

Dunk the junk



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Foreword

Thank you for choosing to use this guide. The technique described here is aimed at people who want to change their eating habits because they are overweight and at people whose doctors have advised them to change their eating habits for health reasons.

Are you of normal weight but would like to weigh less or, for example, want to add more fruit to your diet? If so, hello and goodbye! This guide is only intended for people with problematic eating habits who need to take action. If you do not know whether you are overweight, you can calculate your body mass index (BMI) here:

https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/metric_bmi_calculator/bmi_calculator.html. The BMI, however, provides only a rough clue and does not take into account significant variables such as body fat percentage. If you are unsure whether you are overweight, please consult your physician.

This guide will not inform you about healthy eating or calories. The technique described here is designed to serve as a kind of appetite suppressant for high-calorie foods such as chips or chocolate. In a recently completed study of 84 people with problematic alcohol consumption, we were able to reduce their craving for alcohol by half compared to a control group (the technique has also been successful among smokers). This manual transfers the main contents of the recommendations on problematic alcohol consumption to problematic eating behavior.

In order to succeed with this technique, you will first need some insight into your eating habits, including the understanding that unhealthy eating behavior can indeed cause harm. And, you must have the firm intention to lose weight and break through the problematic eating pattern.

This guide is short, and the technique is easy to use. The real work begins afterwards. Only if you use the technique regularly will you be able to limit your food consumption, lose weight, and eat healthier.

Reading and understanding and the decision to change are an important start, but they are not enough. Try to actively integrate what you have learned into your everyday life! Please read the manual from front to back – do not jump to the end or skip passages that seem familiar or irrelevant to you.

We will often speak of unhealthy foods as “addictive substances”. This may sound polemical, but remember that overeating and obesity are now considered behavioral addictions characterized by a loss of control and a physical urge to eat despite knowing the harmful effects on health.

Good luck!

From head to toe: Underestimated consequences of unhealthy eating habits

Introduction

The decision to part with a vice once and for all can be made quickly and easily. Mark Twain is credited with the following quote about smoking cigarettes, another habit that is hard to kick: “Giving up smoking is the easiest thing in the world. I know because I’ve done it thousands of times”. Kicking a habit in the short term may be easy, but as the quote implies, perseverance is needed to sustain a healthier lifestyle over the long haul. This is even more true for eating than for smoking. After all, we have to eat and are therefore seduced again and again to eat more than is good for us or to consume things that may do us harm in the long run.

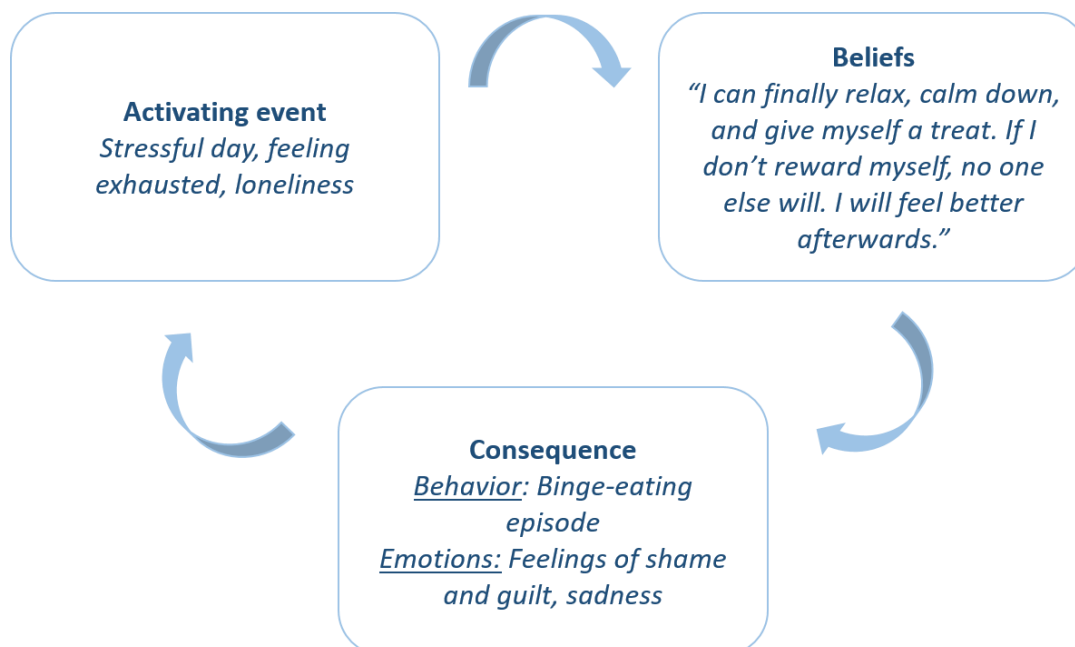
In the medium term, an unhealthy diet and obesity can lead to various physical and psychological problems and mobility restrictions. The link between an unhealthy eating behavior and the following physical and mental disorders is scientifically proven. This is only a small selection of the potential health effects of an unhealthy eating behavior.

