

CONTENTS

1	The Behaviour Change Wheel	2
2	The Theoretical Domains Framework².....	4
3	The Behaviour Change Technique Taxonomy v1⁴	4

TABLES & FIGURES

Table 1: BCW intervention functions and policy categories	3
Table 2: Descriptions of BCTs.....	5
Table 3: BCTTv1 93 hierarchically clustered BCTs	2
Figure 1: COM-B framework to explore factors influencing behaviour	2
Figure 2: The Behaviour Change Wheel	3
Figure 3: The Theoretical Domains Framework. Michie et al. (2011)	4

1 The Behaviour Change Wheel

The Behaviour Change Wheel (BCW) is a synthesis of 19 frameworks of behaviour change. It can be used both to develop and define the content of interventions designed to support behaviour change¹

The theoretical COM-B model sits in the centre of the wheel it explores factors which influence may influence whether or not a behaviour may occur. These factors are associated with capability (e.g., knowledge and skills), opportunity (e.g., social and environmental influences) and motivation (e.g., beliefs and attitudes).

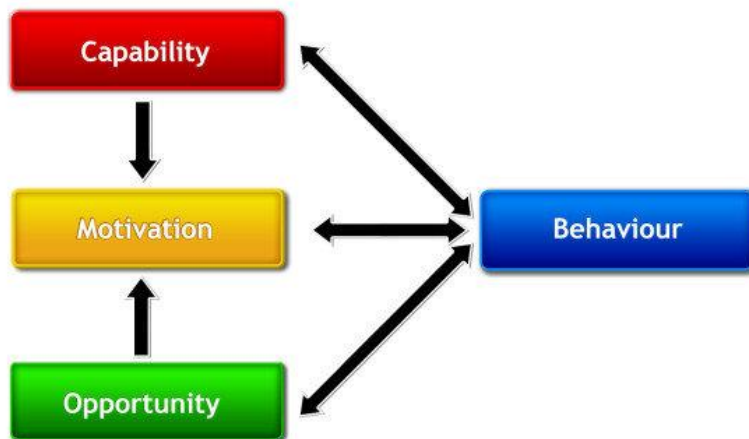


Figure 1: COM-B framework to explore factors influencing behaviour

In the BCW, the COM-B model is surrounded by 9 intervention functions (purposes) and 7 policy categories (system-level strategies to enable or support the delivery of intervention functions) (Table 1). Different intervention functions and policy categories are likely to be effective depending upon a behavioural diagnosis facilitated through the lens of COM-B.

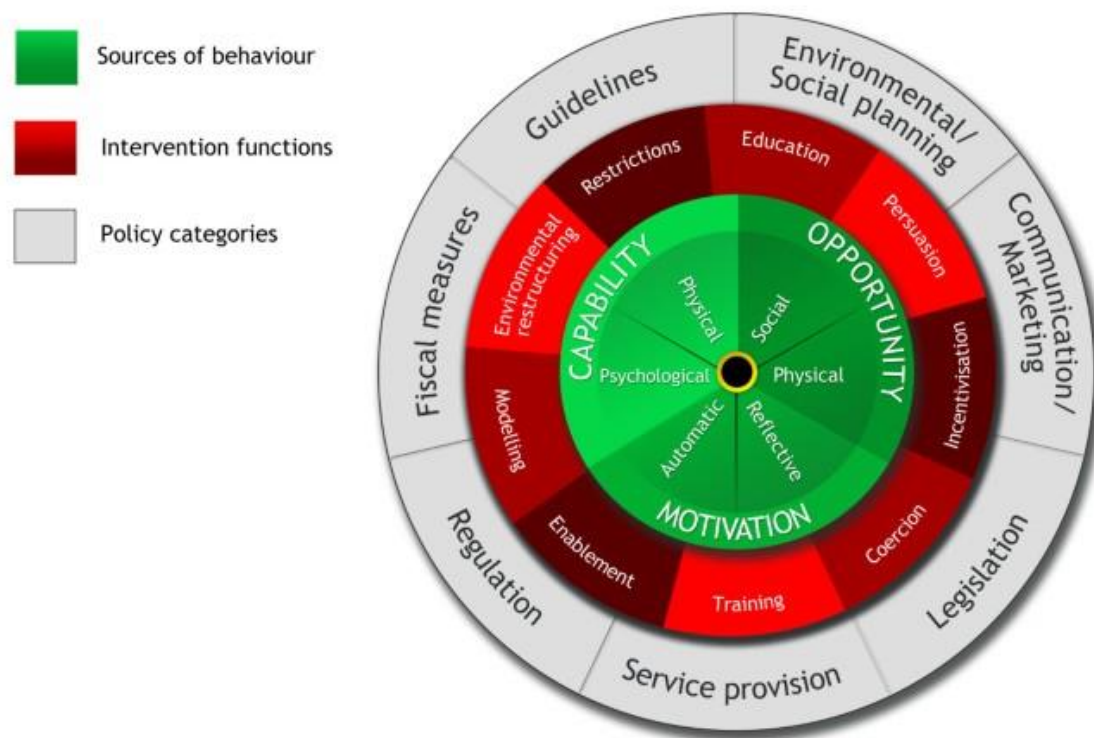


Figure 2: The Behaviour Change Wheel

Table 1: BCW intervention functions and policy categories

Aspect	Intervention Function	Policy Category
Definition	Broad approaches to change behaviour by targeting capability, opportunity and/or motivation	System-level strategies that enable or support the delivery of intervention functions
Purpose	Directly influences behaviour	Create a supportive environment or infrastructure for behaviour change
Categories	Education Persuasion Coercion Training Restriction Environmental restructuring Modelling Enablement	Guidelines Fiscal measures Regulation Legislation Environmental/social planning Service provision Communication/marketing
Links to	Behaviour analysis	Implementation of intervention functions
Level of action	Individual or group behaviour	Organisational, community or governmental policy level

2 The Theoretical Domains Framework²

The Theoretical Domains Framework (TDF), which has its origins in implementation science² has been mapped to the COM-B domains and can be used to add further granularity to the factors influencing behaviour². The TDF has 15 categories which are listed at the left of Figure . These domains also describe the mechanisms of action, or underlying processes by which a behaviour change intervention produces its effect. It explains how and why an intervention leads to change in behaviour by targeting specific psychological, physical or social processes. Examples of mechanisms of action include increasing self-efficacy and altering perceived social norms. The TDF domains can be directly linked to the active ingredients of the intervention, the behaviour change techniques (BCTs) as fully described by Carey et al.,³

