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How to Exert Self-Discipline Even When You Don't Have Any

In October 1912, a would-be assassin fired at President Theodore Roosevelt while he was giving a speech in Milwaukee, Wisconsin. The bullet penetrated the president's chest, but luckily, a small booklet absorbed much of the impact—the bullet never reached the president's heart. What Roosevelt did next shocked the crowd. He ignored the bleeding and simply carried on with his speech for another ninety minutes. Only after he finished did he bother to see a doctor.

Teddy Roosevelt was known for having extraordinary willpower. As a young boy with poor health, Roosevelt decided to strengthen his physical capabilities by introducing a heavy exercise regime, including weightlifting, boxing, and many other sports. When his father died, Teddy responded by studying even harder, eventually graduating magna cum laude from Harvard. He is said to have read about a book per day—even when he was president—in addition to writing more than thirty-five books himself and 150,000 letters. How did he manage to do all this?

Theodore Roosevelt believed that the key to accomplishments was self-discipline—and that self-discipline was more important than talent,

education, and intellect. “With self-discipline, all things are possible,” he once said. But what is self-discipline? Can you increase it? And what do you do if you don’t have much of it?

The Self-Discipline Challenge

Self-discipline is simply the ability to control yourself so that you can fight off temptations and in-the-moment distractions to reach long-term goals. When you know you need to study for an important examination but you’re tempted by family and friends to spend more time with them instead, self-discipline can save the day. That is, if you have it.

This ability to make small sacrifices for future benefits is indeed, as Teddy Roosevelt believed, an important trait. Studies have shown that people who exhibit self-discipline are happier, healthier, wealthier, get into less trouble, and get better grades.¹

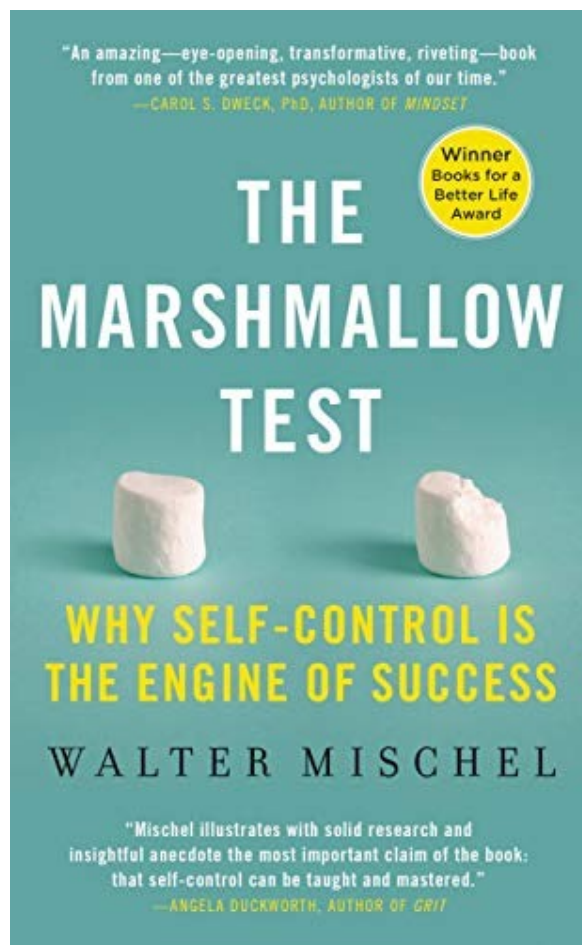
Few of us have as much self-discipline as we’d like. We procrastinate, make impulsive decisions, and fall prey to temptations, only to regret it all later. The sad truth is that self-discipline is a limited resource—there’s no quick and easy way to increase it. But even so, there *are* helpful approaches. It turns out that **a good way to become more disciplined is to take measures that reduce the need for self-discipline in the first place.** It’s a little like getting a vaccination to prevent disease instead of treating the disease.

In other words, the key to self-discipline is to find ways to achieve your goals *without* relying on self-discipline. Let’s look at some ways to do that.

Make Tough Choices Easy

Make it as *easy as possible* to make the right choices. Say you want to go to the gym every Thursday night but always find it hard to get your things together and head out. Try packing your bag the day before so that it’s ready for you to grab and go when Thursday night arrives.

Or say that every time you get home, you find it difficult to start your homework. Try this: At the end of a study session, prepare your desk for the



Stanford marshmallow experiment

23 languages

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This article **possibly contains inappropriate or misinterpreted citations that do not [verify](#) the text**. The reason given is: **the article mixes up the 1970 and 1972 marshmallow experiments** Relevant discussion may be found on the [talk page](#). Please help [improve this article](#) by checking for citation inaccuracies. *(February 2022)* ([Learn how and when to remove this template message](#))

The **Stanford marshmallow experiment** was a study on [delayed gratification](#) in 1972 led by psychologist [Walter Mischel](#), a professor at [Stanford University](#).^[1] In this study, a child was offered a choice between one small but immediate reward, or two small rewards if they waited for a period of time. During this time, the researcher left the child in a room with a single marshmallow for about 15 minutes and then returned. If they did not eat the marshmallow, the reward was either another [marshmallow](#) or [pretzel stick](#), depending on the child's preference. In follow-up studies, the researchers found that children who were able to wait longer for the preferred rewards tended to have better life outcomes, as measured by [SAT scores](#),^[2] educational attainment,^[3] [body mass index \(BMI\)](#),^[4] and other life measures.^[5] A replication attempt with a sample from a more diverse population, over 10 times larger than the original study, showed only half the effect of the original study. The replication suggested that economic background, rather than willpower, explained the other half.^{[6][7]} The predictive power of the marshmallow test was challenged in a 2020 study.^{[8][9]}

next day. Make sure the desk is cleared with your book already opened on the right page, with your pen and anything else you need next to it.