- A diet that is too high in fat can cause a fat metabolism disorder (hyperlipidemia) characterized by elevated cholesterol and triglyceride levels in the blood.
- The long-term consequences of a high-fat diet and being overweight include high blood pressure (above 140/90), which significantly increases the risk of heart attack, stroke, and other cardiac events.
- Being overweight and having poor nutrition can contribute to the metabolic disease diabetes mellitus. This disease often leads to symptoms such as fatigue or increased thirst. Without treatment and without a change in diet, kidney damage or damage to the nerves and blood vessels can occur.
- Recent studies provide evidence that excessive consumption of refined sugar stimulates the growth of cancerous tumors.
- Furthermore, sleep apnea syndrome, which is associated with obesity, can also lead to a disturbance in sleep patterns. Stopping breathing repeatedly at night leads to daytime fatigue and reduced performance.
- Being overweight puts a strain on the joints and the spine. Joint diseases such as herniated discs, arthrosis, and arthritis are therefore frequent consequences.

Why are we writing this? After all, you have already decided to eat less or to eat healthier and thus have demonstrated a certain awareness of the problem. Then why should we scare you? All too often, our resolve weakens as soon as the “work” or real renunciation begins. We therefore want to emphasize that a poor diet can actually have life-threatening consequences. In particular, snacks high in fat and sugar have a strongly addictive effect. The technique presented here is intended to counteract this.

“I don’t like the drugs but the drugs like me”. - Marilyn Manson

As with practically everything that is fun or experienced as pleasant in the short term, such as the consumption of alcohol and behaviors like gambling, there is also a downside to eating. Unhealthy nutrition to the point of an eating addiction, in which one consumes a large amount of food in a short time without enjoyment or conscious control, is called “binge eating”. The urge for food is often so strong that the affected person has a hard time resisting. This appetite, which can build up to the point of gluttony, can strike a person on several fronts. The accompanying thoughts (“I can comfort myself by eating a bag of chips and watching TV”) and feelings – and especially the prospect of feeling better (“Finally, I can relax, calm down, and give myself a treat. If I don’t reward myself, no one else will”) – are often triggered by an inner restlessness and a feeling of “now it’s my turn”. The only way to deal with this intense state and make it tolerable seems to be food (see the figure below). This kind of craving is not specific to food – we find it in many substance-related addictions (e.g., alcohol, tobacco) as well as in behavioral addictions (e.g., gambling). In the case of addiction to food, the physical feeling of addiction is caused by several factors: On the one hand, “addictive substances” such as sweet (e.g., chocolate) or savory (e.g., chips) snacks usually have a high number of calories with low nutritional value. However, since the body demands essential nutrients, a feeling of hunger arises relatively soon after the consumption of an unhealthy food, which is often countered with the continued consumption of junk food. Furthermore, the body gets used to the usually intense taste experiences. Flavor enhancers play a role here, but so do the appearance and even the sounds of the food while chewing. The industry does not leave anything to chance, testing every little detail in laboratories. Taste stimulation is perfected to such an extent that healthy alternatives appear increasingly “boring”.