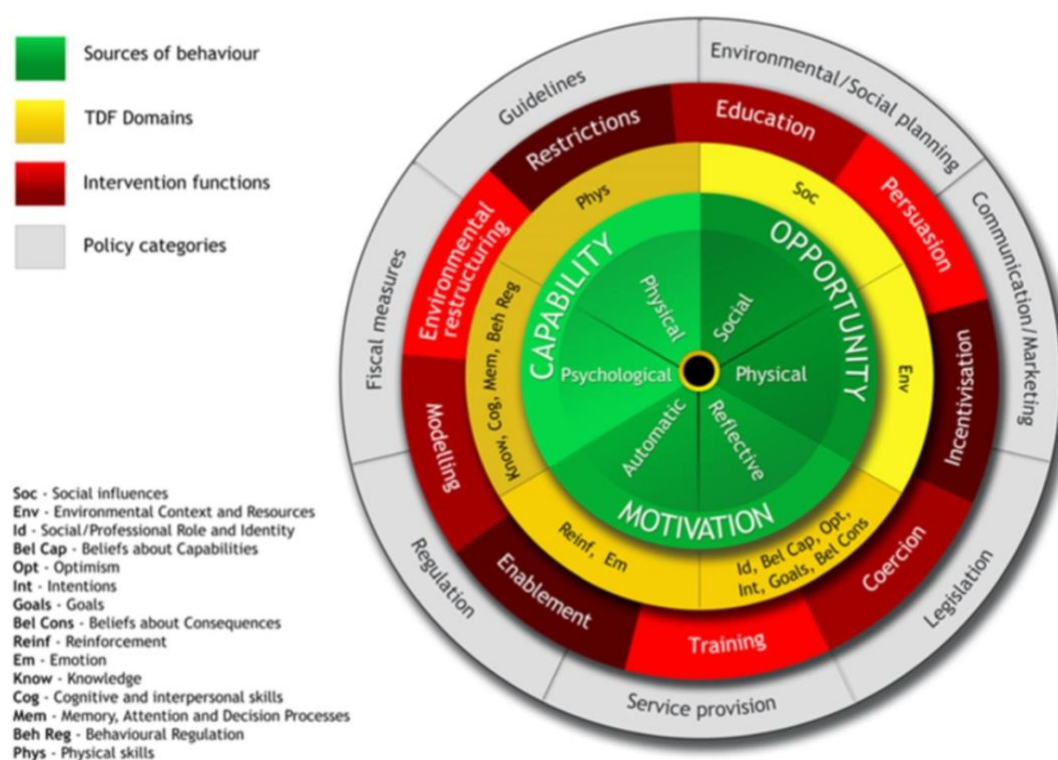


Figure 3: The Theoretical Domains Framework. Michie et al. (2011)

3 The Behaviour Change Technique Taxonomy v1⁴

Behaviour change techniques are the smallest. Replicable components of an intervention designed to alter behaviour by targeting underlying processes. Each BCT is a specific strategy and links to a specific mechanism of action. BCTs are systematically classified and organised into hierarchies in taxonomies. The BCT Taxonomy v1 (BCTTv1) is one example.

More specifically Behaviour Change Techniques (BCTs) can be described as follows:

- i) contain verbs (e.g., provide, advise, arrange, prompt) that refer to the action(s)

- taken by the person/s delivering the technique. BCTs can be delivered by an ‘interventionist’ or self- delivered
- ii) contain the term “**behaviour**” referring to a single action or sequence of actions that includes the performance of **wanted** behaviour(s) and/or **inhibition** (non-performance) of **unwanted** behaviour(s)
 - iii) note alternative or additional coding where relevant
 - iv) note the technical terms associated with particular theoretical frameworks where relevant (e.g. ‘including implementation intentions)

The BCTs in BCTTv1 are described in Table 2 and grouped by cluster in Table 3.

Table 2: Descriptions of BCTs

No.	Label	Definition	Examples
1. Goals and planning			
1.1	Goal setting (behavior)	Set or agree on a goal defined in terms of the behavior to be achieved <i>Note: only code goal-setting if there is sufficient evidence that goal set as part of intervention; if goal unspecified or a behavioral outcome, code 1.3, Goal setting (outcome); if the goal defines a specific context, frequency, duration or intensity for the behavior, <u>also</u> code 1.4, Action planning</i>	Agree on a daily walking goal (e.g. 3 miles) with the person and reach agreement about the goal Set the goal of eating 5 pieces of fruit per day as specified in public health guidelines
1.2	Problem solving	Analyse , or prompt the person to analyse, factors influencing the behavior and generate or select strategies that include overcoming barriers and/or increasing facilitators (includes ‘ Relapse Prevention ’ and ‘ Coping Planning ’) <i>Note: barrier identification without solutions is not sufficient. If the BCT does not include analysing the behavioral problem, consider 12.3, Avoidance/changing exposure to cues for the behavior, 12.1, Restructuring the physical environment, 12.2, Restructuring the social environment, or 11.2, Reduce negative emotions</i>	Identify specific triggers (e.g. being in a pub, feeling anxious) that generate the urge/want/need to drink and develop strategies for avoiding environmental triggers or for managing negative emotions, such as anxiety, that motivate drinking Prompt the patient to identify barriers preventing them from starting a new exercise regime e.g., lack of motivation, and discuss ways in which they could help overcome them e.g., going to the gym with a buddy
Back to index page			

1.3	Goal setting (outcome)	Set or agree on a goal defined in terms of a positive outcome of wanted behavior <i>Note: only code guidelines if set as a goal in an intervention context; if goal is a behavior, code 1.1, Goal setting (behavior); if goal unspecified code 1.3, Goal setting (outcome)</i>	Set a weight loss goal (e.g. 0.5 kilogram over one week) as an outcome of changed eating patterns
1.4	Action planning	Prompt detailed planning of performance of the behavior (must include at least one of context, frequency, duration and intensity). Context may be environmental (physical or social) or internal (physical, emotional or cognitive) (includes ' Implementation Intentions ') <i>Note: evidence of action planning does not necessarily imply goal setting, only code latter if sufficient evidence</i>	Encourage a plan to carry condoms when going out socially at weekends Prompt planning the performance of a particular physical activity (e.g. running) at a particular time (e.g. before work) on certain days of the week
1.5	Review behavior goal(s)	Review behavior goal(s) jointly with the person and consider modifying goal(s) or behavior change strategy in light of achievement. This may lead to re-setting the same goal, a small change in that goal or setting a new goal instead of (or in addition to) the first, or no change <i>Note: if goal specified in terms of behavior, code 1.5, Review behavior goal(s), if goal unspecified, code 1.7, Review outcome goal(s); if discrepancy created consider also 1.6, Discrepancy between current behavior and goal</i>	Examine how well a person's performance corresponds to agreed goals e.g. whether they consumed less than one unit of alcohol per day, and consider modifying future behavioral goals accordingly e.g. by increasing or decreasing alcohol target or changing type of alcohol consumed