Suppose you always struggle to wake up in the mornings. A good trick here is to put your alarm clock on the other side of the room (or in another room) making it impossible for you to turn it off without getting up. Or you can download an app that requires you to solve problems to turn it off, such as Mathe Alarm Clock or Alarmy.

KEY POINT

To succeed with little or no willpower, remove temptations, distractions, and obstacles. Set things up beforehand to make it as easy as possible to get started.

Pick *one* small habit you'd like to establish or change in order to accomplish one goal you're working toward. Then, go for it!

Eliminate temptations and distractions. **Research has shown that learners who remove temptations from their surroundings are more successful than those who try to rely on their self-discipline.**² Practically speaking, for example, if your mobile phone is distracting your studies, put it in another room. And if you're always tempted by sweets when you go grocery shopping, limit visits to the supermarket to once a week—after you've already eaten.

Changing Your Habits

Mini Habits
Atomic Habits

Habits form about all kinds of things. For example, looking **sideways** before you cross the street feels so natural that you don't even think about it. In fact, that's what a habit is—it involves the creation of a set of neural links that you draw on without having to think about what you're doing. This “mental autopilot” mode is the power of habit—it saves us mental energy. And, incidentally, it's a gift from your procedural system!

Habits can be good or bad. We may come home from work or school and plop ourselves in front of the television. Or we may start our homework. It depends on what we're used to.

A good way to minimize your use of willpower is to tweak poor habits. How do you do that? First, figure out the trigger to one of your undesirable

↳ The Power of Habit

#1 New York Times Bestseller

MAKE YOUR BED

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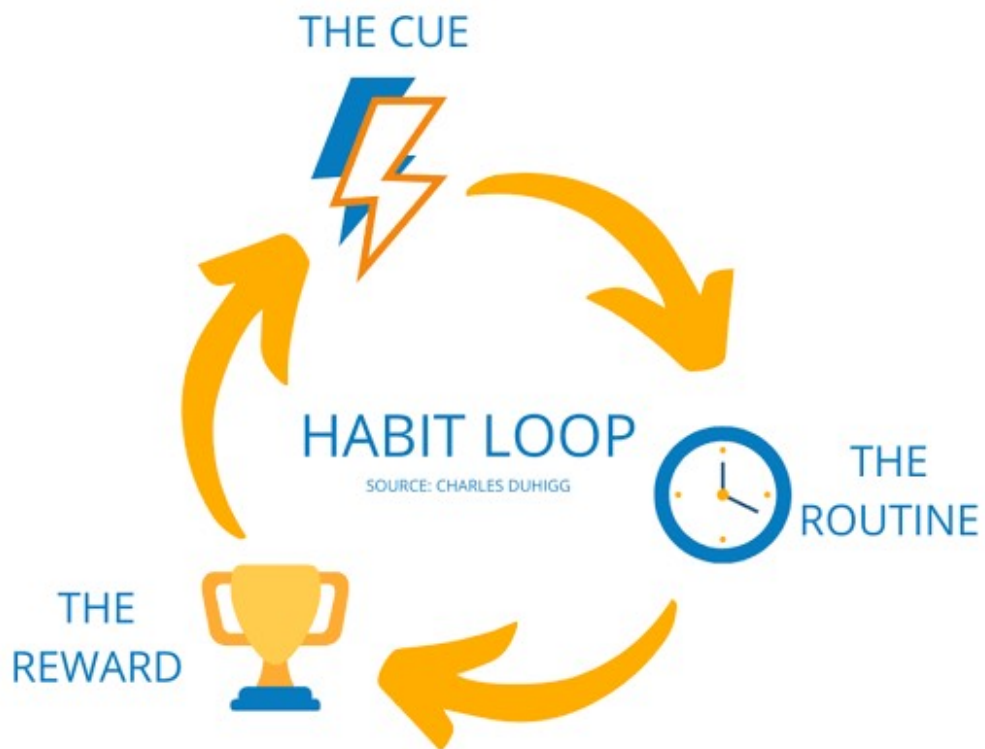
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William H. McRaven