Development of binge-eating episodes.

Therefore, the therapy for addiction disorders (including excessive eating, which is now often referred to as behavioral addiction) takes several approaches. Typically, the treatment of excessive eating aims at changing thoughts and feelings. In therapy, clients are taught over time to apply new strategies that they can use to positively influence their feelings and actively manage their problems instead of numbing or forgetting them with food, as they try to do with “binging”.

The new technique presented here starts with bodily sensations, which have long been neglected in addiction therapy even though the urge for unhealthy snacks and other harmful food is often accompanied by strong physical responses. In eating addiction, people suffer from the sudden onset of a very unpleasant and strong feeling of hunger, which is caused by a highly fluctuating insulin level and disturbances in the normal balance of intestinal bacteria. Even if one knows intellectually that one should break the habit, the physical urge is often so overwhelming that eating is the only thing that seems to promise relief. Food is disconnected from its actual function and becomes an addiction, as stated in the song by Marilyn Manson quoted above.

The technique: “Dunk the junk!”

Preliminary note

Before getting to the technique itself, we would like to talk briefly about how it works psychologically. A psychological technique can only be fully effective if the person using it understands it and is convinced of its efficacy. In this respect, psychotherapy is different from pharmacotherapy, which requires no understanding or conviction. Aspirin, for example, reduces the pain from a headache, even if you have no idea how it works!

The “Dunk the junk” technique is based on a computer-assisted procedure called “retraining” that has achieved promising results in studies with people with alcohol dependency and other addictive disorders. We’d like to illustrate the principle of “retraining” using the example of alcohol dependence. In the case of alcohol addiction, retraining involves viewing images of alcoholic and non-alcoholic beverages on a computer screen. The images become larger when you pull a joystick towards yourself and smaller when you push the joystick away from yourself. The viewer is instructed to push pictures away with the joystick if they depict alcoholic beverages and to pull them closer if they depict non-alcoholic beverages. The use of this technique has been shown not only to lead to a reduction in alcohol consumption but also to be effective in preventing relapse. The technique seems to help to reduce the physical urge to drink.

The purpose of this manual is to apply the principle of “retraining” to the excessive consumption of unhealthy food.

How can that be? Isn't it too good to be true?

A certain amount of skepticism is always useful when ground-breaking successes are published in scientific journals and echoed by the media. For researchers, “One study is no study”. However, the therapeutic effect of “retraining” has been repeatedly confirmed by independent scientists and can be regarded as well established.

The original computerized technique is quite complex and monotonous and has certain other disadvantages (see below), so we believe it could be improved by some changes. Before we talk about this, we would like to explain briefly what we know so far about the psychological mechanisms by which the procedure works. This is important because we have taken into account some of these mechanisms of action in the new technique we present later.

How retraining works

Let us start with the word “retraining”. Retraining is about new learning. Our new technique builds on unconscious processes that make us automatically approach things we like (e.g., hugging someone, approaching an object out of curiosity). This has long since found its way

into our language. For example, we find certain people attractive and sometimes even talk about magnetic attraction. On the other hand, we automatically reject and distance ourselves from things we don't like. We may find someone or something we don't like repulsive or repellent. This type of language is both physically and linguistically anchored and is more or less equally used by all people.

Scientific Digression: Embodiment – The “Physicalness” of Approach and Avoidance

In basic research studies that preceded classical “retraining”, participants with an addiction (e.g., people with alcohol problems, slot machine gamblers) viewed stimuli on a computer that depicted the addictive substance (e.g., a beer bottle, a slot machine) or neutral stimuli (e.g., a bottle of mineral water, a flower pot). Participants were told to push or pull the joystick based on the physical properties of the image, such as whether the picture was presented in portrait or landscape format, not based on the content or meaning of the image. Participants were instructed to push the joystick away as quickly as possible when they were shown a portrait image (the image on the screen then became smaller); they were instructed to pull the joystick towards them when they were shown a landscape image (the image on the screen then became larger). Importantly, if a participant with alcohol addiction was shown a beer bottle, he or she reacted faster if it was presented in landscape format than in portrait format (their “pulling” of the joystick was faster than their “pushing” of the joystick). Similar results have been found with other addictions, including eating. These studies show that addiction is associated with a corresponding physical preference (pathological approach behavior). In people without an addiction, this behavior pattern is absent or significantly attenuated.

