Phalanx Labs

Method paper

Research paper · Version 1.0

How to stop scrolling on your phone

Why phones, social media and short-video feeds are so hard to put down for people who are in control everywhere else, what the research does and doesn't show, and what a staged 90-day method targets, day by day

Phalanx Labs

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Where each section sits in the 90 days

Days 1 to 30	Days 31 to 60	Days 61 to 90
Brain chemistry restabilization	Impulse control	Identity rewiring

1 How do you stop scrolling on your phone? The short answer — Background

2 Is phone or social media addiction real, and how do I know if I have a problem? — Background

3 Why can't I stop scrolling when I'm in control everywhere else? — Background

4 Why do I keep picking up my phone without thinking? — Background

5 What does scrolling do to your attention and your brain? — Background

6 Does having your phone nearby make it harder to think? — Background

7 Why do I scroll in bed, and what does it do to my sleep? — Background

8 Does social media cause anxiety and depression? — Background

9 Why do I reach for my phone when I'm bored? — Background

10 Do app limits, grayscale and social media breaks work? — Background

11 What happens when you stop scrolling? — Background

12 How do I stop scrolling when my work is on my phone? Background

13 What should I do if I start scrolling again? Background

14 What does the Phalanx program target for someone stopping scrolling, and when? Days 15 to 90

15 What do our results show, and what can't this paper tell you? Background

16 When should you get help straight away, and what is this program not? Background

Sections	Figures	Tables	References	Reading time
16	12	5	87	95 min

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Abstract

What works to stop scrolling is changing what's around the habit, not trying harder once the phone is already in your hand. Feeds are built so there's always more, and the posts worth seeing turn up at random, which is the pattern of reward that keeps any habit going longest. Your phone also gets tied to every gap in your day: waking up, the queue, the dull meeting, the toilet, bed. So the urge to scroll is strongest exactly when there's nothing else to do. People who stop for good usually fix their sleep first, take the phone out of the bedroom, turn most notifications off, remove or block the apps that cost them most, fill the empty gaps with something else, and plan what they'll do at each trigger that's left. Stopping isn't physically dangerous. If low mood, anxiety or thoughts of harming yourself come with it, see a doctor or contact a crisis line.

This paper explains each part of that answer and the research behind it. It covers whether phone and social media addiction is real, why you can be in control at work and still lose an hour to a feed, why you pick the phone up without thinking, what scrolling does to attention, whether a phone nearby makes it harder to think, why you scroll in bed and what it does to sleep, whether social media causes anxiety and depression, why boredom sends you to the phone, whether app limits and breaks work, what happens when you stop, how to stop when your work lives on your phone, and what to do if you start again. Each section starts with a short, direct answer. The detail and the evidence follow, including where the evidence is mixed and where well-known findings haven't held up.

The last part of the paper describes what the Behavior Control System, the 90-day method Phalanx Labs runs with every client, targets for someone stopping scrolling and on which days. Of the 290+ clients we have worked with across 12 countries over 7 years, 98.4% had already tried and failed to stop before they came to us. We report a 97% success rate, defined as the share of clients who ran the program and stayed off the habit through the program and the six months of aftercare that follow it, and we explain how it is tracked and what it cannot show. It comes from client follow-up, not from a controlled trial. The program is not therapy, clinical care or medical treatment, and it does not replace a doctor or a crisis service.

Keywords

how to stop scrolling | phone addiction | social media addiction | problematic smartphone use | doomscrolling | short-video feeds | notifications | variable reward | brain drain | phone at bedtime | sleep | social media and depression | boredom | digital detox | screen time limits | habit | relapse prevention

Section 01

How do you stop scrolling on your phone? The short answer

In brief

You stop scrolling for good by changing what makes you pick the phone up: your sleep, your notifications, where the phone lives, which

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apps are on it, and what you do in the gaps the feed used to fill. Trying harder in the moment is the approach that fails most often.

Safety note

Stopping scrolling isn't physically dangerous, and there's no medical withdrawal to manage. But heavy phone and social media use often comes with low mood, anxiety, loneliness and poor sleep. If you're having thoughts of harming yourself, contact emergency services or a crisis line now. In the US, call or text 988. In the UK and Ireland, call Samaritans on 116 123. In India, call Tele-MANAS on 14416. If low mood, anxiety or poor sleep has gone on for weeks, see a doctor: they're worth treating in their own right, not only as part of a phone habit. If you also drink heavily every day or take sleeping or anxiety medication, don't stop those suddenly without a doctor. Sections 8 and 16 explain why.

Most people who want to stop scrolling have already tried. Of the 290+ clients we have worked with across 12 countries over 7 years, 98.4% had already tried and failed to stop a habit before they came to us, and the phone is one of the habits they bring most often, usually alongside another one. The attempts were sincere: deleting the apps for a weekend, setting a screen-time limit, switching the screen to grey, a digital detox, a promise to leave the phone downstairs. Most of them lasted days. One of our clients, a commercial director in the Netherlands who came to us for three habits at once, described how far the phone had spread through his day: “And I realized that every single moment in between, the moments on the toilet, the moment not having to do something for 10 minutes, I was always on my phone.” That is the habit in one sentence. It doesn't live in one place or at one time. It lives in every gap.

Most people also underestimate how big the habit is. When researchers logged the phones of 23 young adults for two weeks, they used their phones 85 times a day on average. The same people guessed 37. More than half of those uses lasted less than 30 seconds[1]. A meta-analysis that compared what people said about their technology use with what was logged found that the two agreed only moderately, and that questionnaires about problematic use matched the logs even less well[2]. A habit you can't see clearly is hard to change, which is one reason the first job in any serious attempt is to see it.