1.6	Discrepancy between current behavior and goal	<p>Draw attention to discrepancies between a person's current behavior (in terms of the <i>form, frequency, duration, or intensity</i> of that behavior) and the person's previously set outcome goals, behavioral goals or action plans (goes beyond self- monitoring of behavior)</p> <p><i>Note: if discomfort is created only code 13.3, Incompatible beliefs and <u>not</u> 1.6, Discrepancy between current behavior and goal; if goals are modified, also code 1.5, Review behavior goal(s) and/or 1.7, Review outcome goal(s); if feedback is provided, <u>also</u> code 2.2, Feedback on behaviour</i></p>	Point out that the recorded exercise fell short of the goal set
Back to index page			

1.7	Review outcome goal(s)	<p>Review outcome goal(s) jointly with the person and consider modifying goal(s) in light of achievement. This may lead to re- setting the same goal, a small change in that goal or setting a new goal instead of, or in addition to the first</p> <p><i>Note: if goal specified in terms of behavior, code 1.5, Review behavior goal(s), if goal unspecified, code 1.7, Review outcome goal(s); if discrepancy created consider also 1.6, Discrepancy between current behavior and goal</i></p>	Examine how much weight has been lost and consider modifying outcome goal(s) accordingly e.g., by increasing or decreasing subsequent weight loss targets
1.8	Behavioral contract	<p>Create a written specification of the behavior to be performed, agreed on by the person, and witnessed by another <i>Note: <u>also</u> code 1.1, Goal setting (behavior)</i></p>	Sign a contract with the person e.g. specifying that they will not drink alcohol for one week

1.9	Commitment	Ask the person to affirm or reaffirm statements indicating commitment to change the behavior <i>Note: if defined in terms of the behavior to be achieved <u>also</u> code 1.1, Goal setting (behavior)</i>	Ask the person to use an “I will” statement to affirm or reaffirm a strong commitment (i.e. using the words “strongly”, “committed” or “high priority”) to start, continue or restart the attempt to take medication as prescribed
2. Feedback and monitoring			
2.1	Monitoring of behavior by others without feedback	Observe or record behavior with the person’s knowledge as part of a behavior change strategy <i>Note: if monitoring is part of a data collection procedure rather than a strategy aimed at changing behavior, do not code; if feedback given, code only 2.2, Feedback on behavior, and <u>not</u> 2.1, Monitoring of behavior by others without feedback; if monitoring outcome(s) code 2.5, Monitoring outcome(s) of behavior by others without feedback; if self- monitoring behavior, code 2.3, Self-monitoring of behaviour</i>	Watch hand washing behaviors among health care staff and make notes on context, frequency and technique used
Back to index page			

2.2	Feedback on behavior	Monitor and provide informative or evaluative feedback on performance of the behavior (e.g. form, frequency, duration, intensity) <i>Note: if Biofeedback, code only 2.6, Biofeedback and <u>not</u> 2.2, Feedback on behavior; if feedback is on outcome(s) of behavior, code 2.7, Feedback on outcome(s) of behavior; if there is no clear evidence that feedback was given, code 2.1, Monitoring of behavior by others without feedback; if feedback on behaviour is evaluative e.g. praise, also code 10.4, Social reward</i>	Inform the person of how many steps they walked each day (as recorded on a pedometer) or how many calories they ate each day (based on a food consumption questionnaire).
-----	-----------------------------	--	---

2.3	Self-monitoring of behavior	Establish a method for the person to monitor and record their behavior(s) as part of a behavior change strategy <i>Note: if monitoring is part of a data collection procedure rather than a strategy aimed at changing behavior, do not code; if monitoring of outcome of behavior, code 2.4, Self-monitoring of outcome(s) of behavior; if monitoring is by someone else (without feedback), code 2.1, Monitoring of behavior by others without feedback</i>	Ask the person to record daily, in a diary, whether they have brushed their teeth for at least two minutes before going to bed Give patient a pedometer and a form for recording daily total number of steps
2.4	Self-monitoring of outcome(s) of behavior	Establish a method for the person to monitor and record the outcome(s) of their behavior as part of a behavior change strategy <i>Note: if monitoring is part of a data collection procedure rather than a strategy aimed at changing behavior, do not code ; if monitoring behavior, code 2.3, Self-monitoring of behavior; if monitoring is by someone else (without feedback), code 2.5, Monitoring outcome(s) of behavior by others without feedback</i>	Ask the person to weigh themselves at the end of each day, over a two week period, and record their daily weight on a graph to increase exercise behaviors
Back to index page			

2.5	Monitoring outcome(s) of behavior by others without feedback	Observe or record outcomes of behavior with the person's knowledge as part of a behavior change strategy <i>Note: if monitoring is part of a data collection procedure rather than a strategy aimed at changing behavior, do not code; if feedback given, code only 2.7, Feedback on outcome(s) of behavior; if monitoring behavior code 2.1, Monitoring of behavior by others without feedback; if self-monitoring outcome(s), code 2.4, Self-monitoring of outcome(s) of behavior</i>	Record blood pressure, blood glucose, weight loss, or physical fitness
2.6	Biofeedback	Provide feedback about the body (e.g. physiological or biochemical state) using an external monitoring device as part of a behavior change strategy <i>Note: if Biofeedback, code only 2.6, Biofeedback and <u>not</u> 2.2, Feedback on behavior or 2.7, Feedback on outcome(s) of behaviour</i>	Inform the person of their blood pressure reading to improve adoption of health behaviors
2.7	Feedback on outcome(s) of behavior	Monitor and provide feedback on the outcome of performance of the behavior <i>Note: if Biofeedback, code only 2.6, Biofeedback and <u>not</u> 2.7, Feedback on outcome(s) of behavior; if feedback is on behavior code 2.2, Feedback on behavior; if there is no clear evidence that feedback was given code 2.5, Monitoring outcome(s) of behavior by others without feedback; if feedback on behaviour is evaluative e.g. praise, also code 10.4, Social reward</i>	Inform the person of how much weight they have lost following the implementation of a new exercise regime
3. Social support			