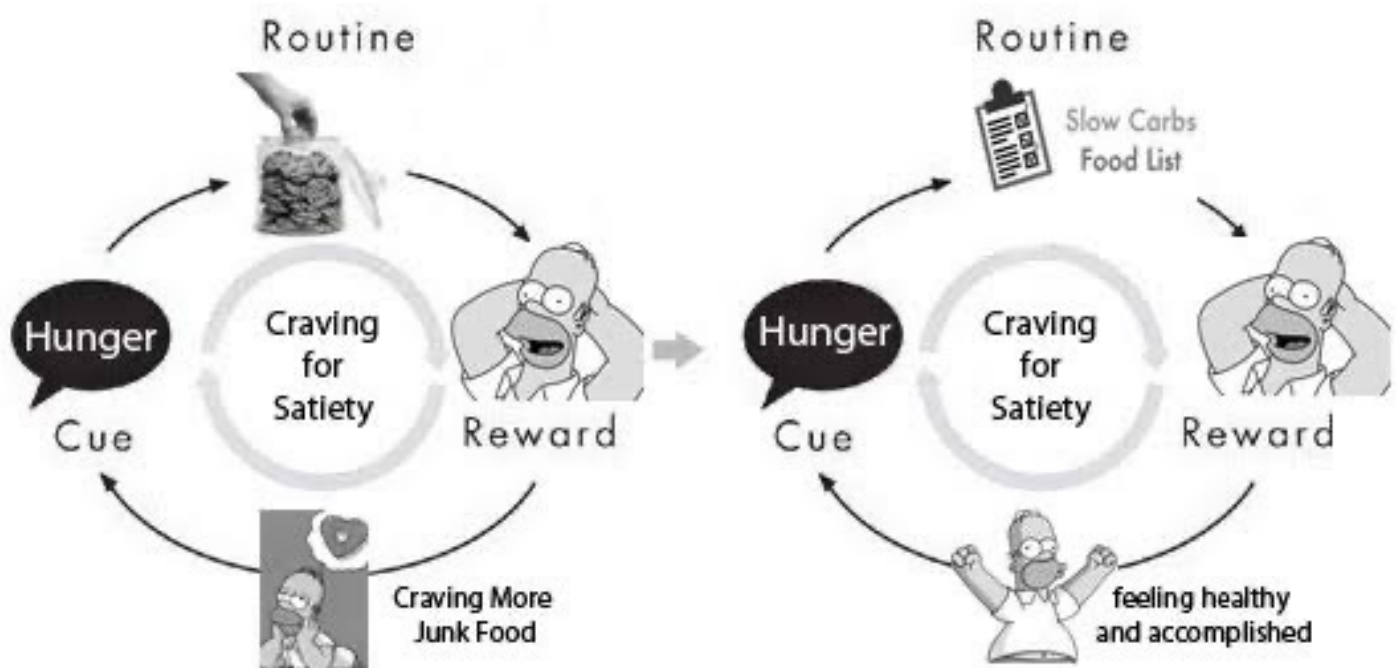


“If you make your bed every morning you will have accomplished the first task of the day. It will give you a small sense of pride and it will encourage you to do another task and another and another. .??. And, if by chance you have a miserable day, you will come home to a bed that is made - that you made - and a made bed gives you encouragement that tomorrow will be better.”

~ WILLIAM H. MCRAVEN



You Can't Extinguish a Bad Habit, You Can Only Change It.



HOW IT WORKS: USE THE SAME CUE. PROVIDE THE SAME REWARD. CHANGE THE ROUTINE.

HABIT STACKING

THE HABIT STACKING FORMULA IS :

"AFTER [CURRENT HABIT], I WILL [NEW HABIT]."



After I pour my cup of coffee
each morning

I will meditate for a minute

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HABIT STACKING

PAIR NEW HABITS WITH CURRENT HABITS
TO ENCOURAGE CONSISTENCY

AFTER I [CURRENT HABIT], I WILL [NEW HABIT]

- After I pour my morning cup of coffee, I will meditate for 60 seconds.
- After I meditate for sixty seconds, I will write my to-do list for the day.
- After I write my to-do list for the day, I will immediately begin my first task.



Diderot Effect: This allows you to take advantage of the natural momentum that comes from one behavior leading into the next.

How to Build New Habits by Taking Advantage of Old Ones

written by JAMES CLEAR | BEHAVIORAL PSYCHOLOGY, HABITS, SELF-IMPROVEMENT

This article is an excerpt from Atomic Habits, my New York Times bestselling book.

In 2007, researchers at Oxford University started peering into the brains of newborn babies. What they found was surprising.

After comparing the newborn brains to the normal adult human, the researchers realized that the average adult had 41 percent fewer neurons than the average newborn. ¹

At first glance, this discovery didn't make sense. If babies have more neurons, then why are adults smarter and more skilled?

Let's talk about what is going on here, why this is important, and what it has to do with building better habits and mastering your mental and physical performance.

The Power of Synaptic Pruning

There is a phenomenon that happens as we age called synaptic pruning. Synapses are connections between the neurons in your brain. The basic idea is that your brain prunes away connections between neurons that don't get used and builds up connections that get used more frequently.

For example, if you practice playing the piano for 10 years, then your brain will strengthen the connections between those musical neurons. The more you play, the stronger the connections become. Not only that, the connections become faster and more efficient each time you practice. As your brain builds stronger and faster connections between neurons, you can express your skills with more ease and expertise. It is a biological change that leads to skill development.

Meanwhile, someone else who has never played the piano is not strengthening those connections in their brain. As a result, the brain prunes away those unused connections and allocates energy toward building connections for other life skills.

This explains the difference between newborn brains and adult brains. Babies are born with brains that are like a blank canvas. Everything is a possibility, but they don't have strong connections anywhere. The adults, however, have pruned away a good deal of their neurons, but they have very strong connections that support certain skills.

Now for the fun part. Let's talk about how synaptic pruning plays an important role in building new habits.

Habit Stacking

Synaptic pruning occurs with every habit you build. As we've covered, your brain builds a strong network of neurons to support your current behaviors. The more you do something, the stronger and more efficient the connection becomes.

You probably have very strong habits and connections that you take for granted each day. For example, your brain is probably very efficient at remembering to take a shower each morning or to brew your morning cup of coffee or to open the blinds when the sun rises ... or thousands of other daily habits. You can take advantage of these strong connections to build new habits.

How?

When it comes to building new habits, you can use the connectedness of behavior to your advantage. One of the best ways to build a new habit is to identify a current habit you already do each day and then stack your new behavior on top. This is called habit stacking.

Habit stacking is a special form of an implementation intention. Rather than pairing your new habit with a particular time and location, you pair it with a current habit. This method, which was created by BJ Fogg as part of his Tiny Habits program, ² can be used to design an obvious cue for nearly any habit.

Habit Stacking Examples

The habit stacking formula is:

After/Before [CURRENT HABIT], I will [NEW HABIT].