The usual explanation for failing is a lack of willpower. That explanation is wrong in a specific and useful way. Willpower, in the sense of deliberate control by the prefrontal cortex, is real, but it is the faculty most easily taken offline by the conditions in which most scrolling happens: stress, tiredness, poor sleep, boredom, and the presence of something that has been linked to the habit thousands of times before[3-5]. The phone adds a problem of its own. It's in your pocket all day, it lights up and buzzes to ask for attention, and the apps on it are designed to keep you there. A

decision made by a rested person in the morning has to be carried out by a tired person at 11 pm with the phone already in their hand, and people are poor at predicting how differently they'll feel in that second state[6].

The research suggests that heavy scrolling is best understood as a strong habit fed by unpredictable rewards, in a setting built to keep it going, rather than as a lack of character. Economists who paid people to cut their social media use found that the effect of a temporary payment lasted after the payment stopped, which is what you'd expect of a habit, and they estimated that self-control problems account for 31% of social media use[7]. In plain terms, people use social media more than they themselves would choose to. That is the gap a method has to close.

What the research supports is changing the situation before the urge begins, rather than fighting the urge once it has started[8]. In practice that means four things, in order. First, fix the ground the habit grows in: sleep, the shape of the day and the empty stretches in it. Second, change the phone and the places it lives, so the habit is harder to start: notifications off or batched, the phone out of the bedroom, the worst apps removed or limited. Third, plan a specific response for every trigger that's left, the queue, the meeting, the evening slump, so the decision is made before the moment arrives[9]. Fourth, give the time and attention back to something that matters more, because a gap left empty tends to be filled by whatever is closest, and the phone is always closest.

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Table 1. The ways people most often try to cut down or stop scrolling, what each one changes, and what each one leaves in place. These are the attempts our clients most often describe before they came to us.

Attempt	What it changes	What it leaves in place
Deleting the apps for a weekend	Access, for a few days	The phone, the gaps in the day and the triggers. The apps come back on Monday, often through the browser first.
A screen-time limit	A reminder when a set time is reached	A limit you can dismiss with one tap is a decision handed back to the person least able to make it: the one already scrolling.
Switching the screen to grey	How colorful the feed looks	The feed's endless supply, its unpredictable rewards and every trigger in the day.
A digital detox weekend	Use, for a set period	An end date. The habits, the notifications and the empty gaps are waiting on the first morning after it.
Turning off every notification at once	The phone's interruptions	The habit of checking anyway. In one field experiment, people with no notifications at all reported more anxiety and fear of missing out[10].
A promise to use it less	Motivation	Nothing structural. The conditions that led to the last hour of scrolling are still in place for the next one.

None of these attempts is useless. Each one changes something real, and some of them, used as part of a plan, are part of what works. What they share is that each changes one thing and leaves the rest in place, and that is why they don't last. The rest of this paper explains each part of the habit, the evidence for what changes it, and how a staged method puts the parts together.

Section 02

Is phone or social media addiction real, and how do I know if I have a problem?

In brief

Researchers still disagree about whether heavy phone or social media use is an addiction, and neither of the main diagnostic manuals lists it as one. What isn't in doubt is that many people use their phones more than they want to, can't cut down when they try, and pay for it in sleep, work and mood. That is the problem worth solving, whatever it's called.

Whether phone or social media use can be an addiction is an open question. Neither of the two main diagnostic manuals lists a smartphone or social media addiction. A review of the research by Tayana Panova and Xavier Carbonell concluded that there wasn't enough support to call it an addiction, and that the behavior was better described as problematic or maladaptive use, because its consequences didn't reach the severity of addiction to drugs[11]. Joël Billieux and colleagues had already warned that research which starts by assuming an everyday activity is an addiction, and then confirms it, risks turning ordinary life into a disorder[12]. This paper uses the plainer term problematic use for that reason, and because the label matters less than the pattern.

The pattern itself is common. A meta-analysis of 41 studies of 41,871 children and young people found that about one in four, a median of 23.3%, showed problematic smartphone use. It was linked to higher odds of depression (odds ratio 3.17), anxiety (3.05), stress (1.86) and poor sleep (2.60)[13]. A larger review, of 504 studies covering 2,123,762 people in 64 countries, put the pooled prevalence of smartphone addiction at 26.99% and of social media addiction at 17.42%[14]. Those figures should be read with care. The studies used different questionnaires with different cut-offs, so the numbers say more about how often people score above a line than about how many have a disorder. And these are associations: problematic use and poor mental health go together, but the studies can't say which comes first.

The questionnaires are still useful for one thing: they show what problematic use looks like. The most widely used short scale for smartphone use asks ten questions about missing planned work, finding it hard to concentrate, feeling pain in the wrists or neck, feeling impatient without the phone, thinking about it when not using it, never giving it up even when daily life is affected, checking constantly so as not to miss conversations, using it longer than intended, and being told by others that you use it too much[15]. In a survey of 23,533 adults, scores for addictive use of social media went with symptoms of attention problems, obsessive-compulsive traits, anxiety and depression, and were higher in younger people[16].

Table 2. Signs that phone or social media use has become a problem, drawn from the questions used in research. None of these is a diagnosis. They describe the pattern this paper is about.

