

Debate & Analysis

Making health habitual:

the psychology of 'habit-formation' and general practice

MAKING HEALTH HABITUAL

The Secretary of State recently proposed that the NHS:

... take every opportunity to prevent poor health and promote healthy living by making the most of healthcare professionals' contact with individual patients.¹

Patients trust health professionals as a source of advice on 'lifestyle' (that is, behaviour) change, and brief opportunistic advice can be effective.² However, many health professionals shy away from giving advice on modifying behaviour because they find traditional behaviour change strategies time-consuming to explain and difficult for the patient to implement.² Furthermore, even when patients successfully initiate the recommended changes, the gains are often transient³ because few of the traditional behaviour change strategies have built-in mechanisms for maintenance.

Brief advice is usually based on advising patients on what to change and why (for example, reducing saturated fat intake to reduce the risk of heart attack). Psychologically, such advice is designed to engage conscious deliberative motivational processes, which Kahneman terms 'slow' or 'System 2' processes.⁴ However, the effects are typically short-lived because motivation and attention wane. Brief advice on how to change, engaging automatic ('System 1') processes, may offer a valuable alternative with potential for long-term impact.

Opportunistic health behaviour advice must be easy for health professionals to give and easy for patients to implement to fit into routine health care. We propose that simple advice on how to make healthy actions into habits — externally-triggered automatic responses to frequently encountered contexts — offers a useful option in the behaviour change toolkit. Advice for creating habits is easy for clinicians to deliver and easy for patients to implement: repeat a chosen behaviour in the same context, until it becomes automatic and effortless.

HABIT FORMATION AND HEALTH

While often used as a synonym for frequent or customary behaviour in everyday parlance, within psychology, 'habits' are defined as actions that are triggered automatically in response to contextual

cues that have been associated with their performance:^{5,6} for example, automatically washing hands (action) after using the toilet (contextual cue), or putting on a seatbelt (action) after getting into the car (contextual cue). Decades of psychological research consistently show that mere repetition of a simple action in a consistent context leads, through associative learning, to the action being activated upon subsequent exposure to those contextual cues (that is, habitually).⁷⁻⁹ Once initiation of the action is 'transferred' to external cues, dependence on conscious attention or motivational processes is reduced.¹⁰ Therefore habits are likely to persist even after conscious motivation or interest dissipates.¹¹ Habits are also cognitively efficient, because the automation of common actions frees mental resources for other tasks.

A growing literature demonstrates the relevance of habit-formation principles to health.^{12,13} Participants in one study repeated a self-chosen health-promoting behaviour (for example, eat fruit, go for a walk) in response to a single, once-daily cue in their own environment (such as, after breakfast). Daily ratings of the subjective automaticity of the behaviour (that is, habit strength) showed an asymptotic increase, with an initial acceleration that slowed to a plateau after an average of 66 days.⁹ Missing the occasional opportunity to perform the behaviour did not seriously impair the habit formation process: automaticity gains soon resumed after one missed performance.⁹ Automaticity strength peaked more quickly for simple actions (for example, drinking water) than for more elaborate routines (for example, doing 50 sit-ups).

Habit-formation advice, paired with a 'small changes' approach, has been tested as a behaviour change strategy.^{14,15} In one study, volunteers wanting to lose weight were randomised to a habit-based intervention, based on a brief leaflet listing

10 simple diet and activity behaviours and encouraging context-dependent repetition, or a no-treatment waiting list control. After 8 weeks, the intervention group had lost 2 kg compared with 0.4 kg in the control group. At 32 weeks, completers in the intervention group had lost an average of 3.8 kg.¹⁴ Qualitative interview data indicated that automaticity had developed: behaviours became 'second nature', 'worming their way into your brain' so that participants 'felt quite strange' if they did not do them.¹⁰ Actions that were initially difficult to stick to became easier to maintain. A randomised controlled trial is underway to test the efficacy of this intervention where delivered in a primary care setting to a larger sample, over a 24-month follow-up period.¹⁶ Nonetheless, these early results indicate that habit-forming processes transfer to the everyday environment, and suggest that habit-formation advice offers an innovative technique for promoting long-term behaviour change.¹³

MAKING HEALTHY HABITS

We suggest that professionals could consider providing habit-formation advice as a way to promote long-term behaviour change among patients. Habit-formation advice is ultimately simple — repeat an action consistently in the same context.¹² The habit formation attempt begins at the 'initiation phase', during which the new behaviour and the context in which it will be done are selected. Automaticity develops in the subsequent 'learning phase', during which the behaviour is repeated in the chosen context to strengthen the context-behaviour association (here a simple ticksheet for self-monitoring performance may help; Box 1). Habit-formation culminates in the 'stability phase', at which the habit has formed and its strength has plateaued, so that it persists over time with minimal effort or deliberation.

"Advice for creating habits is easy for clinicians to deliver and easy for patients to implement: repeat a chosen behaviour in the same context, until it becomes automatic and effortless."