3.1	Social support (unspecified)	Advise on, arrange or provide social support (<i>e.g. from friends, relatives, colleagues, 'buddies' or staff</i>) or non-contingent praise or reward for performance of the behavior. It includes encouragement and counselling, but only when it is directed at the behavior <i>Note: attending a group class and/or mention of 'follow-up' does not necessarily apply this BCT, support must be explicitly mentioned; if practical, code 3.2, Social support (practical); if emotional, code 3.3, Social support (emotional) (includes 'Motivational interviewing' and 'Cognitive Behavioral Therapy')</i>	Advise the person to call a 'buddy' when they experience an urge to smoke Arrange for a housemate to encourage continuation with the behavior change programme Give information about a self- help group that offers support for the behaviour Back to index page
3.2	Social support (practical)	Advise on, arrange, or provide practical help (<i>e.g. from friends, relatives, colleagues, 'buddies' or staff</i>) for performance of the behavior <i>Note: if emotional, code 3.3, Social support (emotional); if general or unspecified, code 3.1, Social support (unspecified) If only restructuring the physical environment or adding objects to the environment, code 12.1, Restructuring the physical environment or 12.5, Adding objects to the environment; attending a group or class and/or mention of 'follow-up' does not necessarily apply this BCT, support must be explicitly mentioned.</i>	Ask the partner of the patient to put their tablet on the breakfast tray so that the patient remembers to take it
3.3	Social support (emotional)	Advise on, arrange, or provide emotional social support (<i>e.g. from friends, relatives, colleagues, 'buddies' or staff</i>) for performance of the behavior <i>Note: if practical, code 3.2, Social support (practical); if unspecified, code 3.1, Social support (unspecified)</i>	Ask the patient to take a partner or friend with them to their colonoscopy appointment
4. Shaping knowledge			

4.1	Instruction on how to perform a behavior	Advise or agree on how to perform the behavior (includes ' Skills training ') <i>Note: when the person attends classes such as exercise or cookery, code 4.1, Instruction on how to perform the behavior, 8.1, Behavioral practice/rehearsal and 6.1, Demonstration of the behavior</i>	Advise the person how to put a condom on a model of a penis correctly
4.2	Information about antecedents	Provide information about antecedents (e.g. <i>social and environmental situations and events, emotions, cognitions</i>) that reliably predict performance of the behaviour	Advise to keep a record of snacking and of situations or events occurring prior to snacking
4.3	Re-attribution	Elicit perceived causes of behavior and suggest alternative explanations (e.g. <i>external or internal and stable or unstable</i>)	If the person attributes their over-eating to the frequent presence of delicious food, suggest that the 'real' cause may be the person's inattention to bodily signals of hunger and satiety

[Back to index page](#)

4.4	Behavioral experiments	Advise on how to identify and test hypotheses about the behavior, its causes and consequences, by collecting and interpreting data	Ask a family physician to give evidence-based advice rather than prescribe antibiotics and to note whether the patients are grateful or annoyed
5. Natural consequences			
5.1	Information about health consequences	Provide information (e.g. written, verbal, visual) about health consequences of performing the behavior <i>Note: consequences can be for any target, not just the recipient(s) of the intervention; emphasising importance of consequences is not sufficient; if information about emotional consequences, code 5.6, Information about emotional consequences; if about social, environmental or unspecified consequences code 5.3, Information about social and environmental consequences</i>	Explain that not finishing a course of antibiotics can increase susceptibility to future infection Present the likelihood of contracting a sexually transmitted infection following unprotected sexual behavior

5.2	<i>Saliency of consequences</i>	Use methods specifically designed to emphasise the consequences of performing the behaviour with the aim of making them more memorable (goes beyond informing about consequences) <i>Note: if information about consequences, also code 5.1, Information about health consequences, 5.6, Information about emotional consequences or 5.3, Information about social and environmental consequences</i>	Produce cigarette packets showing pictures of health consequences e.g. diseased lungs, to highlight the dangers of continuing to smoke
5.3	<i>Information about social and environmental consequences</i>	Provide information (e.g. written, verbal, visual) about social and environmental consequences of performing the behavior <i>Note: consequences can be for any target, not just the recipient(s) of the intervention; if information about health or consequences, code 5.1, Information about health consequences; if about emotional consequences, code 5.6, Information about emotional consequences; if unspecified, code 5.3, Information about social and environmental consequences</i>	Tell family physician about financial remuneration for conducting health screening Inform a smoker that the majority of people disapprove of smoking in public places
5.4	<i>Monitoring of emotional consequences</i>	Prompt assessment of feelings after attempts at performing the behavior	Agree that the person will record how they feel after taking their daily walk
Back to index page			

5.5	<i>Anticipated regret</i>	Induce or raise awareness of expectations of future regret about performance of the unwanted behavior <i>Note: <u>not</u> including 5.6, Information about emotional consequences; if suggests adoption of a perspective or new perspective in order to change cognitions also code 13.2, Framing/reframing</i>	Ask the person to assess the degree of regret they will feel if they do not quit smoking
-----	----------------------------------	---	--

5.6	Information about emotional consequences	Provide information (e.g. written, verbal, visual) about emotional consequences of performing the behavior <i>Note: consequences can be related to emotional health disorders (e.g. depression, anxiety) and/or states of mind (e.g. low mood, stress); <u>not</u> including 5.5, Anticipated regret; consequences can be for any target, not just the recipient(s) of the intervention; if information about health consequences code 5.1, Information about health consequences; if about social, environmental or unspecified code 5.3, Information about social and environmental consequences</i>	Explain that quitting smoking increases happiness and life satisfaction
6. Comparison of behaviour			
6.1	Demonstration of the behavior	Provide an observable sample of the performance of the behaviour, directly in person or indirectly e.g. via film, pictures, for the person to aspire to or imitate (includes ' Modelling '). <i>Note: if advised to practice, <u>also</u> code, 8.1, Behavioural practice and rehearsal; if provided with instructions on how to perform, <u>also</u> code 4.1, Instruction on how to perform the behaviour</i>	Demonstrate to nurses how to raise the issue of excessive drinking with patients via a role-play exercise
6.2	Social comparison	Draw attention to others' performance to allow comparison with the person's own performance <i>Note: being in a group setting does not necessarily mean that social comparison is actually taking place</i>	Show the doctor the proportion of patients who were prescribed antibiotics for a common cold by other doctors and compare with their own data
6.3	Information about others' approval	Provide information about what other people think about the behavior. The information clarifies whether others will like, approve or disapprove of what the person is doing or will do	Tell the staff at the hospital ward that staff at all other wards approve of washing their hands according to the guidelines
Back to index page			