Sign	What it looks like
Use beyond intention	Opening an app for one thing and looking up 40 minutes later; using it longer than planned, most days
Failed attempts to cut down	Deleting and reinstalling apps, limits switched off, detoxes that end early
Checking without deciding to	Finding the phone in your hand with no memory of picking it up; reaching for it at every pause
Costs to sleep	Scrolling past the time you meant to sleep; the phone the last thing you see at night and the first in the morning
Costs to work	Planned work missed or delayed; hard to concentrate on anything long
Costs to people	Partners, children or friends who point it out; the phone out during meals and conversations
Restlessness without it	Impatience or unease when the phone is out of reach, or a pull to check that's hard to ignore

A practical test is simpler than any questionnaire. Write down how much you'd choose to use your phone if you could set the amount in advance, then check the screen-time figure your phone already records. If the two are far apart, and you've tried to close the gap and couldn't, you have the problem this paper is about. Economists who studied this directly found that when people were allowed to set limits on their own future screen time, their use fell substantially, and that people were partly unaware of their own self-control problems[7]. People wanted the limits. Many of them just couldn't hold the line unaided, and didn't fully know it.

Scrolling also rarely travels alone. The clients who come to us for it almost always bring a second habit, and the published stories show the combinations: phone scrolling with weed and cigarettes, social media with porn, doomscrolling with gaming and procrastination, social media with nicotine and junk food. These habits share a setting, the private gaps in the day, and a function, quick relief from boredom, stress or effort. That is why the program in Section 14 works on all of a person's cheap, easy rewards at once rather than on the phone alone.

Definition: problematic use

Problematic phone or social media use means using it more than you intend, being unable to cut down when you try, and paying for it in sleep, work, relationships or mood. It is a description of a pattern, not a medical diagnosis. This paper uses it because researchers still disagree about whether the word addiction fits[11].

Section 03

Why can't I stop scrolling when I'm in control everywhere else?

In brief

Because a feed is built to have no end and to pay off at random, which is the schedule of reward that keeps a habit going longest. The control you use at work is deliberate, and deliberate control is the first thing tiredness, stress and an always-available phone wear down.

You can be disciplined at work and still lose an hour to a feed because the two draw on different systems, and the feed is designed for the weaker one. At work there are deadlines, other people and consequences you can see, and deliberate control has outside help. A feed has none of those. It has no last page, so nothing in it ever tells you to stop. It pays off at random, so the next post might always be the good one. And it's there in every quiet moment, when deliberate control is at its lowest.

Start with the design. Most feeds have no natural end: when you reach the bottom, more loads. Video apps start the next video before you've decided to watch it. In a study of 120 YouTube users in the US, Kai Lukoff and colleagues found that autoplay and recommendations mainly undermined people's sense of control over their use of the app, while playlists and search, where the person chooses what comes next, supported it[17]. The difference is who makes the decision. Search waits for you. A feed with autoplay decides for you, and keeps going until you make a decision to stop, over and over again.

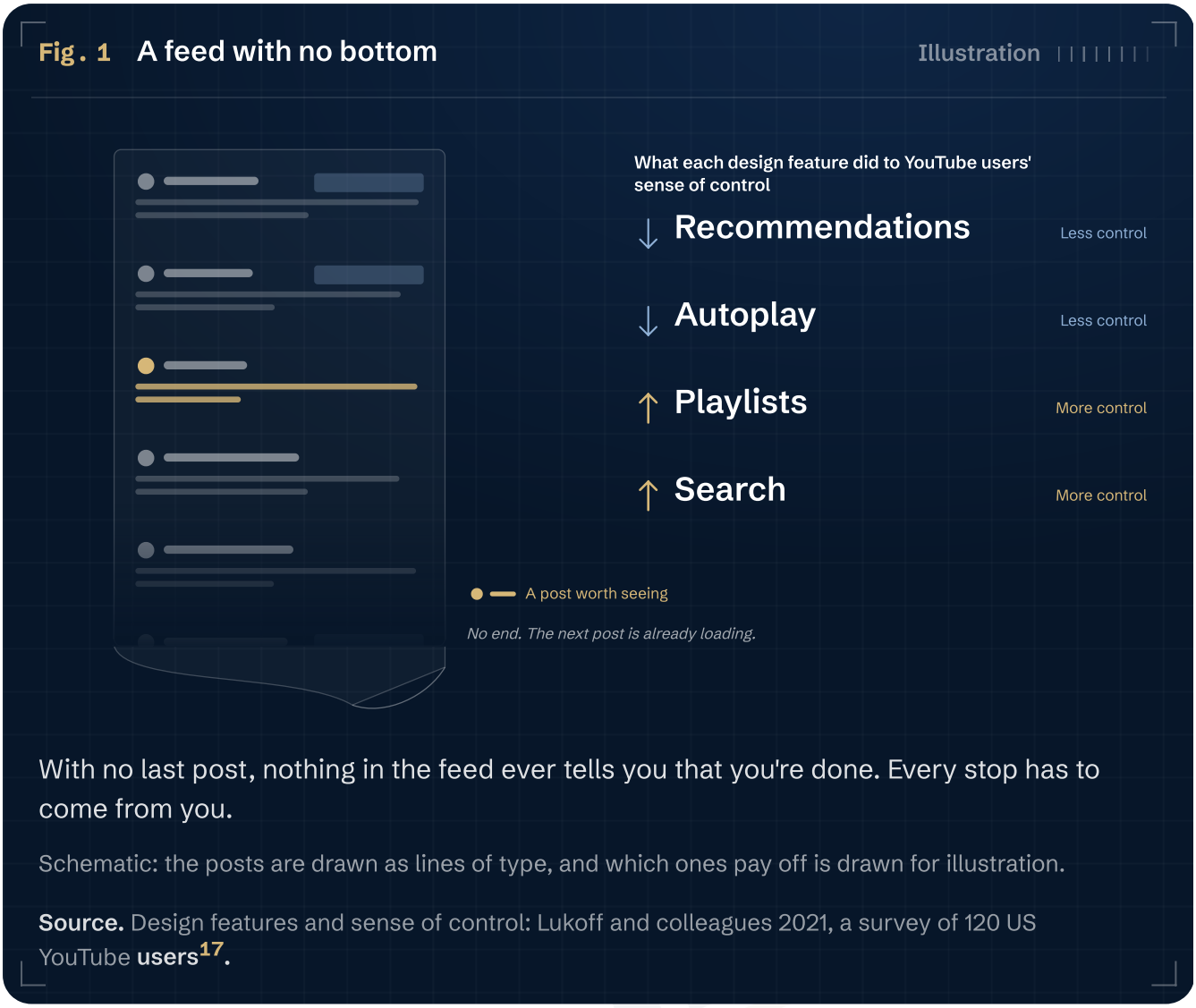
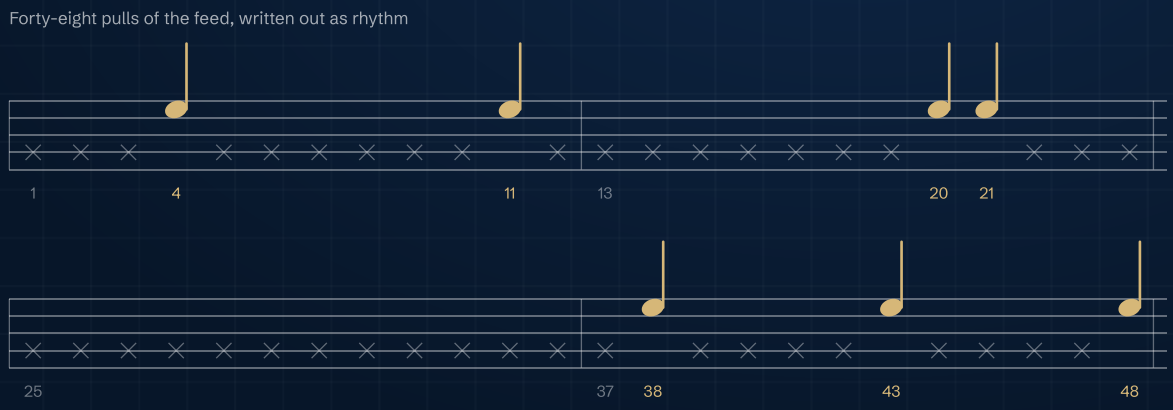