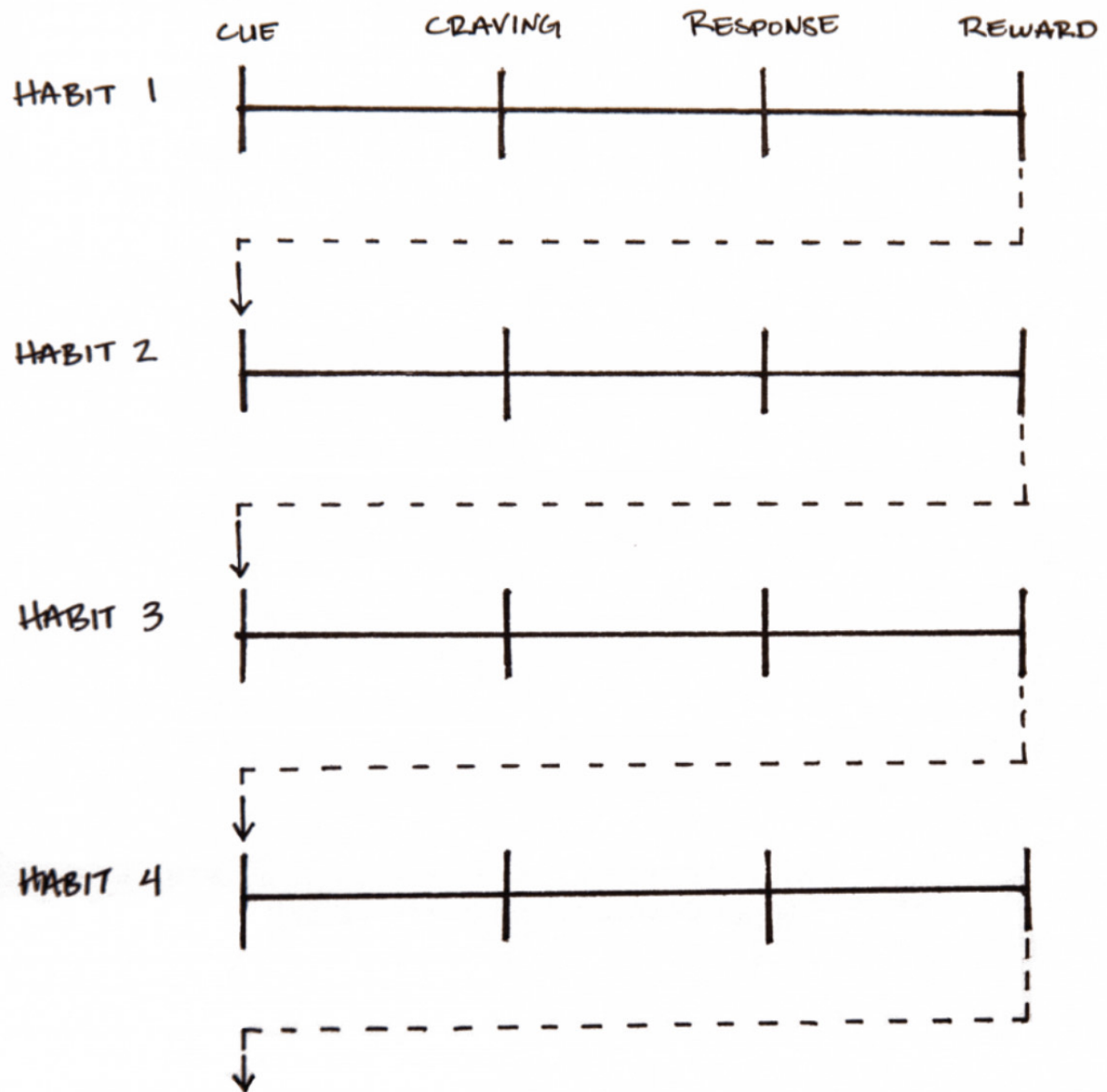
For example:

- After I pour my cup of coffee each morning, I will meditate for one minute.
- After I take off my work shoes, I will immediately change into my workout clothes.
- After I sit down to dinner, I will say one thing I'm grateful for that happened today.
- After I get into bed at night, I will give my partner a kiss.
- After I put on my running shoes, I will text a friend or family member where I am running and how long it will take.

Again, the reason habit stacking works so well is that your current habits are already built into your brain. You have patterns and behaviors that have been strengthened over years. By linking your new habits to a cycle that is already built into your brain, you make it more likely that you'll stick to the new behavior.

Once you have mastered this basic structure, you can begin to create larger stacks by chaining small habits together. This allows you to take advantage of the natural momentum that comes from one behavior leading into the next.

HABIT STACKING



Habit stacking increases the likelihood that you'll stick with a habit by stacking your new behavior on top of an old one. This process can be repeated to chain numerous habits together, each one acting as the cue for the next.

Your morning routine habit stack might look like this:

1. After I pour my morning cup of coffee, I will meditate for sixty seconds.
2. After I meditate for sixty seconds, I will write my to-do list for the day.
3. After I write my to-do list for the day, I will immediately begin my first task.

Or, consider this habit stack in the evening:

1. After I finish eating dinner, I will put my plate directly into the dishwasher.
2. After I put my dishes away, I will immediately wipe down the counter.
3. After I wipe down the counter, I will set out my coffee mug for tomorrow morning.

You can also insert new behaviors into the middle of your current routines. For example, you may already have a morning routine that looks like this: Wake up > Make my bed > Take a shower. Let's say you want to develop the habit of reading more each night. You can expand your habit stack and try something like: Wake up > Make my bed > Place a book on my pillow > Take a shower. Now, when you climb into bed each night, a book will be sitting there waiting for you to enjoy.

Overall, habit stacking allows you to create a set of simple rules that guide your future behavior. It's like you always have a game plan for which action should come next. Once you get comfortable with this approach, you can develop general habit stacks to guide you whenever the situation is appropriate:

- When I see a set of stairs, I will take them instead of using the elevator.
- Social skills. When I walk into a party, I will introduce myself to anyone I don't know yet.
- When I want to buy something over \$100, I will wait 24 hours before purchasing.
- Healthy eating. When I serve myself a meal, I will always put veggies on my plate first.
- When I buy a new item, I will give something away. ("One in, one out.")³
- When the phone rings, I will take one deep breath and smile before answering.

