

HABITS

In 1972, Walter Mischel brought children one by one into a room and gave them marshmallows. The doors were locked. The windows were unidirectional.

No, Mischel was not a pedophile. He was a psychologist and this would prove to be one of the most famous experiments of the last century.¹

Each child was put in a room by themselves and given a single treat. He then told the child that he had to leave the room, but if the child waited and didn't eat the marshmallow until he came back, he would reward them with two marshmallows.

While outside the room, he tracked what the children did. Could they delay gratification and wait for a greater reward? Or would they indulge their impulses once left unsupervised?

About a third of the children immediately ate the marshmallow as soon as Mischel walked out. Another third waited for a period of time, but finally gave in and ate it. And then the last third waited the full 15 minutes — no doubt an eternity for a child with candy in front of them.

At the time, psychologists believed willpower was something that was innate, and unchangeable, so in this case, it was an afterthought. What Mischel had been more interested in was whether a child's age correlated with their ability to delay gratification. It was an experiment in developmental psychology, not personality.

And sure enough, it did correlate: older children were, on average, able to wait longer before giving into temptation. This got published. Mischel went on with his life and the children went on with theirs. The marshmallow experiment was a success, but largely forgotten.

¹ Mischel, W., Ebbesen, E. B., & Raskoff Zeiss, A. (1972). Cognitive and attentional mechanisms in delay of gratification. *Journal of Personality and Social Psychology*, *21*(2), 204–218.

But the Marshmallow Experiment wasn't done yet. In approximately 20 years, Mischel would unexpectedly revisit it, and his findings would shake up the psychological world.

It just so happened that one of the subjects of Mischel's original experiment was his daughter (then five-years-old) and her schoolmates, including many of her friends. As the years dragged on and his daughter and her friends grew up, it became harder and harder for Mischel to ignore the fact that many of the kids who demonstrated no ability to delay gratification were getting in trouble at school and making poor grades, and the ones who had showed a perfect display of delayed gratification were scoring high on their SAT's and getting admitted to prestigious colleges. So 20 years later, he decided to track the children down and see where they had ended up as young adults.

The follow-up results were seismic and they're the reason why the experiment continues to be so famous today.

A child's ability to delay gratification correlated with academic and professional success more than almost any other measure — more than intelligence, more than standardized testing, more than household income, religion, personality tests, gender — anything.²

Psychologists conducted similar studies and found that people who were able to delay gratification longer were, on average, physically healthier, academically more successful, financially more stable, and overall, rated their subjective quality of life higher.³ They produced better SAT scores, went to

² Mischel, W., Shoda, Y., & Rodriguez, M. I. (1989). Delay of gratification in children. *Science*, *244*(4907), 933–938.

³ Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., ... others. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences*, *108*(7), 2693–2698.

better schools, got better jobs, had more stable relationships and suffered from fewer mental illnesses.⁴

A definitive predictor of future success eluded psychologists for close to a century. The measurement of IQ had originally been invented for this purpose, but failed spectacularly, and other measurements proved just as faulty. But it appeared Mischel had stumbled upon a reliable predictor on accident.

Yet willpower seems to be a dwindling virtue in our society today. More people are obese today than ever in world history. Attention spans are shrinking. Cases of narcissism, anxiety disorders and depression are higher than ever before.

For our generation, emphasis has always been put on self-esteem and not self-discipline. And it seems that we're paying the price.

Willpower is Like a Muscle

In 1998, psychologist Roy Baumeister made a startling discovery. People who were forced to exert willpower (in this case, resisting eating cookies placed in front of them) did worse on puzzles and problem-solving tasks than people who indulged themselves.⁵ Thinking that perhaps it was a fluke of particularly hungry people, he and other psychologists ended up reproducing the



⁴ Mischel, W., Ayduk, O., Berman, M. G., Casey, B. J., Gotlib, I. H., Jonides, J., ... Shoda, Y. (2010). "Willpower" over the life span: decomposing self-regulation. *Social Cognitive and Affective Neuroscience*, nsq081v1

⁵ Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: is the active self a limited resource? *Journal of Personality and Social Psychology*, *74*(5), 1252.

results over and over again — people who are forced to exert willpower and focus on one task, are worse at exerting willpower and focus on subsequent tasks.

What this means is our willpower is finite and can be drained.

We each have a certain fuel tank of willpower that we can exert and once we use it all up, we are far more prone to give up and indulge ourselves in our whims, impulses and base desires.

This phenomenon is referred to in psychology as ego depletion.