Figure 1. A feed drawn as a ribbon of type. With an end, the strip stops and says so. Without one, it runs off the page and keeps moving, and now and then a post pays off (gold). Beside it, the design features YouTube users said reduced or supported their sense of control. Switch between the two feeds to compare them.

Then there's the way the rewards arrive. Pulling down to refresh a feed, or flicking to the next video, is a small action that sometimes brings something worth having and usually doesn't. You can't tell which pull will pay. Animal learning research established decades ago that rewards delivered on an unpredictable schedule produce some of the most persistent behavior known, behavior that keeps going long after the rewards have become rare[18]. Research on the dopamine system shows part of why. Dopamine neurons respond most strongly to rewards that are better than expected[19], and in monkeys, a slower dopamine response built up during the wait for a reward and was largest when the outcome was most uncertain[20]. Not knowing is part of the draw.

Fig. 2 The pull-to-refresh as an irregular rhythm — Illustration



Pulls	Worth having	Longest wait
48	7	16

Nothing in the pattern tells you when the next good one is coming, so there's never a natural place to stop.

Schematic: the pattern of pulls is drawn for illustration, not measured. A cross is a pull that brought nothing new; a gold note is one that brought something worth having.

Source. Rewards on an unpredictable schedule, after Ferster and Skinner **1957**[18]; people timing their posts the way reward learning predicts, in more than one million posts, after Lindström and colleagues **2021**[21].

Figure 2. Forty-eight pulls of a feed written out as a line of percussion: a cross for a pull that brought nothing new, a gold note for one that brought something worth having. The good ones come unevenly, sometimes two together and sometimes after a long wait, so there's never a natural place to stop. Pull one at a time to watch the pattern refuse to settle. The pattern is drawn for illustration.

Social media adds a reward that matters more to people than almost anything: other people's approval. Björn Lindström and colleagues analyzed more than one million posts by more than 4,000 people on several social media platforms. People spaced their posts the way reward learning predicts, in a pattern that got them the most likes for the effort of posting, and an online experiment with 176 people confirmed that the likes were driving the behavior[21]. In a brain-imaging study, teenagers shown photos that appeared to have many likes were more likely to like those photos themselves, and the photos produced more activity in brain regions involved in reward[22]. Likes, replies and new followers arrive unpredictably too, which puts them on the same schedule as the refresh.

Over time, a behavior repeated in the same setting stops needing a decision. Wendy Wood and Dennis Rünger's review describes how behavior repeated in a stable context comes to be triggered by that context with little reference to current goals[23], and stress pushes the balance further toward habit and away from deliberate choice[4]. A phone is used in more contexts, more times a day, than almost anything else a person does. Each one becomes a trigger: the alarm, the commute, the queue, the lift, the toilet, the end of a meeting, the sofa, the bed. By the time someone decides to cut down, the habit has thousands of starting points.

This is why competence at work doesn't transfer. At work, the conditions do much of the controlling for you. At 11 pm, alone, tired and holding the phone, control depends entirely on the prefrontal cortex, and that is the system stress and sleep loss weaken first[3]. One of our clients, a tech lead in the United States who came to us for porn and social media after about ten years of trying, described what the habits had cost: “So these were challenges that were having an effect on my day-to-day life, my relationships, my ability at my job.” Capable people lose to the feed not because they lack discipline but because the feed meets them where discipline has the least help.