7. Associations

7.1	Prompts/cues	Introduce or define environmental or social stimulus with the purpose of prompting or cueing the behavior. The prompt or cue would normally occur at the time or place of performance <i>Note: when a stimulus is linked to a specific action in an if-then plan including one or more of frequency, duration or intensity <u>also</u> code 1.4, Action planning.</i>	Put a sticker on the bathroom mirror to remind people to brush their teeth
7.2	Cue signalling reward	Identify an environmental stimulus that reliably predicts that reward will follow the behavior (includes <u>Discriminative cue</u>)	Advise that a fee will be paid to dentists for a particular dental treatment of 6-8 year old, but not older, children to encourage delivery of that treatment (the 6- 8 year old children are the environmental stimulus)
7.3	Reduce prompts/cues	Withdraw gradually prompts to perform the behavior (includes <u>Fading</u>)	Reduce gradually the number of reminders used to take medication
7.4	Remove access to the reward	Advise or arrange for the person to be separated from situations in which unwanted behavior can be rewarded in order to reduce the behavior (includes <u>Time out</u>)	Arrange for cupboard containing high calorie snacks to be locked for a specified period to reduce the consumption of sugary foods in between meals
7.5	Remove aversive stimulus	Advise or arrange for the removal of an aversive stimulus to facilitate behavior change (includes <u>Escape learning</u>)	Arrange for a gym-buddy to stop nagging the person to do more exercise in order to increase the desired exercise behaviour
7.6	Satiation	Advise or arrange repeated exposure to a stimulus that reduces or extinguishes a drive for the unwanted behavior	Arrange for the person to eat large quantities of chocolate, in order to reduce the person's appetite for sweet foods
7.7	Exposure	Provide systematic confrontation with a feared stimulus to reduce the response to a later encounter	Agree a schedule by which the person who is frightened of surgery will visit the hospital where they are scheduled to have surgery
Back to index page			

7.8	Associative learning	Present a neutral stimulus jointly with a stimulus that already elicits the behavior repeatedly until the neutral stimulus elicits that behavior (includes 'Classical/Pavlovian Conditioning') <i>Note: when a BCT involves reward or punishment, code one or more of: 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i>	Present repeatedly fatty foods with a disliked sauce to discourage the consumption of fatty foods
8. Repetition and substitution			
8.1	Behavioral practice/rehearsal	Prompt practice or rehearsal of the performance of the behavior one or more times in a context or at a time when the performance may not be necessary, in order to increase habit and skill <i>Note: if aiming to associate performance with the context, <u>also</u> code 8.3, Habit formation</i>	Prompt asthma patients to practice measuring their peak flow in the nurse's consulting room
8.2	Behavior substitution	Prompt substitution of the unwanted behavior with a wanted or neutral behavior <i>Note: if this occurs regularly, <u>also</u> code 8.4, Habit reversal</i>	Suggest that the person goes for a walk rather than watches television
8.3	Habit formation	Prompt rehearsal and repetition of the behavior in the same context repeatedly so that the context elicits the behavior <i>Note: <u>also</u> code 8.1, Behavioral practice/rehearsal</i>	Prompt patients to take their statin tablet before brushing their teeth every evening
8.4	Habit reversal	Prompt rehearsal and repetition of an alternative behavior to replace an unwanted habitual behavior <i>Note: <u>also</u> code 8.2, Behavior substitution</i>	Ask the person to walk up stairs at work where they previously always took the lift
8.5	Overcorrection	Ask to repeat the wanted behavior in an exaggerated way following an unwanted behaviour	Ask to eat <u>only</u> fruit and vegetables the day after a poor diet
8.6	Generalisation of a target behavior	Advise to perform the wanted behaviour, which is already performed in a particular situation, in another situation	Advise to repeat toning exercises learned in the gym when at home
Back to index page			

8.7	Graded tasks	Set easy-to-perform tasks, making them increasingly difficult, but achievable, until behavior is performed	Ask the person to walk for 100 yards a day for the first week, then half a mile a day after they have successfully achieved 100 yards, then two miles a day after they have successfully achieved one mile
9. Comparison of outcomes			
9.1	Credible source	Present verbal or visual communication from a credible source in favour of or against the behavior <i>Note: code this BCT if source generally agreed on as credible e.g., health professionals, celebrities or words used to indicate expertise or leader in field and if the communication has the aim of persuading; if information about health consequences, <u>also</u> code 5.1, Information about health consequences, if about emotional consequences, <u>also</u> code 5.6, Information about emotional consequences; if about social, environmental or unspecified consequences <u>also</u> code 5.3, Information about social and environmental consequences</i>	Present a speech given by a high status professional to emphasise the importance of not exposing patients to unnecessary radiation by ordering x-rays for back pain
9.2	Pros and cons	Advise the person to identify and compare reasons for wanting (pros) and not wanting to (cons) change the behavior (includes ' Decisional balance ') <i>Note: if providing information about health consequences, <u>also</u> code 5.1, Information about health consequences; if providing information about emotional consequences, <u>also</u> code 5.6, Information about emotional consequences; if providing information about social, environmental or unspecified consequences <u>also</u> code 5.3, Information about social and environmental consequences</i>	Advise the person to list and compare the advantages and disadvantages of prescribing antibiotics for upper respiratory tract infections

9.3	Comparative imagining of future outcomes	Prompt or advise the imagining and comparing of future outcomes of changed versus unchanged behaviour	Prompt the person to imagine and compare likely or possible outcomes following attending versus not attending a screening appointment
-----	---	---	---

[Back to index page](#)

10. Reward and threat			
10.1	Material incentive (behavior)	<p>Inform that money, vouchers or other valued objects will be delivered if and only if there has been effort and/or progress in performing the behavior (includes 'Positive reinforcement')</p> <p><i>Note: if incentive is social, code 10.5, Social incentive if unspecified code 10.6, Non-specific incentive, and not 10.1, Material incentive (behavior); if incentive is for outcome, code 10.8, Incentive (outcome). If reward is delivered also code one of: 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i></p>	Inform that a financial payment will be made each month in pregnancy that the woman has not smoked
10.2	Material reward (behavior)	<p>Arrange for the delivery of money, vouchers or other valued objects if and only if there has been effort and/or progress in performing the behavior (includes 'Positive reinforcement')</p> <p><i>Note: If reward is social, code 10.4, Social reward, if unspecified code 10.3, Non-specific reward, and not 10.1, Material reward (behavior); if reward is for outcome, code 10.10, Reward (outcome). If informed of reward in advance of rewarded behaviour, also code one of: 10.1, Material incentive (behaviour); 10.5, Social incentive; 10.6, Non-specific incentive; 10.7, Self-incentive; 10.8, Incentive (outcome)</i></p>	Arrange for the person to receive money that would have been spent on cigarettes if and only if the smoker has not smoked for one month

