this is that conducting a randomized control trial to isolate routine as a variable of interest would be challenging. The formation of habits is more often studied.[14-16] As the formation of a habit and routine is more similar than different, some implications of habit formation research will be discussed. However, it is important to note the difference between a routine and a habit. Habits are associated with a cue.[16] For example, washing one's hands after using the restroom is a habit because hand washing is associated with the event of using the restroom. Like a routine, a habit requires little conscious thought. However, after prolonged absence of the cue, an individual's habit may subside. A routine is not dependent on a cue.

A study conducted in the United Kingdom examined how long it takes for adults to form a health habit.[15] Participants were asked to choose a simple dietary or physical activity behavior they did not currently practice to turn into a habit. Behaviors were cued by a single event during the day (e.g., eating a piece of fruit with lunch, drinking a glass of water after breakfast, doing 50 sit-ups after morning coffee, and walking for 10 minutes after breakfast). On average it took 66 days before habits became automatic for participants.[15] Although not significant, physical activity behaviors, which are arguably more complicated than eating or drinking around a meal time, took 1.5 times longer to become automatic than eating or drinking. This illustrates that more complex combinations of behaviors required to prevent disease (routines) are likely to take considerably longer than the 66-day average found for the simple, single behaviors in this study. In addition to the potential differences between the types of behavior, the time to form a habit varied considerably across individuals. In the same study, habit formation ranged from 18 to 254 days.[15] Such variability makes it difficult to form expectations for how long it would take a patient to adopt a simple health behavior. This reinforces the importance of tailoring health advice and treatment expectations to each patient.[17,18]

Part of forming a habit is the consistent repetition of the behavior. In the study discussed above, consistent performance of the behaviors varied by behavior type. Participants who chose a physical activity or eating behavior were significantly less likely to complete the behavior daily than those who chose to drink water.[15] Importantly, not performing the behavior one day did not have lasting effects on the time to forming the habit. This indicates that turning adherence into routine is likely not a dichotomous process. Occasional nonadherence to a behavior will not derail progress made to creating the routine, and perfect adherence does not need to be a goal or expectation for a patient.

Turning Adherence Into Routine

Routines do not require conscious effort or thought.[7,13] Although there are multiple strategies to form a routine, an important one is to help patients develop a structure to their day such that fewer decisions need to be made. When presented with a choice, individuals typically pick the option that is the easiest, quickest, and most enjoyable.[19] Unfortunately, these choices often counter most health recommendations. The success of meal replacements as a weight loss aid exemplifies how reducing the number of decisions an individual makes can lead to improved health.[20,21] Another approach is to train patients to plan out decisions prior to being faced with the decision. Strategies such as preparing meals (or parts of meals) ahead of time, looking at the menu on the way to the restaurant to decide on a healthy choice before sitting at the table, packing a lunch instead of purchasing one, scheduling an exercise class or time to workout with a friend, and so on, all can help remove decisions from an individual's day. When helping a patient plan how to fit health recommendations into their day, it is important for health care providers and patients to be realistic. For most of lifestyle medicine, the establishment of a routine for long-term adherence is more important than perfect adherence in the short term. Health care providers can include situations into the plan when patients have disruptions in routines and can troubleshoot solutions to barriers. For example, a vacation may completely disrupt someone's routine, making it less likely for him or her to maintain certain lifestyle behaviors. In this case, it is important to determine how one's routine will be reestablished on their return.

Conclusion

Establishing a routine—of eating an apple every day—will keep the doctor away. To reduce the health care burden and improve patients' chronic disease management, health care providers can consider shifting toward helping patients build a routine around the lifestyle changes that they need to make. In other words, instead of asking a patient to change his or her lifestyle to adhere to specific recommendations, health care providers can help patients find ways to fit recommendations into their lifestyle. This different perspective for both the health care provider and patient could be what is necessary to increase long-term adherence. However, routines take time to establish. Adding in too many changes to a day will likely be difficult for the patient to sustain and may result in "behavior relapse." Research consistently demonstrates that "too much change, too fast" is likely to end without positive results.[22,23] Health care providers can aim to add in one or two changes at a time, slowing building a routine for health that truly does keep the doctor away.

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