- When I buy a new item, I will give something away. (“One in, one out.”) ³
- When the phone rings, I will take one deep breath and smile before answering.
- When I leave a public place, I will check the table and chairs to make sure I don’t leave anything behind.

No matter how you use this strategy, the secret to creating a successful habit stack is selecting the right cue to kick things off. Unlike an implementation intention, which specifically states the time and location for a given behavior, habit stacking implicitly has the time and location built into it. When and where you choose to insert a habit into your daily routine can make a big difference. If you’re trying to add meditation into your morning routine but mornings are chaotic and your kids keep running into the room, then that may be the wrong place and time. Consider when you are most likely to be successful. Don’t ask yourself to do a habit when you’re likely to be occupied with something else.

Your cue should also have the same frequency as your desired habit. If you want to do a habit every day, but you stack it on top of a habit that only happens on Mondays, that’s not a good choice.

Finding the Right Trigger

One way to find the right trigger for your habit stack is by brainstorming a list of your current habits. You can use your Habits Scorecard as a starting point. Alternatively, you can create a list with two columns. In the first column, write down the habits you do each day without fail.

For example:

- Get out of bed.
- Take a shower.
- Brush your teeth.
- Get dressed.
- Brew a cup of coffee.
- Eat breakfast.
- Take the kids to school.
- Start the work day.
- Eat lunch.
- End the work day.
- Change out of work clothes.
- Sit down for dinner.
- Turn off the lights.
- Get into bed.

Your list can be much longer, but you get the idea. In the second column, write down all of the things that happen to you each day without fail. For example:

- The sun rises.
- You get a text message.
- The song you are listening to ends.
- The sun sets.

Armed with these two lists, you can begin searching for the best place to layer your new habit into your lifestyle.

The Next Step

Habit stacking works best when the cue is highly specific and immediately actionable. Many people select cues that are too vague. I made this mistake myself. When I wanted to start a push-up habit, my habit stack was, “When I take a break for lunch, I will do ten push-ups.” At first glance, this sounded reasonable. But soon, I realized the trigger was unclear. Would I do my push-ups before I ate lunch? After I ate lunch? Where would I do them? After a few inconsistent days, I changed my habit stack to: “When I close my laptop for lunch, I will do ten push-ups next to my desk.” Ambiguity gone.

Habits like “read more” or “eat better” are worthy causes but far too vague. These goals do not provide instruction on how and when to act. Be specific and clear: After I close the door. After I brush my teeth. After I sit down at the table. The specificity is important. The more tightly bound your new habit is to a specific cue, the better the odds are that you will notice when the time comes to act.

Happy habit stacking! ⁴

This article is an excerpt from Chapter 4 of my New York Times bestselling book Atomic Habits. [Read more here.](#)

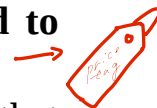
habits. Then find ways to either remove the trigger or change your reaction to it. For example, do you always overeat or turn to unhealthy foods when you're starved? Try a small snack to avoid becoming too hungry.

Changing a habit takes effort—the habit formation period, which requires at least some self-discipline, may take around two months.³ But **building effective habits will enable you to become more productive while preserving precious self-discipline.** Even adding just one habit can make a surprising difference. For example, when Barb is procrastinating instead of starting a task, she turns to her habit of doing a 25-minute Pomodoro. She doesn't think about how much she dislikes the task. Instead, she just gets started—and thinks about how much she'll enjoy the reward at the end of the Pomodoro.

Plan Your Goals and Identify Obstacles

In the 1990s, German psychologist Peter Gollwitzer tried to understand why people don't reach their goals. He found that **having a strong desire to reach a goal isn't enough. What's necessary is a plan for when, where, and how you will reach your goal—and for how you will respond to obstacles.**

→ dopamine



In one research experiment, Gollwitzer and his colleagues found that students who planned when and where they would study spent 50 percent more time studying than those who did not.⁴ Another experiment found that students who planned their response to obstacles to their studying completed 60 percent more practice questions for an important test than students who didn't.⁵ In yet another experiment, researchers from Germany and the UK found that 91 percent of participants met their exercise goals—if they made a plan that included when and where to exercise.⁶

Let's say you know you need to spend the weekend doing last reviews for a major set of final exams on Monday and Tuesday. At the same time, there are activities that are likely to lure you away. Will your self-discipline hold? According to Gollwitzer's research, you'll be much more likely to succeed if you plan when, where, and how you'll work. For example, you can plan to study Saturday and Sunday from 10 a.m. to 6 p.m., tucked away in the corner of a library.

→ know thyself

You'll also be much more likely to succeed if you think about how you'll respond to temptations. Let's say that a friend asks you to go to a party. You might imagine yourself answering, "I can't. I already have other plans." (Stick with a vague response. It makes it harder for people to try to dissuade you—which friends will often try to do—because without details they won't have anything concrete to argue against.) When you plan and practice responses to obstacles in advance, those responses become natural and easier to carry out when the real temptation presents itself later.

Don't Forget to Recharge

It's easy to fall into a groove where, no matter how much you work, it doesn't feel like it's enough. This is a rapid path to burnout. It's important to set aside time for having a life, spend time with the ones you love, and have fun. If you build your break and reward times into your schedule—for example, no work between 6 and 9 p.m. each evening—it can enable you to focus more fully when you're studying.

Sometimes, studies and work can be so demanding that it's difficult to take much time off. In that case, find something you really enjoy that you can look forward to. One medical school student we know, for example, overwhelmed by the firehose of information she had to learn, lived each week for the one hour of her favorite television show.

Involve Others

In writing this book, Olav regularly emailed Barb to tell her when she could expect to receive updated versions of the manuscript. Barb didn't ask for it, and there was no hurry. So why did Olav do it? He finds that when he promises someone that he'll complete a task within a few days, the sense of urgency allows him to get the work done.