10.3	Non-specific reward	<p>Arrange delivery of a reward if and only if there has been effort and/or progress in performing the behavior (includes 'Positive reinforcement') <i>Note: if reward is material, code 10.2, Material reward (behavior), if social, code 10.4, Social reward, and <u>not</u> 10.3, Non-specific reward; if reward is for outcome code 10.10, Reward (outcome). If informed of reward in advance of rewarded behaviour, also code one of: 10.1, Material incentive (behaviour); 10.5, Social incentive; 10.6, Non-specific incentive; 10.7, Self-incentive; 10.8, Incentive (outcome)</i></p>	<p>Identify something (e.g. an activity such as a visit to the cinema) that the person values and arrange for this to be delivered if and only if they attend for health screening</p>
------	----------------------------	---	--

[Back to index page](#)

10.4	Social reward	<p>Arrange verbal or non-verbal reward if and only if there has been effort and/or progress in performing the behavior (includes 'Positive reinforcement') <i>Note: if reward is material, code 10.2, Material reward (behavior), if unspecified code 10.3, Non-specific reward, and <u>not</u> 10.4, Social reward; if reward is for outcome code 10.10, Reward (outcome). If informed of reward in advance of rewarded behaviour, also code one of: 10.1, Material incentive (behaviour); 10.5, Social incentive; 10.6, Non-specific incentive; 10.7, Self-incentive; 10.8, Incentive (outcome)</i></p>	<p>Congratulate the person for each day they eat a reduced fat diet</p>
------	----------------------	--	---

10.5	Social incentive	<p>Inform that a verbal or non-verbal reward will be delivered if and only if there has been effort and/or progress in performing the behavior (includes 'Positive reinforcement') <i>Note: if incentive is material, code 10.1, Material incentive (behavior), if unspecified code 10.6, Non-specific incentive, and <u>not</u> 10.5, Social incentive; if incentive is for outcome code 10.8, Incentive (outcome). If reward is delivered also code one of: 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i></p>	<p>Inform that they will be congratulated for each day they eat a reduced fat diet</p>
10.6	Non-specific incentive	<p>Inform that a reward will be delivered if and only if there has been effort and/or progress in performing the behavior (includes 'Positive reinforcement') <i>Note: if incentive is material, code 10.1, Material incentive (behavior), if social, code 10.5, Social incentive and <u>not</u> 10.6, Non-specific incentive; if incentive is for outcome code 10.8, Incentive (outcome). If reward is delivered also code one of: 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i></p>	<p>Identify an activity that the person values and inform them that this will happen if and only if they attend for health screening</p>

[Back to index page](#)

10.7	Self-incentive	<p>Plan to reward self in future if and only if there has been effort and/or progress in performing the behavior <i>Note: if self-reward is material, <u>also</u> code 10.1, Material incentive (behavior), if social, <u>also</u> code 10.5, Social incentive, if unspecified, <u>also</u> code 10.6, Non-specific incentive; if incentive is for outcome code 10.8, Incentive (outcome). If reward is delivered also code one of: 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i></p>	<p>Encourage to provide self with material (e.g., new clothes) or other valued objects if and only if they have adhered to a healthy diet</p>
------	-----------------------	---	---

10.8	Incentive (outcome)	<p>Inform that a reward will be delivered if and only if there has been effort and/or progress in achieving the behavioural outcome (includes <u>Positive reinforcement</u>)</p> <p><i>Note: this includes social, material, self- and non-specific incentives for outcome; if incentive is for the behavior code 10.5, Social incentive, 10.1, Material incentive (behavior), 10.6, Non-specific incentive or 10.7, Self-incentive and not 10.8, Incentive (outcome). If reward is delivered also code one of: 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i></p>	Inform the person that they will receive money if and only if a certain amount of weight is lost
10.9	Self-reward	<p>Prompt self-praise or self-reward if and only if there has been effort and/or progress in performing the behavior</p> <p><i>Note: if self-reward is material, <u>also</u> code 10.2, Material reward (behavior), if social, <u>also</u> code 10.4, Social reward, if unspecified, <u>also</u> code 10.3, Non-specific reward; if reward is for outcome code 10.10, Reward (outcome). If informed of reward in advance of rewarded behaviour, also code one of: 10.1, Material incentive (behaviour); 10.5, Social incentive; 10.6, Non-specific incentive; 10.7, Self-incentive; 10.8, Incentive (outcome)</i></p>	Encourage to reward self with material (e.g., new clothes) or other valued objects if and only if they have adhered to a healthy diet

[Back to index page](#)

10.10	Reward (outcome)	<p>Arrange for the delivery of a reward if and only if there has been effort and/or progress in achieving the behavioral outcome (includes 'Positive reinforcement') <i>Note: this includes social, material, self- and non-specific rewards for outcome; if reward is for the behavior code 10.4, Social reward, 10.2, Material reward (behavior), 10.3, Non-specific reward or 10.9, Self-reward and <u>not</u> 10.10, Reward (outcome). If informed of reward in advance of rewarded behaviour, also code one of: 10.1, Material incentive (behaviour); 10.5, Social incentive; 10.6, Non-specific incentive; 10.7, Self-incentive; 10.8, Incentive (outcome)</i></p>	<p>Arrange for the person to receive money if and only if a certain amount of weight is lost</p>
10.11	Future punishment	<p>Inform that future punishment or removal of reward will be a consequence of performance of an unwanted behavior (may include fear arousal) (includes 'Threat')</p>	<p>Inform that continuing to consume 30 units of alcohol per day is likely to result in loss of employment if the person continues</p>
11. Regulation			
11.1	Pharmacological support	<p>Provide, or encourage the use of or adherence to, drugs to facilitate behavior change <i>Note: if pharmacological support to reduce negative emotions (i.e. anxiety) then <u>also</u> code 11.2, Reduce negative emotions</i></p>	<p>Suggest the patient asks the family physician for nicotine replacement therapy to facilitate smoking cessation</p>
11.2	Reduce negative emotions^b	<p>Advise on ways of reducing negative emotions to facilitate performance of the behavior (includes 'Stress Management') <i>Note: if includes analysing the behavioural problem, <u>also</u> code 1.2, Problem solving</i></p>	<p>Advise on the use of stress management skills, e.g. to reduce anxiety about joining Alcoholics Anonymous</p>
11.3	Conserving mental resources	<p>Advise on ways of minimising demands on mental resources to facilitate behavior change</p>	<p>Advise to carry food calorie content information to reduce the burden on memory in making food choices</p>