What this means in practice

Don't plan to resist the feed at the moment you're scrolling it. Plan to meet it less often: fewer triggers, more distance between you and the app, and a decided response for the moments that are left. The rest of this paper sets out the evidence for each.

Section 04

Why do I keep picking up my phone without thinking?

In brief

Because picking up the phone has become a habit triggered by your surroundings and your feelings, not a decision. Most checks are short, so you don't notice them, and people check about twice as often as

they think. The fix is to change the triggers and to notice the reach before it becomes a session.

You pick up your phone without thinking because, after thousands of repetitions, the reach is triggered by where you are and how you feel, not by a decision. A pause, a notification, a flicker of boredom or unease is enough. Most of these checks are so short that they don't register as using the phone at all, which is why people consistently underestimate how often they do it. The habit is real, it's measurable, and it can be changed, but only once you can see it.

The clearest measurement comes from a study by Sally Andrews, David Ellis and colleagues, who installed an app that logged every use of the phone for two weeks and also asked 23 young adults to estimate their use. On average the phones were used 84.68 times a day. The same people estimated 37.20. Their estimates of total time were closer, 4.12 hours against 5.05 hours logged, but their estimates of how many times they picked the phone up were not, and 55% of all uses lasted less than 30 seconds. Use was higher in the afternoon and evening than in the morning and at night[1]. In other words, people roughly know how long they spend on their phones, but most of the times they reach for it don't register at all. Those are the moments a habit is made of.

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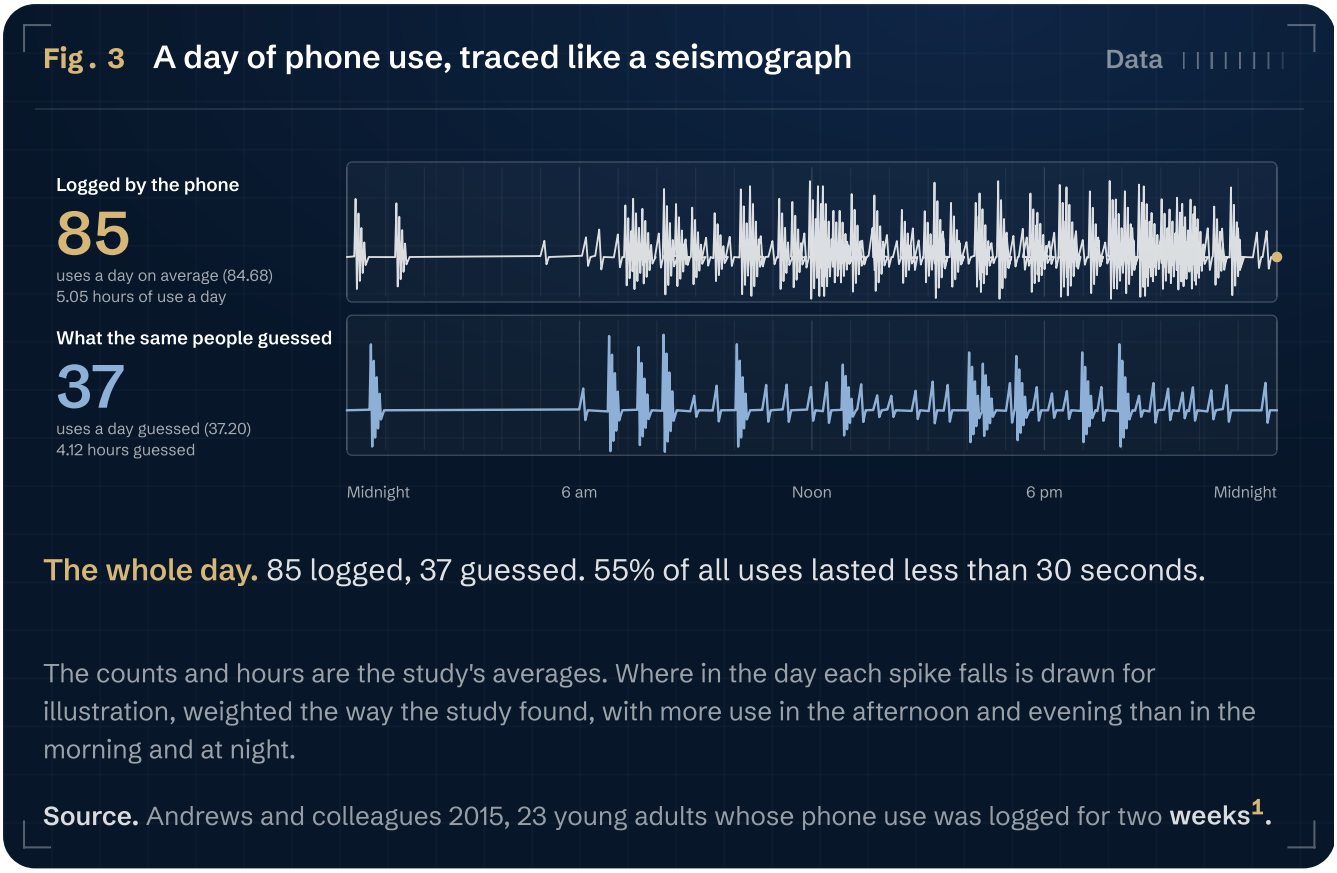


Figure 3. One day of phone use drawn as two channels on a strip of recording paper: the uses the phones logged, and the uses the same people guessed they made. Each spike is one use; most are short, a few run on. The counts and hours are the study's averages. Where in the day each spike falls is drawn for illustration, weighted the way the study found. Move the slider to read the strip up to any hour.