This is why after a hard day's work, all you want to do is sloth around on the couch and eat ice cream. Or why after a week of strict dieting it's so easy to convince yourself that eating an entire pizza isn't such a big deal. Or why after studying all day for an exam you feel justified in going out and getting shit-faced on tequila and exposing yourself in public (...not that this has ever happened, just saying).

This information depresses people. They figure, well, if I only have so much willpower, then I may as well conserve it for really important tasks, like practicing trick jumps in Halo 3 or not smacking my boss in the face tomorrow when he yells at me.

They figure there's no point in trying to get that six-pack or start that new business if they barely have enough willpower to make it through their current day-to-day drudgery.

But the good news is willpower is like a muscle; it can be exercised and practiced and built up. It can also be forgotten, weakened and atrophied. Just like going to the gym and building up strength and endurance, you can build up your discipline and willpower over a long period of time by setting and accomplishing a series of tasks on a consistent basis.

You can make your fuel tank bigger and bigger by draining it on a consistent basis.

And you can also slow the loss of willpower. Studies show that putting yourself into a positive and/or competitive mood has restorative effects on

willpower,⁶ as does, strangely enough, glycogen (as in eating sugar or starch).⁷

This is why those catastrophic tasks as an adolescent (homework, flossing) become simple and an afterthought once you're older. You have a higher threshold for ego depletion; your willpower muscle is bigger and stronger. You also, ideally, give more of a crap about yourself and your well-being, so you're happy, excited even, to do these things.

It's also why some people are able to focus and work 12- or 16-hour days, while others struggle to pour themselves coffee. It's not that they're superhuman or genetically enhanced or neurotic, but they've built up their fuel tank to that level. They've practiced willpower to such an extent over such a long period of time, blowing through a 12-hour day of productivity becomes the new normal.

This is probably the biggest argument for studying consistently in university. For many of us, we're able to loaf through college by staying up all night a couple days before the exam or term paper while screwing around for weeks on end. That's how I was, and in some ways I regret it.

But at some point in your life, you will likely run into a situation where you wish you were capable of working one of these marathon sessions without breaking a sweat; or you'll wish to be able to work consecutive *series* of marathon sessions when necessary — starting your own business, working for a major promotion, sales pitch to investors, etc.

But to get back to the point: willpower is finite, but it can be built and practiced. It's what happens in the long-term that gets more complicated.

⁶ Tice, D. M., Baumeister, R. F., Shmueli, D., & Muraven, M. (2007). Restoring the self: Positive affect helps improve self-regulation following ego depletion. *Journal of Experimental Social Psychology*, *43*(3), 379–384.

⁷ Gailliot, M. T. (2008). Unlocking the energy dynamics of executive functioning: Linking executive functioning to brain glycogen. *Perspectives on Psychological Science*, *3*(4), 245–263.

Self-Discipline is a Series of Positive Habits

Let's stick with the diet example since that's something most people have failed with at one point or another.

Most people go about dieting with a "crash" mentality. They pick an arbitrary number — say, lose 15 pounds in two months — and then they implement whichever form of starvation or asceticism most appeals to them that season.

Most people approach the whole ordeal from a perspective of willpower. I will turn down desserts. I will skip breakfast. I will force myself to walk three times a week for 30 minutes. Then I'll lose my 15 pounds and I'll be happy.

Even if their ego depletion survives such a crass assault from their vanity, they've now depleted all of their willpower in order to reach an arbitrary goal, and not build a lifestyle habit.

What happens? By and large, people fail. They don't make it. Eventually their ego depletion catches up with them, and the Oreos, Snickers, Pizza Hut, and 2-for-1 margaritas take over. It's easy to make the right decisions based on willpower for an hour or a day or a week, but eventually they run out of decision-making gas and cave in to their cravings.

And even for the few who succeed, their fate is not much better. A staggering number of people who reach their dieting goals eventually gain all of the weight back, and usually add some more, just to be safe.

If you peruse fitness and nutrition magazines and forums, anyone who has successfully lost a lot of weight (or added a lot of muscle) and maintained it will tell you that it's not about willpower but **it's rather about integrating the appropriate habits into your daily life.** It's not about the willpower to give up certain foods, but developing the taste for good ones. It's not about forcing yourself to the gym every week as much as finding a way to actually look forward to it and enjoy it. This subject is a little bit close to my heart since I lost about 30 to 35 pounds over the course of a year, between 2009 and 2010.

What ultimately worked for me, and for most people, was not a diet plan or following a specific regimen to the 'T', but building a series of healthy life habits. Your willpower is exerted on making simple lifestyle changes that are sustainable rather than drastic shifts that you have no hope of maintaining day after day, year after year.