Now to the opposite case. In people whose behavior is characterized by strong avoidance, e.g. people who react with fear or disgust to spiders, snakes, etc., their reaction to images of objects that fill them with fear is correspondingly faster when they are in portrait format (i.e., the “push” movement with the joystick) than in landscape format (the “pull” movement). This shows that disgust and fear are physically connected to a defensive reaction. By the way, it makes no difference whether test subjects “pull” in response to the landscape format and “push” in response to the portrait format or vice versa.

This technique breaks the pathological coupling of alcohol, high-calorie food, or other addictive substances with the physical urge to approach the substance.

Retraining makes use of this normal human response tendency by blocking the urge for the object of the addiction with the help of an opposite physical action and thus reduces both the urge and the consumption of the addictive substance.

Disadvantage of classical retraining

As already mentioned, retraining in its original computerized form has certain disadvantages. For example, what a person “craves” or what triggers an addiction varies greatly from individual to individual. Using alcohol as an example again, different people like different alcoholic beverages. Not everyone likes beer or hard liquor. Some drink only one kind of alcohol; others drink various kinds. Brands also play a role, as do labels. Someone who drinks only beer won't necessarily break out in a sweat at the sight of an image of a bottle of red wine. The same applies to cravings for food. For example, those who love salty snacks such as chips or frozen pizza are often much less affected by images of “sweets” such as chocolate bars or pieces of cake. Standardized computer programs do not deal with this level of individualization well. Another advantage of these programs is that some people will do

anything to avoid sitting in front of a computer every day and doing the monotonous retraining exercises. It's not much fun.

The new technique

The technique presented here is based on the principle of retraining but shifts the execution from a computer to one's own imagination.

The use of behavioral techniques alongside imaginal ones is not unusual in psychotherapy. It has long been known that people who suffer from a phobia, such as a fear of certain animals (e.g. spiders) or of closed or open spaces, may benefit from exposure or confrontation therapy. That is, they deliberately expose themselves to the dreaded objects or situations. By doing so, they may get to the point where they can say: "I can deal with it; it's not so bad after all". This involves their realization that the consequences they fear will not occur and that their fear will eventually subside on its own. In the treatment of anxiety, this procedure is effective both when exposing oneself directly to objects or situations in real life as well as when imagining them or viewing them in a simulated environment (e.g., in virtual reality experiments with 3D glasses).

We make use of the latter principle (i.e., imagined exposure) for our variant of retraining. In our opinion, this shift into the world of imagination has several advantages over the original computerized technology. You can imagine your favorite unhealthy food of choice (your personal "addictive substance") as well as healthy alternatives that also taste good to you or that you at least find OK. In addition, you can also imagine the typical environment in which you usually eat your favorite unhealthy food. For some, it may be their own living room; for others, it may be the diner down the road. Several times a day, you should imagine your favorite unhealthy food, preferably in the typical surroundings where you eat.

Instead of simply pushing away an image on a computer screen, as in the original computerized exercise, using our imagination offers more possibilities, and this, in our opinion, can significantly increase the effectiveness of the technique.

Let's go through the steps.

- **Choice of food:** Most people have one to five favorite foods they'd like to eat less of. Think about this, and identify where you usually consume your favorite (e.g., at work, at home in the kitchen, or while watching TV). Vividly imagine your favorite unhealthy food. Imagine its color, smell, and taste in detail. Then, push away the food again and again, as described below.
- **Choice of healthy alternative:** Next, think of a healthy alternative food that you like or consume regularly (e.g., fruit, vegetables, or Greek yoghurt). Again, use as many sensory modalities as possible to imagine these dishes. Then, pull this food in your thoughts towards yourself again and again, as described in the concrete exercises section below.