The triggers come from outside and inside. Outside triggers are the phone's own signals: a buzz, a sound, a banner, a red badge on an icon. A notification doesn't need to be answered to cost something. In a laboratory study by Cary Stothart and colleagues, simply receiving a notification during an attention task disrupted performance about as much as actually using the phone for a call or a text[24]. The habit becomes so strong that people feel signals that aren't there. In a survey of medical staff at one hospital, 115 of 169, or 68%, had experienced phantom vibrations, feeling the phone buzz when it hadn't; 13% felt them every day[25]. The body has learned to listen for the phone.

Inside triggers are feelings: boredom, restlessness, the small discomfort of a hard task, the moment of loneliness in a quiet room, the unease of waiting. The phone relieves each of them in seconds, and relief is a reward. A habit that relieves discomfort gets triggered by discomfort, which is why people often find themselves reaching for the phone at exactly the point a piece of work gets difficult. Section 9 looks at boredom in detail. The pattern also runs the other way. In an experiment by Russell Clayton and colleagues, people who were separated from their own iPhone and could hear it ringing while they worked on a word puzzle showed rises in heart rate, blood pressure and anxiety, and did worse on the puzzle[26]. For a heavy user, being cut off from the phone can itself become the discomfort that the phone relieves.

Each short check matters more than its length suggests. A habit is strengthened by repetition in a stable context[23], and 85 short checks a day is about 600 repetitions a week, more than almost any other behavior in a person's life. Many short checks also become long ones. The reach is automatic, but what follows it is a feed designed to hold attention, and the 30-second check that ends in a 30-minute session starts in exactly the same way as the one that doesn't.

Two kinds of change work against a habit like this. The first removes or weakens the triggers: notifications off or batched, the phone out of sight and out of reach in the places the habit is strongest, the apps that cost most moved off the home screen or off the phone. Strategies that change the situation before an urge begins are more effective than strategies for resisting an urge already under way[8]. The second is noticing. Jeffrey Quinn and colleagues compared the strategies people used to control strong and weak habits and found that vigilant monitoring, watching for the moment the habit starts and telling yourself not to do it, was the most effective for strong habits, and that it worked by strengthening inhibitory control[27]. Noticing the reach is the skill. Once someone can catch the hand on the way to the pocket, they have a moment in which to choose.



What this means in practice

Before trying to cut down, find out how often you actually pick the phone up, from the phone's own count rather than your estimate. Then remove the outside triggers you can, and practice catching the reach itself: the hand moving toward the pocket, before the screen is on.

Section 05

What does scrolling do to your attention and your brain?

In brief

Constant notifications and checking pull attention away from the task in hand and make focus harder to hold, and people who batch their notifications feel more attentive and less stressed. There is no good evidence that scrolling permanently damages the brain. Some well-

known claims about multitasking and attention haven't held up when tested again.

The clearest effect of heavy phone use on attention is the cost of interruption. Every notification and every check pulls attention off what you were doing, and it takes time to come back. When the interruptions come all day, attention never fully returns. Experiments show that people with notifications on are more inattentive than the same people with them off, and that batching notifications into a few set times a day makes people feel more attentive and less stressed. What the evidence doesn't show is lasting damage. Claims that scrolling permanently shortens attention spans or rewires the brain go beyond what has been measured.

Interruptions cost more than the time they take. In a study by Gloria Mark and colleagues, people whose work was interrupted finished it faster, but at a price: they reported more stress, more frustration, more time pressure and more effort[28]. People compensate for interruptions by working harder, and they feel it. Kostadin Kushlev and colleagues tested what notifications do over a longer stretch. They asked 221 people to spend one week with alerts on and the phone kept within reach, and another week with alerts off and the phone kept away. In the week with alerts on, people reported more inattention and hyperactivity, the symptoms associated with attention deficit hyperactivity disorder, in a sample of people from the general population, and more inattention in turn predicted lower productivity and well-being[29].

The most useful experiment on what to do about it comes from Nicholas Fitz and colleagues, who randomly assigned 237 smartphone users to receive notifications as they arrived, in batches three times a day, or not at all. People whose notifications were batched three times a day felt more attentive, more productive and more in control, were in a better mood and had lower stress than people who received them as usual. Turning notifications off altogether didn't produce the same benefits: people with no notifications at all reported more anxiety and more fear of missing out[10]. The lesson isn't that every alert must go. It's that alerts should arrive when you've decided to look, not whenever someone else decides to send one.