When you have a task that requires self-discipline, see if you can create a meaningful deadline or commitment by involving others. Say you need to study on a Saturday but know it will be hard to do. Find someone else who's also planning to work on Saturday and agree to meet

2. a torrent of sth a lot of words spoken quickly, especially in order to insult or criticize someone 連珠炮似的話語:

•When I asked him to move, he unleashed a torrent of abuse .我讓他挪挪位置，他就破口大罵起來。

a torrent of Greek / Italian etc

•The woman poured out a torrent of Italian.那個女子冒出一連串義大利語。

Macmillan English Dictionary 2nd Edition

torrent UK  ['tɒrənt] US  ['tɒrənt] noun [*singular torrent plural torrents*]

1. [countable] a fast and powerful flow of liquid, especially water

They were swept away by the raging torrent.

Thesaurus: movements of water hyponym

2. [singular] a large amount of something, especially something unpleasant

torrent of: a torrent of abuse/words/criticism

Thesaurus: large quantities or amounts synonym large amounts or quantities of a specific kind hyponym

3. 洪水般的洶湧;大量(或大批)氾濫

• a deluge of letters and phone calls

大量湧來的信件和電話

• a deluge of words

滔滔不絕的話



"a firehose of information"



Brainy Quote

<https://www.brainyquote.com> › ... › David Carr Quotes

David Carr - We live in an age where there is a firehose...

We live in an age where there is a **firehose of information**, and there is no hierarchy of what is important and what is not. Where the truth is often ...



Scientific American

<https://www.scientificamerican.com> > article > how-sus... ⋮

How Susceptible Are You to Misinformation? There's a Test ...

Jul 5, 2566 BE — People who spend a lot of time on social media are exposed to a **firehose of information**, both real and fake, with little context to help ...



poddtoppen.se

<https://poddtoppen.se> > podcast > k... · [Translate this page](#) ⋮

Karen Travers: "A firehose of information" - The Fly

Karen Travers: "**A firehose of information**" ... On this episode, the Flies interview Karen Travers, a White House Correspondent covering all aspects of the Trump ...



"a firehose of information"



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information overload



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STATMed Learning

Information Overload in Med School



YouTube

How Social Media Trains Cognitive ...

We live in an age where there is a firehose of information, and there is no hierarchy of

We live in an age where there is a firehose of information, and there is no hierarchy of what is important and what is not. Where the truth is often fashioned through a vast net

HOW TO DEAL WITH A



is a firehose of information a common expression?



Yes, the phrase "firehose of information" is a common expression used to describe a large volume or rapid flow of information. It conveys the idea that the information is coming at a high intensity and can be overwhelming or difficult to manage, much like trying to control a powerful stream of water from a firehose. This expression is often used in contexts where there is an abundance of information to process or when someone feels inundated by a constant stream of data or news.



show me its synonyms



Here are some synonyms and related expressions that convey a similar meaning to "firehose of information":



1. Information overload
2. Data deluge
3. Flood of information
4. Information tsunami
5. Information avalanche
6. Deluge of data ✓
7. Information flood
8. Data tsunami
9. Information onslaught
10. Torrent of information ✓

up and study together. This outside accountability will push you to get the work done because you want to keep your word and your appointment.



Let's return to President Roosevelt. Averaging about a book per day, he might have been the best-read man in the United States at the time.⁷ But when it came to reading, Roosevelt didn't need self-discipline to get it done. Why? Roosevelt loved to read! You only truly need self-discipline to do the tasks that you're not that motivated to do. If you can increase your motivation for studying, that might be the best remedy of all. That's why we'll next turn our focus to the crucial role of motivation.

READING TIP

If you want to read books but find reading to be a challenge, just set yourself a goal of, say, twenty pages a day. By the end of the year, you'll have read over twenty books!

KEY TAKEAWAYS

FROM THE CHAPTER

Self-discipline is important for success but also a limited resource.

- **Find ways to overcome challenges without having to rely on self-discipline.**
 - **Remove temptations, distractions, and obstacles from your surroundings** and make it as easy as possible to make the right decisions.
 - **Change existing habits that may be harming your ability to study by finding the habit cue and changing your response to it.**
- Plan your goals and identify obstacles and the ideal way to respond to them ahead of time.
- Involve others in your work to increase your commitment.

8

How to Motivate Yourself

Tom Sawyer looked at the big fence in front of him. Next to him stood a bucket of whitewash, waiting for him to spread it out across the bare board planks. Tom sighed. Normally, he would be out on a small adventure by now. Instead, he had been sent to whitewash his aunt's fence as a punishment for skipping school to go swimming. He took a deep breath and started the boring job of stroking the board planks. Right, left, soak the brush in whitewash, and repeat. To make matters worse, kids passing by would stop and make fun of him.

But within minutes of the start of this famous story—*The Adventures of Tom Sawyer*, by Mark Twain, Tom had gotten all the other kids on the street to paint the fence for him. He had even convinced the kids to give him gifts to be allowed to paint. How did he motivate the other kids to do it?

It's About Effort

Say you want to do well and be successful in your studies. Does that mean you have a lot of motivation? Not necessarily. **Motivation isn't about how much you want something; it's about how much effort you're willing to exert to get it.**

What gives you this willingness to exert effort? Researchers believe that the chemical dopamine plays a key role. They found that rats would work

much harder to obtain food if dopamine levels were high in brain regions related to our emotions.¹ Later experiments have shown that humans will also work harder when they feel the pull of dopamine.² So dopamine is like adding a turbocharger to an engine—it boosts your drive. And although you could insert an electrically charged wire into your brain to increase the flow of motivational dopamine (hey—it works on rats!), we’ll look at some better and safer ways.