Most people exert their willpower on achieving temporary fixes whereas willpower should be expended on developing life-long habits.

Think about it, a person who gets up every morning, makes their bed, gets all of their work done by noon, practices an instrument in the afternoon, learns a new language in their spare time, goes to the gym every other night, budgets their finances perfectly, calls their mother and feeds the dog, saves babies from burning buildings — do you really think they are forcing themselves into making all of these decisions at every moment of every day against a wave of internal resistance?

Of course not, they would deplete their willpower fuel tank in no time. And even if they worked up their willpower over a long period of time, they'd burn themselves out within a few days.

This is why research has shown that people who set multiple goals at the same time end up accomplishing none of them — they burn themselves out before they have time to turn each one into a habit.⁸ What *does* work is focusing on one goal at a time, and building up to it slowly over a long period of time by implementing habits.

This is not sexy or exciting, which is probably why few people bother doing it. We're impatient. We're undisciplined.

⁸ Dalton, A. N., & Spiller, S. A. (2012). Too much of a good thing: The benefits of implementation intentions depend on the number of goals. *Journal of Consumer Research*, *39*(3), 600–614.

Everything You Need to Know About Habits

Habits form when you engage in a behavior *repeatedly in the presence of consistent stimuli*. That last part is important. Habits are "automatic" responses to familiar environmental cues. You save mental energy by developing habitual responses to familiar cues, situations, and even people that you encounter on a regular basis.

In his book *The Power of Habit*, Charles Duhigg summarizes a lot of research on how habits are formed and maintained and how they can be broken. Countless studies have shown that habits are comprised of three main parts: an environmental cue, a behavioral response, and a reward (or the removal of an unpleasant stimulus).

Cue 🕅 Behavior 🕅 Reward

For example, if you're a smoker, your cravings are typically triggered by a cue that you associate with smoking. For instance, finishing a big meal, drinking a beer, or seeing someone smoking a cigarette on TV.

This cue then triggers your desire to perform the habituated behavior. Then you smoke, and your brain rewards you – you feel more relaxed, calmer (and of course, the nicotine helps as well).

Habit researchers have found that in order to create new habits (or break old ones), we should NOT focus on the behavior but rather focus on the cue.⁹

We spend so much time and effort on creating or eliminating the behavior itself, when instead we should really be dedicating our willpower to consciously creating and/or reorganizing the *cues* in our environment that trigger those habits.

⁹ Verplanken, B., & Melkevik, O. (2008). Predicting habit: The case of physical exercise. *Psychology of Sport and Exercise*, *9*(1), 15–26.

So, for example, let's say you want to start working out on a regular basis. Instead of just focusing on developing the habit of "working out," focus on developing a routine around *initiating a workout*. This may just seem like a semantic difference, but it's huge.

An easy way to do this is to choose a cue that already occurs regularly in your daily life, such as getting home from work. Then, during the early stages of developing your workout habit, focus your effort on going straight to your room after you get home and changing into your workout clothes. Then go fill up your water bottle and head straight to the gym or hit the running trail or whatever. You want to develop the habit of putting yourself in the position to work out regularly, which makes it more likely that you'll work out regularly. After a while, you'll start to notice that when you get home from work (environmental cue/trigger), it takes little to no effort to go to your room, throw on your workout clothes and head to the gym (habitual response). You'll even start to look forward to it, and maybe even feel like something in your life is off when you don't work out. That's the power of habit.

The "reward" component of the habit equation above is used to reinforce your target behavior after you've successfully completed it. With our exercise example, you might get done working out and treat yourself to a (healthy) snack or maybe schedule a post-workout rest session by watching an episode of your favorite TV show. Some people derive enough reward from the exercise itself (e.g., "runner's high"), which acts as powerful reinforcement for their habit. Whatever you do, be sure to incorporate a healthy reward into your habit routine.

Habit Timelines



Research shows that our brains don't simply sum up the repetitive behavior we engage in and then, all of a sudden, treat it as an automatic habit once we've achieved some threshold number of repetitions. Instead, habits come about gradually over time and in a non-linear fashion.¹⁰ At first, consciously repeating a behavior in the same context on a daily basis causes a

relatively quick increase in how automatic the behavior is; i.e., how habitual it is. This makes sense, since at first, the behavior is not at all automatic, so it stands to reason that any amount of practice will have the biggest gains towards automating the behavior at this point. After repeated practice, however, the behavior is refined and your brain gradually switches over to full habit mode.