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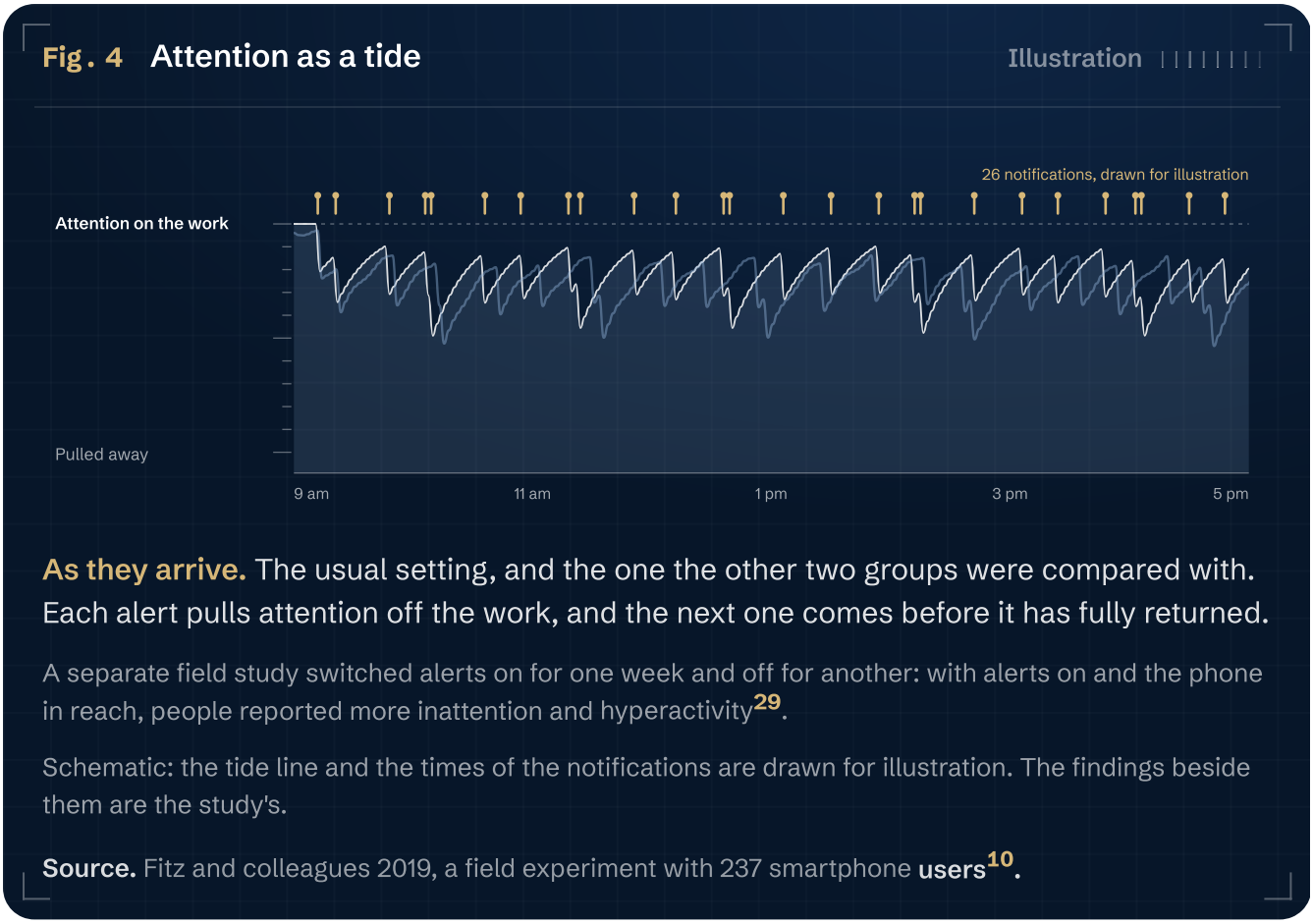


Figure 4. Attention on the work in front of you drawn as a tide over a working day. Each notification (gold pin) pulls it out, and it takes a while to come back in. With alerts as they arrive, it never fully returns; batched three times a day, it has time to recover between them; with none at all, the level holds but the surface is restless. The tide line and the times of the alerts are drawn for illustration. The findings for each setting are the study's.

The research on whether heavy media use changes attention more permanently is less settled, and it is a good example of how a striking early finding can shrink under further testing. In 2009, Eyal Ophir, Clifford Nass and Anthony Wagner reported that people who habitually used many media at once were more easily distracted by irrelevant information and, surprisingly, worse at switching between tasks[30]. The finding was widely reported. But when Wisnu Wiradhany and Mark Nieuwenstein tried to replicate it in two studies, only 5 of 14 tests showed a significant difference between heavy and light media multitaskers, only 2 held up in a stricter analysis, and a meta-analysis of the published effects found an association that was weak and lost its significance once small-study bias was corrected[31]. A later review by Melina Uncapher and Anthony Wagner concluded that the balance of evidence suggested heavier media multitaskers did worse in a number of areas of thinking, mostly those involving sustained attention, while noting that many studies found no difference at all and that the direction of cause was unknown[32]. People who are already more distractible may simply use more media.

The same caution applies to claims about dopamine. It's true that dopamine is involved in learning from rewards, that it responds most to rewards that are better than expected[19], and that uncertainty itself can drive a dopamine response[20]. That explains why an unpredictable feed is good at building a habit. It doesn't show that scrolling damages the dopamine system, lowers dopamine levels, or needs a dopamine detox to undo. Those claims are common online and they aren't supported by measurements in people who scroll. What is supported is more ordinary: a habit learned through reward, triggered by context, and harder to control under stress and tiredness[3, 23].

One idea from addiction research does help explain why the urge can outlast the pleasure. Kent Berridge and Terry Robinson distinguish wanting, the urge to get a reward, from liking, the pleasure of having it, and show that the two can come apart: wanting can grow stronger while liking stays the same or fades[33]. Their theory was developed for drugs, and it hasn't been tested directly for phone use, so we use it only as a description that many heavy users recognize: the urge to check is strong, and the checking itself often isn't enjoyable. Our client in the Netherlands described the feeling after he stopped, looking back at the hours he had spent napping or scrolling: “Now it feels like a punishment. I'm so energized. I'd rather go for a walk, rather go read a book, work out, do some other stuff that gives value to my life, check up on my business, think creatively instead of wasting my time taking naps or scrolling on my phone.”

Attention can also be trained back. Marc Berman and colleagues found that a walk in a natural setting, or even looking at pictures of nature, improved performance on a demanding attention task compared with a walk in a city or pictures of streets[34]. Michael Mrazek and colleagues found that two weeks of mindfulness training improved working memory and reading comprehension scores on a graduate admissions test, and reduced mind wandering[35]. Neither study was about phones. Both show that attention is something you can rebuild with deliberate practice, which is why the program in Section 14 puts walks, exercise and meditation in the first weeks, before the phone habit is tackled directly.

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Section 06

Does having your phone nearby make it harder to think?