It has been repeatedly demonstrated that aversive stimuli lead to a defensive or avoidant reaction, while pleasant stimuli lead to an approach response. As mentioned before, this is the principle on which retraining is based. This also applies to up versus down. People can tell we are depressed from our posture. We may walk slumped over or make ourselves small; the corners of our mouth may droop. On the other hand, pride and a good mood do the opposite; we walk erect and the corners of our mouth are lifted up, letting everyone know how good we're feeling. As a result of *mirror neurons* in the brain, which are important for feelings of

empathy and compassion and for the transference of emotions, most people react negatively when they see photos of people whose bodies and facial expressions are drooping. This may be mirrored in our own behavior; when we see someone with a bent posture, we may spontaneously adopt that posture and the facial expression that goes with it. This may in turn depress our mood. Although we are often unconscious of these “infectious effects”, they have been scientifically established. These effects of the mirror neurons are exactly what we want to make use of with the technique presented here.

Our emotional and physical selves interact. An elevated or depressed mood causes us to walk upright or bent over. But this also works the other way around. Try it out. Gestures and posture are so rooted in our emotional world that straightening the body involuntarily leads to a slight improvement in mood, while slumping and walking dejectedly may darken our thoughts. Or, look up at the sky. Most people find it difficult to have negative thoughts when they do. The effect is amazing and shows the linkage between mind, emotion, and the body.

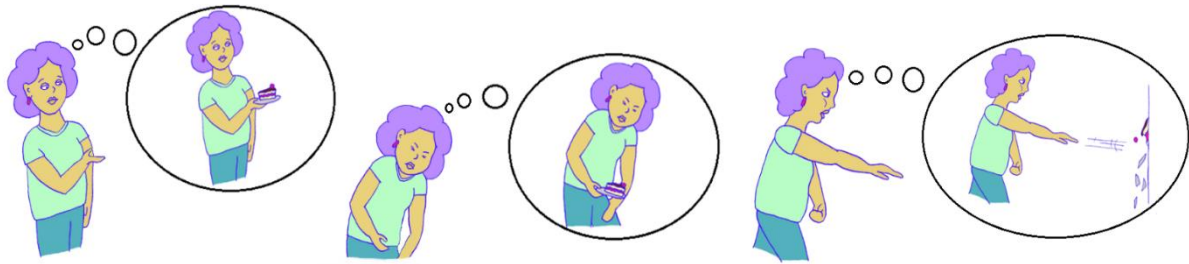
Why is this important here? Instead of simply pushing away unhealthy food in your mind, we advise that you perform the following sequence regularly.

Concrete exercises:

1. Imagine one of your favorite junk foods or snacks. In your mind, take it in your hand where you eat it most often.
2. Then exhale and slump into yourself. Make your shoulders round and bent and reinforce this as consciously as possible with cloudy thoughts.
3. Now, get rid of your favorite junk food or snack (e.g., push it across the kitchen table as if it were a bowling lane). Look at the photo below. At the end, the bowl/plate should shatter or, if you don't have moral issues with it (remember, this is only in your head), wreck the place where you eat (e.g., stain the carpet and walls with the food; break a few chairs). Important: Imagine the food and where you usually eat it in your mind, but make the movement of rejecting the food with your body.
4. As we have discussed, rejection is associated with a (horizontal) push movement and also a downward motion (think of the “thumbs down” sign of disapproval). That is why we recommend that you imagine pushing away the food and throwing the bowl/plate with food on the ground in your thoughts. You could also imagine spitting or vomiting the unhealthy food into the toilet. Make the scene as grotesque as possible. If you want, you can pretend to become nauseous, but, of course, don't make yourself throw up. You know yourself and your body best and will know which method to use to physically reinforce your imagination. Repeat this a few times a day.