“... typical [behaviour change] advice ... emphasises variation in behaviours and settings Variation may stave off boredom, but is effortful and ... incompatible with development of automaticity.”

Initiation requires the patient to be sufficiently motivated to begin a habit-formation attempt, but many patients would like to eat healthier diets or take more exercise, for example, if doing so were easy. Patients must choose an appropriate context in which to perform the action. The ‘context’ can be any cue, for example, an event (‘when I get to work’) or a time of day (‘after breakfast’), that is sufficiently salient in daily life that it is encountered and detected frequently and consistently. A cue

located within an existing daily routine (for example, ‘when I go on my lunch break’) provides a convenient and stable starting point.¹⁰

Keeping going during the learning phase is crucial. The idea of repeating a single specific action (for example, eating a banana) in a consistent context (with cereal at breakfast) is very different from typical advice given to people trying to take up new healthy behaviours, which often emphasises variation in behaviours

and settings to maintain interest (trying different fruits with or between different meals). Variation may stave off boredom, but is effortful and depends on maintaining motivation, and is incompatible with development of automaticity.⁶

Patients should choose the target behaviour themselves. Progress towards a self-determined behavioural goal supports patients’ sense of autonomy and sustains interest,¹⁷ and there is evidence that a behaviour change selected on the basis of its personal value, rather than to satisfy external demands such as physicians’ recommendations, is an easier habit target.¹⁸ Patients need to select a new behaviour (for example, eat an apple) rather than give up an existing behaviour (do not eat fried snacks) because it is not possible to form a habit for not doing something. The automaticity of habit means that breaking existing habits requires different and altogether more effortful strategies than making new habits.¹²

Patients should be encouraged to aim for small and manageable behaviour changes, because failure can be discouraging. A sedentary person, for example, would be more appropriately advised to walk one or two stops more before getting on the bus than to walk the entire route — at least for their first habit goal. Small changes can benefit health: slight adjustments to dietary intake can aid long-term weight management,¹⁹ and small amounts of light physical activity are more beneficial than none.²⁰ Moreover, simpler actions become habitual more quickly.⁹ Additionally, behaviour change achievements, however small, can increase self-efficacy, which can in turn stimulate pursuit of further changes.²¹ Forming one ‘small’ healthy habit may thereby increase self-confidence for working towards other health-promoting habits.

Unrealistic expectations of the duration of the habit formation process can lead the patient to give up during the learning phase. Some patients may have heard that habits take 21 days to form. This myth appears to have originated from anecdotal evidence of patients who had received plastic surgery treatment and typically adjusted psychologically to their new appearance within 21 days.²² More relevant research found that automaticity plateaued on average around 66 days after the first daily performance,⁹ although there was considerable variation across participants and behaviours. Therefore, it may be helpful to tell patients to expect habit formation (based on daily repetition) to take around

Box 1. A tool for patients

Make a new healthy habit

1. Decide on a goal that you would like to achieve for your health.
2. Choose a simple action that will get you towards your goal which you can do on a daily basis.
3. Plan when and where you will do your chosen action. Be consistent: choose a time and place that you encounter every day of the week.
4. Every time you encounter that time and place, do the action.
5. It will get easier with time, and within 10 weeks you should find you are doing it automatically without even having to think about it.
6. Congratulations, you’ve made a healthy habit!

My goal (e.g. ‘to eat more fruit and vegetables’) _____

My plan (e.g. ‘after I have lunch at home I will have a piece of fruit’)
(When and where) _____ I will _____

Some people find it helpful to keep a record while they are forming a new habit. This daily tick-sheet can be used until your new habit becomes automatic. You can rate how automatic it feels at the end of each week, to watch it getting easier.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Monday										
Tuesday										
Wednesday										
Thursday										
Friday										
Saturday										
Sunday										
Done on >5 days, yes or no										
How automatic does it feel? Rate from 1 (not at all) to 10 (completely)										

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10 weeks. Our experience is that people are reassured to learn that doing the behaviour gets progressively easier; so they only have to maintain their motivation until the habit forms. Working effortfully on a new behaviour for 2–3 months may be an attractive offer if it has a chance of making the behaviour become ‘second nature’.

CONCLUSION

Psychological theory and evidence around habit-formation generates recommendations for simple and sustainable behaviour change advice. We acknowledge that health professionals do not always find it appropriate to offer lifestyle counselling to patients: some patients can become annoyed when advised to change their behaviour, and this reaction can threaten patients’ trust in and satisfaction with the doctor–patient relationship.² However, in settings where professionals feel able to offer behaviour advice, we suggest that they consider providing guidance on habit-formation. Habit-formation advice can be delivered briefly, it is simple for the patient to implement, and it has realistic potential for long-term impact. It offers health professionals a useful tool for incorporating evidence-based health promotion into encounters with patients. A sample tool for health professionals to use with patients to encourage habit formation is provided in Box 1.

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