11.4	Paradoxical instructions	Advise to engage in some form of the unwanted behavior with the aim of reducing motivation to engage in that behaviour	Advise a smoker to smoke twice as many cigarettes a day as they usually do Tell the person to stay awake as long as possible in order to reduce insomnia
------	---------------------------------	--	---

[Back to index page](#)

12. Antecedents			
12.1	Restructuring the physical environment	Change, or advise to change the physical environment in order to facilitate performance of the wanted behavior or create barriers to the unwanted behavior (other than prompts/cues, rewards and punishments) <i>Note: this may also involve 12.3, Avoidance/reducing exposure to cues for the behavior; if restructuring of the social environment code 12.2, Restructuring the social environment; if only adding objects to the environment, code 12.5, Adding objects to the environment</i>	Advise to keep biscuits and snacks in a cupboard that is inconvenient to get to Arrange to move vending machine out of the school
12.2	Restructuring the social environment	Change, or advise to change the social environment in order to facilitate performance of the wanted behavior or create barriers to the unwanted behavior (other than prompts/cues, rewards and punishments) <i>Note: this may also involve 12.3, Avoidance/reducing exposure to cues for the behavior; if also restructuring of the physical environment also code 12.1, Restructuring the physical environment</i>	Advise to minimise time spent with friends who drink heavily to reduce alcohol consumption
12.3	Avoidance/reducing exposure to cues for the behavior	Advise on how to avoid exposure to specific social and contextual/physical cues for the behavior, including changing daily or weekly routines <i>Note: this may also involve 12.1, Restructuring the physical environment and/or 12.2, Restructuring the social environment; if the BCT includes analysing the behavioral problem, <u>only</u> code 1.2, Problem solving</i>	Suggest to a person who wants to quit smoking that their social life focus on activities other than pubs and bars which have been associated with smoking

12.4	Distraction	Advise or arrange to use an alternative focus for attention to avoid triggers for unwanted behaviour	Suggest to a person who is trying to avoid between-meal snacking to focus on a topic they enjoy (e.g. holiday plans) instead of focusing on food
Back to index page			
12.5	Adding objects to the environment	Add objects to the environment in order to facilitate performance of the behavior <i>Note: Provision of information (e.g. written, verbal, visual) in a booklet or leaflet is insufficient. If this is accompanied by social support, also code 3.2, Social support (practical); if the environment is changed beyond the addition of objects, also code 12.1, Restructuring the physical environment</i>	Provide free condoms to facilitate safe sex Provide attractive toothbrush to improve tooth brushing technique
12.6	Body changes	Alter body structure, functioning or support directly to facilitate behavior change	Prompt strength training, relaxation training or provide assistive aids (e.g. a hearing aid)
13. Identity			
13.1	Identification of self as role model	Inform that one's own behavior may be an example to others	Inform the person that if they eat healthily, that may be a good example for their children
13.2	Framing/reframing	Suggest the deliberate adoption of a perspective or new perspective on behavior (e.g. its purpose) in order to change cognitions or emotions about performing the behavior (includes ' Cognitive structuring '); <i>If information about consequences then code 5.1, Information about health consequences, 5.6, Information about emotional consequences or 5.3, Information about social and environmental consequences instead of 13.2, Framing/reframing</i>	Suggest that the person might think of the tasks as reducing sedentary behavior (rather than increasing activity)
13.3	Incompatible beliefs	Draw attention to discrepancies between current or past behavior and self-image, in order to create discomfort (includes ' Cognitive dissonance ')	Draw attention to a doctor's liberal use of blood transfusion and their self-identification as a proponent of evidence-based medical practice

13.4	Valued self-identity	Advise the person to write or complete rating scales about a cherished value or personal strength as a means of affirming the person's identity as part of a behavior change strategy (includes <u>Self-affirmation</u>)	Advise the person to write about their personal strengths before they receive a message advocating the behavior change
13.5	Identity associated with changed behavior	Advise the person to construct a new self-identity as someone who 'used to engage with the unwanted behavior'	Ask the person to articulate their new identity as an 'ex-smoker'

[Back to index page](#)

14. Scheduled consequences			
14.1	Behavior cost	Arrange for withdrawal of something valued if and only if an unwanted behavior is performed (includes <u>Response cost</u>). Note if withdrawal of contingent reward code, 14.3, Remove reward	Subtract money from a prepaid refundable deposit when a cigarette is smoked
14.2	Punishment	Arrange for aversive consequence contingent on the performance of the unwanted behavior	Arrange for the person to wear unattractive clothes following consumption of fatty foods
14.3	Remove reward	Arrange for discontinuation of contingent reward following performance of the unwanted behavior (includes <u>Extinction</u>)	Arrange for the other people in the household to ignore the person every time they eat chocolate (rather than attending to them by criticising or persuading)
14.4	Reward approximation	Arrange for reward following any approximation to the target behavior, gradually rewarding only performance closer to the wanted behavior (includes <u>Shaping</u>) <i>Note: also code one of 59-63</i>	Arrange reward for any reduction in daily calories, gradually requiring the daily calorie count to become closer to the planned calorie intake

14.5	Rewarding completion	Build up behavior by arranging reward following final component of the behavior; gradually add the components of the behavior that occur earlier in the behavioral sequence (includes <u>Backward chaining</u>) <i>Note: also code one of 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i>	Reward eating a supplied low calorie meal; then make reward contingent on cooking and eating the meal; then make reward contingent on purchasing, cooking and eating the meal
14.6	Situation-specific reward	Arrange for reward following the behavior in one situation but not in another (includes <u>Discrimination training</u>) <i>Note: also code one of 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i>	Arrange reward for eating at mealtimes but not between meals
14.7	Reward incompatible behavior	Arrange reward for responding in a manner that is incompatible with a previous response to that situation (includes <u>Counter-conditioning</u>) <i>Note: also code one of 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i>	Arrange reward for ordering a soft drink at the bar rather than an alcoholic beverage
Back to index page			

14.8	Reward alternative behavior	Arrange reward for performance of an alternative to the unwanted behavior (includes <u>Differential reinforcement</u>) <i>Note: also code one of 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome); consider also coding 1.2, Problem solving</i>	Reward for consumption of low fat foods but not consumption of high fat foods
14.9	Reduce reward frequency	Arrange for rewards to be made contingent on increasing duration or frequency of the behavior (includes <u>Thinning</u>) <i>Note: also code one of 10.2, Material reward (behavior); 10.3, Non-specific reward; 10.4, Social reward, 10.9, Self-reward; 10.10, Reward (outcome)</i>	Arrange reward for each day without smoking, then each week, then each month, then every 2 months and so on