Try to play with the technique and develop your own scenarios. The above scenarios are only suggestions, but it is important that an accelerated movement *away from the body* is included in your exercise. **Important: The movement should be physically executed, not just imagined!**

Also think of your favorite healthy snack (i.e., a nutrient-rich but low-calorie food that you consume regularly) or – if you consume almost exclusively unhealthy food – one which you think you *might* like. Detailed instructions follow in the next section.



Phases of the aversion exercise: Take the junk food/unhealthy snack in your hand in your imagination, bend your body forwards (not just in your thoughts – actually execute this behavior), and contemplate negative thoughts – and then imagine throwing the bowl/plate with the food to the ground (see the text; actually push or throw away with your arms and hands the food that you are imagining in your mind).

Examples of actions you could perform in your imagination:

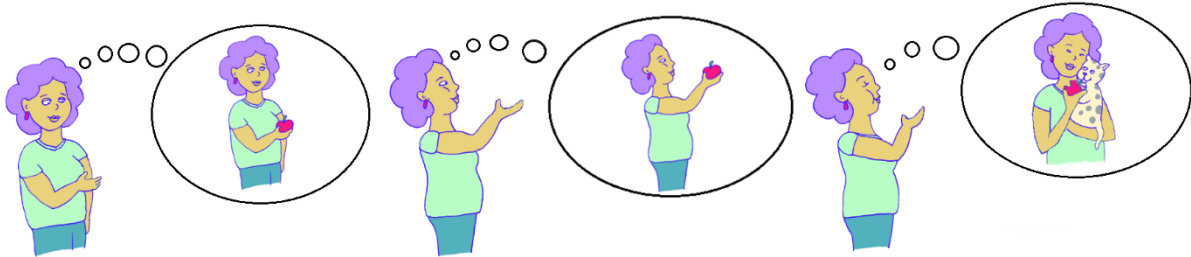
- *Throw a bag of potato crisps on the floor of your office until it bursts*
- *Throw a chocolate bar against the wall; chocolate rains down everywhere and stains the couch*
- *Throw a bread basket, which you imagine a waiter bringing to a restaurant table, like a handball to the front of the restaurant*
- *With an imaginary shotgun, shoot candy into the wall of your living room*
- *Smear your favorite candy bars with disgust against the kitchen wall*
- *Push a “forbidden” food away from you with both hands (perhaps pretending it is a heavy crate)*

Now the opposite sequence for healthy food:

1. Imagine you are holding a healthy, nutritious food.
2. Take a deep breath. Make yourself tall and stand up as if someone were pulling you up by an imaginary thread attached to the top of your head. Your posture is upright and relaxed, your eyes are looking straight ahead, and your head is not bending forward. Your shoulders are back and your chest is forward. Can you feel how this posture alone creates a feeling of strength and confidence?
3. Now, bring a spoon or fork with the food or a piece of fruit towards your mouth, exaggerating the motion as in the photos below (similar to images in advertisements) so that you are looking slightly upwards, which improves the mood in many people. You can also imagine drinking a beverage, such as sugar-free lemonade or low-sugar iced tea.



At the same time, if you can, try to create other pleasant feelings (if you can't, no problem). For example, imagine sitting and laughing with others while drinking or hugging a beloved person or pet. As soon as you have as vivid a positive feeling as possible, imagine eating the healthy food. It's about connecting positive feelings, especially bodily feelings, with the food.



Grab an imaginary healthy food straighten your posture as described, lift the imaginary food high, and, if possible, couple these actions with other positive feelings (e.g., stroking a pet; see the text).

Try different things. You don't have to do the sequence in strict order, and you can do one of the imagination exercises several times in succession. Do whatever seems to work, but do both exercises – the one with the unhealthy food and the one with the healthy snack/food.