Motivation as a Sum of Parts

Let’s revisit Tom Sawyer. After a few failed attempts, Tom managed to motivate the other kids on the street to paint the fence for him. We tend to think that motivation is something that we either “have” or “don’t have.” But as Tom discovered, **motivation can be created, strengthened, and maintained through intelligent tactics.**

So what does it take to motivate yourself? It’s a little like asking what it takes to move a car forward. An engine, gas, oil, wheels—altogether, a lot. In the same way, there are many influences on motivation. **In this chapter, we’ll explore how finding value, experiencing mastery, setting goals, and working with other people can increase your energy and desire to work on difficult tasks. Understanding these factors can allow you to create and sustain your motivation, even as times get tough.**

TO BUILD AND MAINTAIN YOUR MOTIVATION

- Find value in your studies.
- Work to experience feelings of mastery.
- Set goals.
- Work with others.

Value—Find What’s in It for You

We are motivated to spend time on activities that we enjoy or benefit from. If you’re learning Spanish but don’t enjoy it, don’t find it useful, and don’t care about a grade, you’ll find it difficult to motivate yourself to study.

Whether you find an activity enjoyable and beneficial depends a lot on your **perception**. That explains why two students can differ so much in their motivation, even when they are performing the same task.

Luckily, you can change your perception—as Olav discovered in high school when he took a part-time job at a busy restaurant washing dishes. Twice a week, he worked nonstop from 4 p.m. to 2 a.m. When he compared studying to hard labor in an overheated restaurant kitchen, studying wasn't bad at all.

Changing perceptions was also how Tom Sawyer succeeded in motivating others to paint the fence. Tom realized that people want what is difficult to get. So he reframed the painting task from a mundane job to a once-in-a-lifetime opportunity. When speaking to his friend Ben, Tom refused to call painting “work” and instead said he enjoyed it. When Ben asked if he could try to paint a little, Tom refused, saying that his aunt was picky about who painted the fence. Making painting a hard-to-get activity motivated Ben to offer his apple in return for some time with the brush. Tom agreed, and soon all the other kids were trading away their toys to be allowed to paint.

One way to reframe your perception of a task is to make a list of all the benefits you can think of. *Dinner with friends without a guilty conscience? Look good when you get together with your team?* If you take the time to compile reasons, ideas may emerge that you hadn't thought of before, and this can motivate you even further.³ Your list can include how the task moves you closer to your goals. For example, if you want to earn a certificate in project management, you might think, “Doing this homework set will move me closer to that certificate. Not doing this homework set will move me away from that certificate.”

Another way to make a task valuable is to reward yourself when you've completed some portion of the task. A reward can be simply taking a break where you listen to your favorite music, or having the chance to watch your favorite television show, to hang out with friends, or even just to go for a walk. (After sitting awhile, walks can feel good.) Rewards can be especially useful when you face hard or boring tasks, which is another reason why the Pomodoro Technique is so powerful. But be careful of using your mobile phone during your break—remember, research has shown that the focused

attention you put into the phone means you're not actually getting the mental break you need.⁴

Mastery—Experience Progress

A feeling of mastery is a powerful motivator. As you work toward mastery, your studies should fall in the “doable with effort” range. You can grow frustrated if the task is too hard. But if things are too easy, you'll get bored.

If a task is too difficult, try to break it up, seek help, or find better resources. Find an online video on the topic or post your question in a discussion forum online. Another technique is the “rubber ducky” approach, where you place a rubber ducky, or whatever object you'd like to speak to, in front of you—you then try to explain out loud where you're stuck. You can also take a step back and restart at a lower level. For example, when Olav studied calculus at university, he hadn't studied math in two years and found himself struggling. So he dug out his old high school math book and spent a weekend reading explanations and redoing calculus problems. That gave him more-appropriate practice problems and explanations, which allowed him to begin to grapple successfully with university-level math.

Incidentally, getting help is sometimes the best approach. When Barb was preparing for a midterm for her first programming class in college, she made a list of a dozen questions. To get answers, she went to the tutoring center on campus. Later, she discovered that nearly every one of her questions was covered on the test. Taking the time to ask for help at the tutoring center made a big difference in her understanding of key aspects of the material—and her grade. This further increased her motivation.

How you deal with setbacks also matters. If you see setbacks as failures, it's easy to be demotivated. **Instead, you should consider setbacks as valuable opportunities to learn and grow.** Of course, when you're in the throes of what seems like failure, it's hard to be upbeat. **But just keep in mind that what seems like a really big deal at a given moment probably isn't in the greater scheme of things. Or as Nobel Prize winner Daniel Kahneman said, “Nothing in life is as important as you think it is while you are thinking about it.”**