14.10	Remove punishment	Arrange for removal of an unpleasant consequence contingent on performance of the wanted behavior (includes <u>'Negative reinforcement'</u>)	Arrange for someone else to do housecleaning only if the person has adhered to the medication regimen for a week
15. Self-belief			
15.1	Verbal persuasion about capability	Tell the person that they can successfully perform the wanted behavior, arguing against self-doubts and asserting that they can and will succeed	Tell the person that they can successfully increase their physical activity, despite their recent heart attack.
15.2	Mental rehearsal of successful performance	Advise to practise imagining performing the behavior successfully in relevant contexts	Advise to imagine eating and enjoying a salad in a work canteen
15.3	Focus on past success	Advise to think about or list previous successes in performing the behavior (or parts of it)	Advise to describe or list the occasions on which the person had ordered a non-alcoholic drink in a bar
15.4	Self-talk	Prompt positive self-talk (aloud or silently) before and during the behavior	Prompt the person to tell themselves that a walk will be energising
16. Covert learning			
16.1	Imaginary punishment	Advise to imagine performing the unwanted behavior in a real-life situation followed by imagining an unpleasant consequence (includes <u>'Covert sensitisation'</u>)	Advise to imagine overeating and then vomiting
Back to index page			

16.2	<i>Imaginary reward</i>	Advise to imagine performing the wanted behavior in a real-life situation followed by imagining a pleasant consequence (includes <u>‘Covert conditioning’</u>)	Advise the health professional to imagine giving dietary advice followed by the patient losing weight and no longer being diabetic
16.3	<i>Vicarious consequences</i>	Prompt observation of the consequences (including rewards and punishments) for others when they perform the behavior <i>Note: if observation of health consequences, also code 5.1, Information about health consequences; if of emotional consequences, <u>also</u> code 5.6, Information about emotional consequences, if of social, environmental or unspecified consequences, <u>also</u> code 5.3, Information about social and environmental consequences</i>	Draw attention to the positive comments other staff get when they disinfect their hands regularly
Back to index page			

^a Notes are provided underneath most BCTs to help distinguish them from similar techniques

^b An additional technique ‘Increase positive emotions’ will be included in BCT Taxonomy v2

Table 3: BCTTv1 93 hierarchically clustered BCTs

1. Goals and planning	6. Comparison of behaviour	12. Antecedents
1.1. Goal setting (behavior) 1.2. Problem solving 1.3. Goal setting (outcome) 1.4. Action planning 1.5. Review behavior goal(s) 1.6. Discrepancy between current behavior and goal 1.7. Review outcome goal(s) 1.8. Behavioral contract 1.9. Commitment	6.1. Demonstration of the behavior 6.2. Social comparison 6.3. Information about others' approval	12.1. Restructuring the physical environment 12.2. Restructuring the social environment 12.3. Avoidance/reducing exposure to cues for the behavior 12.4. Distraction 12.5. Adding objects to the environment 12.6. Body changes
2. Feedback and monitoring	7. Associations	13. Identity
2.1. Monitoring of behavior by others without feedback 2.2. Feedback on behaviour 2.3. Self-monitoring of behaviour 2.4. Self-monitoring of outcome(s) of behaviour 2.5. Monitoring of outcome(s) of behavior without feedback 2.6. Biofeedback 2.7. Feedback on outcome(s) of	7.1. Prompts/cues 7.2. Cue signalling reward 7.3. Reduce prompts/cues 7.4. Remove access to the reward 7.5. Remove aversive stimulus 7.6. Satiation 7.7. Exposure 7.8. Associative learning	13.1. Identification of self as role model 13.2. Framing/reframing 13.3. Incompatible beliefs 13.4. Valued self-identify 13.5. Identity associated with changed behavior
3. Social support	8. Repetition and substitution	14. Scheduled consequences
3.1. Social support (unspecified) 3.2. Social support (practical) 3.3. Social support (emotional)	8.1. Behavioral practice/rehearsal 8.2. Behavior substitution 8.3. Habit formation 8.4. Habit reversal 8.5. Overcorrection 8.6. Generalisation of target behavior 8.7. Graded tasks	14.1. Behavior cost 14.2. Punishment 14.3. Remove reward 14.4. Reward approximation 14.5. Rewarding completion 14.6. Situation-specific reward 14.7. Reward incompatible behavior 14.8. Reward alternative behavior 14.9. Reduce reward frequency 14.10. Remove punishment
4. Shaping knowledge	9. Comparison of outcomes	15. Self-belief
4.1. Instruction on how to perform the behavior 4.2. Information about Antecedents 4.3. Re-attribution	9.1. Credible source 9.2. Pros and cons 9.3. Comparative imagining of future outcomes	15.1. Verbal persuasion about capability 15.2. Mental rehearsal of successful performance 15.3. Focus on past success 15.4. Self-talk
5. Natural consequences	10. Reward and threat	16. Covert learning
5.1. Information about health consequences 5.2. Salience of consequences 5.3. Information about social and environmental consequences 5.4. Monitoring of	10.1. Material incentive (behavior) 10.2. Material reward (behavior) 10.3. Non-specific reward 10.4. Social reward 10.5. Social incentive 10.6. Non-specific incentive 10.7. Self-incentive 10.8. Incentive (outcome) 10.9. Self-reward 10.10. Reward (outcome) 10.11. Future punishment	16.1. Imaginary punishment 16.2. Imaginary reward 16.3. Vicarious consequences
	11. Regulation	

emotional consequences 5.5. Anticipated regret 5.6. Information about	11.1. Pharmacological support 11.2. Reduce negative emotions 11.3. Conserving mental resources 11.4. Paradoxical instructions
--	--

1. Michie S, Van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science*. 2011;6(1):1-12.
2. Atkins L, Francis J, Islam R, et al. A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science*. 2017/06/21 2017;12(1):77. doi:10.1186/s13012-017-0605-9
3. Carey RN, Connell LE, Johnston M, et al. Behavior Change Techniques and Their Mechanisms of Action: A Synthesis of Links Described in Published Intervention Literature. *Annals of Behavioral Medicine*. Jul 17 2019;53(8):693-707. doi:10.1093/abm/kay078
4. Michie S, Richardson M, Johnston M, et al. The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of behavioral medicine*. 2013;46(1):81-95.