A few tips:

- Set a timer (e.g., using a smartphone or an app; for instructions, see below) so that you are reminded to do the full sequence of the exercise at least twice a day. Practice for about 10 minutes a day. You do not have to do the exercises in a completely quiet environment, but it is important that you are able to concentrate on them and are not constantly disturbed by outside influences or other people. You don't always have to do the exercises at the same time of day. Of course, the benefit of having a fixed time is that you'll remember to do them more easily, but if you do the exercises at a different time every day, that's fine too.
- While you are eating the imaginary healthy food, try to do the above exercises in your imagination – that is, eat with pleasure and consciously – in an upright position. Don't slump. Think of a beautiful object or scenery. When you are imagining an unhealthy food, however, try not to evoke any positive thoughts because you are trying to cut the connection between sugary foods/junk foods and good feelings as much as possible.

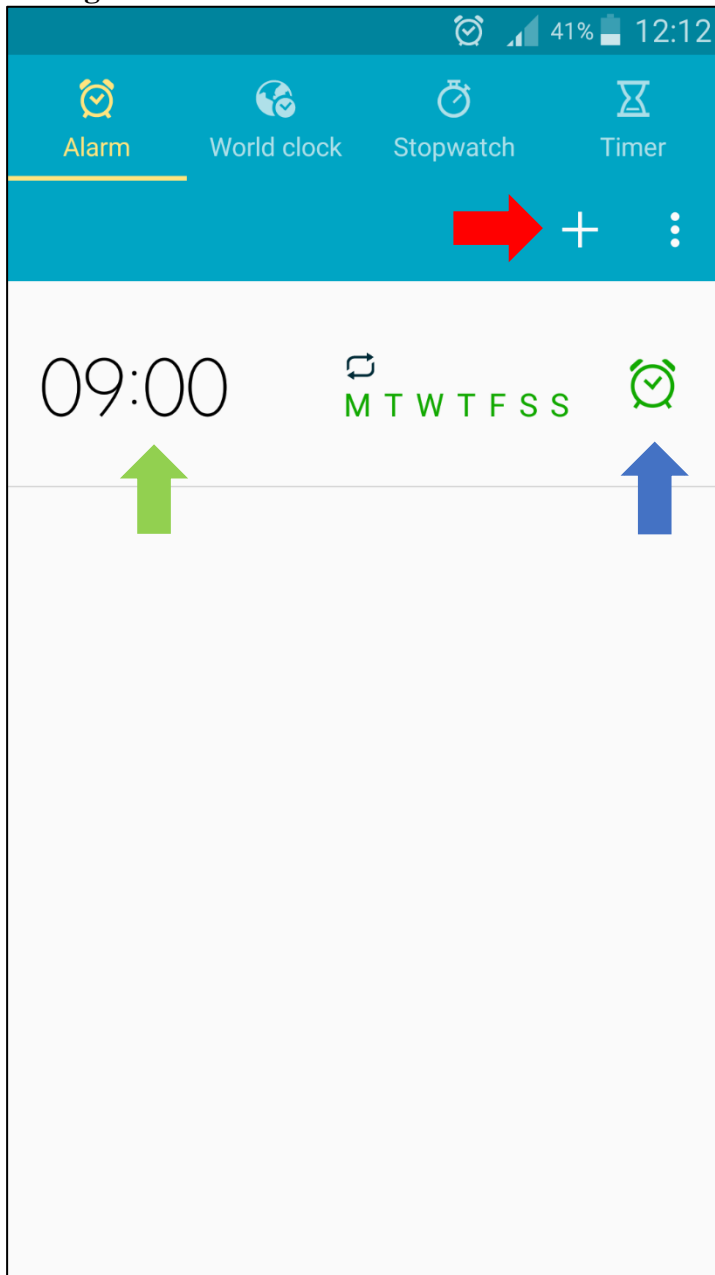
The aim of the exercises is to couple unhealthy food and unhealthy snacks with physical aversion in order to weaken the physical urge for junk food. Try to incorporate this into your everyday life. If you pass a garbage can or notice an unpleasant smell somewhere, imagine your favorite unhealthy food.

Play around with the technique. Try to have a little fun “bad-mouthing” unhealthy food.

So, let's do it:

Start today. If you have any questions, please contact Prof. Dr. Steffen Moritz (moritz@uke.de).