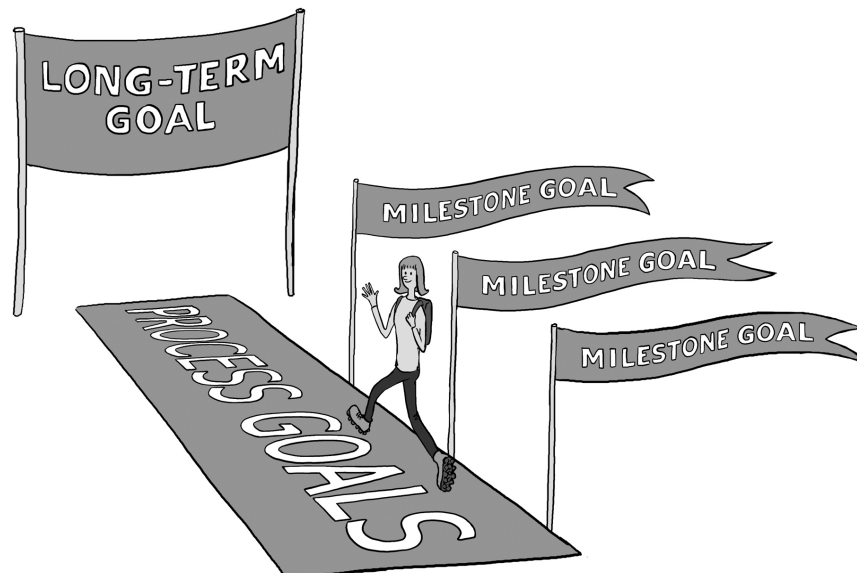
Goals—Aim for Something

When Olav was asked to start swimming to recover from an arm injury, he realized that he didn't enjoy swimming back and forth in a narrow lane. To make swimming more bearable, Olav discovered that setting a one-kilometer (0.6-mile) distance goal for each swim worked perfectly. He kept track of his distance, and every time he ticked off another kilometer, he felt great.

Setting goals is a great motivational tool. We recommend that you **set long-term goals, milestone goals, and process goals.**

Long-Term Goals

Your long-term goal should be something that excites and gives you a good feeling whenever you think about it, such as one day becoming a doctor, traveling the world, or starting your own business. **Keep a photograph or physical object within handy view that represents your long-term goal.** That will act as a reminder that motivates you to persevere along the sometimes frustrating road to get there.



With long-term goals, you can also use a motivational technique called “mental contrasting.” This means contrasting your life today with how your

life will be once your long-term goal is achieved.⁵ Say your long-term goal is to become a doctor. But right now, you're in college eating macaroni and cheese for dinner, working part-time at a job you don't enjoy much, and finding it hard to keep up with your studies. Now close your eyes and visualize how your life will be as a doctor. Imagine what a typical day will be like, where you will live, where you will work, and how your usual workday will unfold. This contrast between the future and today will energize you to keep working toward your goal.

You can also use negative contrasting as a motivator. For example, when Barb was trying to switch gears and learn engineering in her late twenties, it wasn't easy. Sometimes her resolution flagged. But then she would think back on how it felt to be working as a private in the army, where she didn't have much say about where her career went. She didn't want to be in that situation again. Engineering provided a good pathway out of the kinds of routine jobs Barb didn't want to be stuck in.

Milestone Goals

Your long-term goal should also be supplemented with some near-future milestone goals—**goals that act as steps on the road to reaching your long-term goal**. Such goals could be reaching a certain grade point average and goals for your individual subjects.

Process Goals

Milestone goals, in turn, should be supported by process goals—that is, **actionable goals that say how you are going to reach your milestone goals**. “Study math for one hour each day” and “Learn ten new words every day” are examples of process goals.

There is a tried-and-true piece of advice that **your long-term, milestone, and process goals will be more motivating if they are SMART: Specific, Measurable, Ambitious, Realistic, and Time-limited**.⁶ In other words, you should be concrete about each goal and ensure that you can measure progress and attainment. Your goal should be a little difficult, but not unreachable, and you must be able to set a deadline for it. For example, the goal “to do well” is not a SMART goal because it's not specific, it's hard to

measure, and it has no deadline. On the other hand, to “get an A on my next machine learning assignment” can be a SMART milestone goal, just as “to work on this assignment for 45 minutes a day for the next five days” can be a SMART process goal. Olav’s goal of swimming one kilometer every week also meets the SMART criteria.

GOOD GOALS ARE “SMART”

Specific

Measurable

Ambitious

Realistic

Time-limited

Find Someone to Work With

Watching a movie, going for a walk, and having a meal can all become more fulfilling if we share it with someone we like. That’s because people have a built-in need to be socially connected and to secure the love and respect of others.⁷ And face it—studying is more enjoyable if you have someone to study together with. If some of your friends are serious about their studies, it’s even better. How to find such friends? If you’re taking online classes, keep an eye on the discussion forums—you can meet very helpful people that way. If you’re taking live classes, watch for students who ask good questions. Even if you’re shy, it can be worthwhile to go up to that person, introduce yourself, and start a conversation, perhaps by asking a question you might have been too reserved to ask in front of the class.

If you’re working on a difficult task, having a study buddy or a small study group can motivate you. The task doesn’t change, but if you’re figuring out concepts and problems with others, it can become as exciting as a soccer team working together to win a game. If your buddies are ambitious and driven, some of their motivation may even transfer to you—a phenomenon called *motivation contagion*.⁸ Working with others can also deepen your learning—in part by having your friends point out where your thinking has gone wrong. Just ensure that if you meet to study together, you

do just that. If you can't, it's better to study on your own and meet your friends for social activities later.

Forming a study group is a great way to facilitate learning and stay motivated. Discussing the study material and hearing what others think can give insight into the key points of the material.

Let's return a final time to Tom Sawyer. Tom tested a number of motivational tactics, including begging for help and paying others, before he found one that worked. And in that lies another important point about motivation. Since many tactics can give rise to motivation, you may have to experiment a bit to find the best one for you.

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In the next chapter, we'll move on to how to be more productive with one of the most common ways of studying: reading.

KEY TAKEAWAYS

FROM THE CHAPTER

- **Motivation is not something you either have or don't have**—it can be created, strengthened, and maintained using different techniques.
- **The best way to motivate yourself will vary**, depending on the cause of your low motivation. It's therefore wise to try different strategies.
- **Remind yourself of all the benefits of completing tasks.**
- **Reward yourself for completing difficult tasks.**
- **Make sure that a task's level of difficulty matches your skill set.** Ask for help, break a task up, or allow yourself more time (if you can!).
- **Use mental contrasting**, both positive and negative.
- **Make your goals and ensure that they are SMART (Specific, Measurable, Ambitious, Realistic, and Time-limited).**

- **Surround yourself with other students who are interested in the topics at hand.**