Studies have also found that after something becomes a habit, our behavior isn't actually guided by our internal goals and motivations anymore.¹¹ Again, habits are just automatic responses to the cues in our environment. *But* – and this is the important part – with our goals in mind, we can consciously use our willpower to manipulate our environments and develop desired habitual responses to the cues of our choosing. In this way, we can leverage our environments on a daily basis to develop automatic, habitual behaviors that will help us reach our goals.

¹⁰ Lally, P., Van Jaarsveld, C. H., Potts, H. W., & Wardle, J. (2010). How are habits formed: Modeling habit formation in the real world. *European Journal of Social Psychology*, *40*(6), 998–1009.

¹¹ Wood, W., & Neal, D. T. (2007). A new look at habits and the habit-goal interface. *Psychological Review*, *114*(4), 843.

Maintaining Habits

Many people start out with good intentions and a strong desire to develop healthy habits only to slip back into their old, bad-habit ways. Studies have identified several factors that contribute to forming and keeping a lifestyle with healthy habits.

One of those factors is relatively straightforward: just knowing the basics about how habits are formed and how they work can significantly increase your chances of forming and keeping healthy habits (and maybe even get rid of a few bad habits).¹² So, educating yourself by reading something like this gives you a leg up on establishing healthy habits in your life. You're already on your way.

Another big factor is how you perceive the habit you want to build. If the habit seems impossible, then it will feel harder. If it seems easier, then it will be easier.

That sounds stupid, but it has serious consequences.

For example, if you want to lose weight and you decide that you want to do it by working out for 90 minutes per day, six days per week, that is going to feel like a gigantic and daunting task. Because it feels gigantic and daunting, you're far more likely to give up. Whereas if you decide to lose weight by walking for 20 minutes after dinner each night (the dinner is your cue), then it feels very easy to accomplish, and therefore it is.

The beautiful thing is that once you've adopted the "easy mode" version of your desired habit, you can always amp it up afterward. For example, if you walk for 20 minutes after dinner each night for a month, *then* you can decide, "Hey I'll walk for 45 minutes now." Then you can try out a little bit of running. Then you can add calisthenics and plyometrics, and before you know it, you're working out for 90 minutes per day, six days per week.

¹² Lally, P., Chipperfield, A., & Wardle, J. (2008). Healthy habits: efficacy of simple advice on weight control based on a habit-formation model. *International Journal of Obesity*, *32*(4), 700–707.

The key is to start small. Set the bar low. Seriously. If you suffer from chronic low self-efficacy and low self-esteem, you have to start where you are. Don't expect the quantum leap, at least not at first. I know someone who lost *a lot* of weight (almost 80 lbs) over a 2-year period. He was running marathons by the time he was in shape, but you know how he started out? Four minutes a day on the exercise bike. That's all he could do at first, but he did it *every single day* and increased his workout as he lost more weight and gained more confidence.

Once he knew he could do a few minutes on the bike, he figured he could do a few more, then he figured he could go for a run, then he believed he could run competitively, then he set a goal to run a marathon and did it.

He didn't say, "OK, I'm ridiculously overweight so I should run a marathon." He instead started where he was, which was in his basement on an exercise bike for 4 minutes a day. This kept him engaged and he didn't feel too overwhelmed while he was working to create a healthier lifestyle.

A few other things to keep in mind:

- While consistency is key, research has shown that missing one or a handful of opportunities to practice a desired habit will not ruin your chances at establishing that habit in the long run. Don't beat yourself up if you miss a workout session or you pig out one night on pizza and ice cream. Acknowledge it as just part of the process and get back to your routine as soon as you can.
- People don't develop and acquire habits at the same rate; everyone is different. There are a lot of products and advice out there that promise a goal within a definitive time frame: 60 Days to Rock-Hard Abs; Read 7 Times Faster in 2 Weeks; Retire 6 Months from Today... it's all bullshit. Set goals for *yourself* and know your limitations and weaknesses; then work to eliminate them at your own pace.

A Final Word on Willpower

Author Jonathan Franzen once said that nothing good could be written on a laptop that had an internet connection. Your goal should not be the final end product, but creating circumstances that make the end product inevitable.

Instead of setting a goal of getting 3-hours of work done each night, expend your willpower on habits which will make that 3-hours inevitable removing distractions, disconnecting internet, setting up rituals.

New behaviors only require willpower until they're ingrained in us, until we no longer have to think about them. Instead of asking yourself what goal you'd like to reach, go one step further and ask which habits you'd have to implement in order for that goal to be achievable, and then expend the willpower on implementing those life habits.