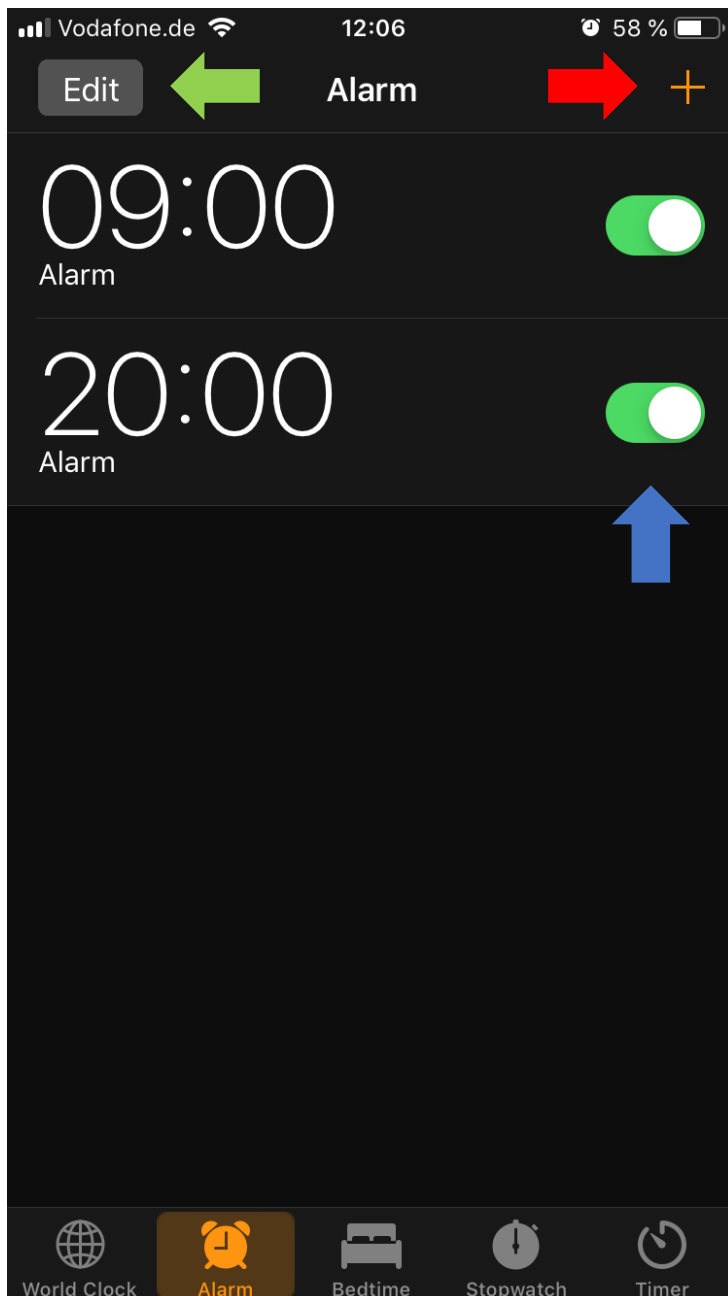
Setting a timer



For Android smartphones:

Example of setting a new alarm

Open the app “Clock” (usually pre-installed as a standard application; if not, many timer/clock apps are available free of charge). In the menu under “Alarm” you can set any number of reminders via the plus symbol (red arrow). By clicking on the time (green arrow), you will reach a new menu field where you can set whether you want to be reminded daily or only on certain days. Activate the alarm by clicking on the alarm clock (blue arrow).



For iOS smartphones:

Example of setting an alarm

Open the “Clock” app (standard iOS app; doesn’t have to be installed). In the menu under “Alarm,” you can set any number of reminders via the plus symbol (**red arrow**). By clicking on “Edit” (**green arrow**) and then on the appropriate reminder, you will reach a new menu where you can set whether you want to be reminded daily or only on certain days. Activate the alarm by moving the slider to the right (**blue arrow**).