In brief

Possibly, but less than a famous 2017 study suggested. That study found people did better on memory tests with the phone in another room, but a direct replication found no difference and the meta-analyses disagree. What's clearer is that a phone in view pulls at your

attention and makes conversations worse, and that putting it in another room is a cheap way to remove a trigger.

The honest answer is that it might, a little, but the evidence is much weaker than its reputation. A 2017 study by Adrian Ward and colleagues found that people did better on tests of working memory with their phone in another room than with it on the desk, even when the phone was face down and silent. That finding, often called the brain drain effect, was widely reported. Since then, a direct, pre-registered replication found no difference, and three meta-analyses have reached three different conclusions. What is better supported is that a visible phone makes people feel more distracted and makes face-to-face time worse. Either way, putting the phone in another room costs nothing, and it removes the trigger.

Ward's study had two experiments. In the first, 520 people were randomly assigned to leave their phone on the desk face down, in a pocket or bag, or in another room while they did tests of working memory and fluid intelligence. People did better with the phone in another room than with it on the desk. Most of them hadn't noticed any effect: asked how much they'd thought about their phone, the most common answer was not at all, and 75.9% said its location hadn't affected their performance at all. In the second experiment, with 275 people, the operation span score, a measure of working memory, was 4.67 points higher with the phone in another room than on the desk. The phone in a pocket or bag fell in between and wasn't significantly different from either. The effect was largest in the people most dependent on their phones[36].

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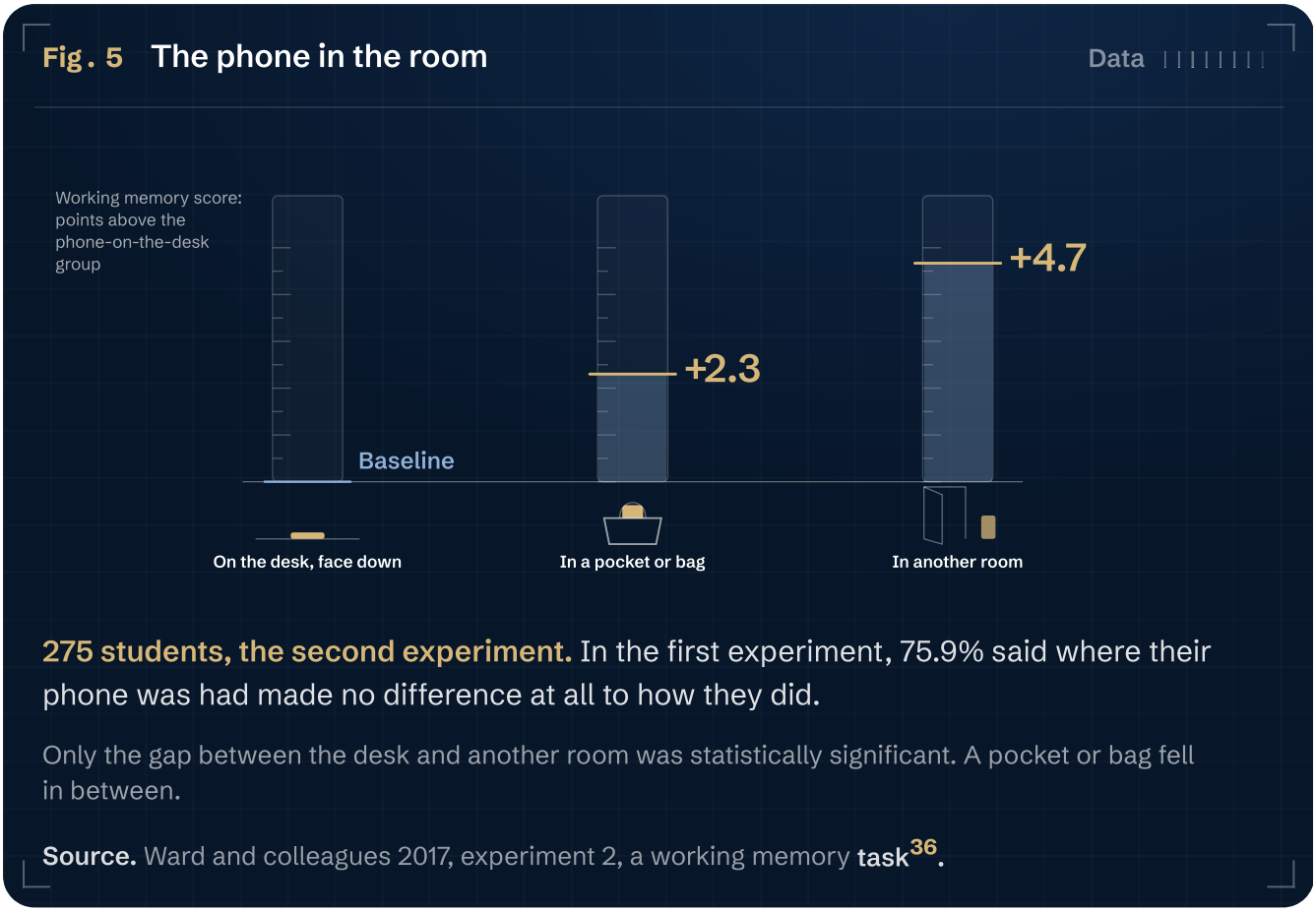


Figure 5. The 2017 study drawn as three tide gauges, one for each place the phone was kept, with the water as high as the working memory score rose above the phone-on-the-desk group. Then the record since: one mark per study, filled where it found an effect, open where it found none, half filled where the result was mixed. Switch between the two views.

Later studies tested the idea again. Bill Thornton and colleagues, before Ward, had found that a phone in view was distracting on the harder of the tasks they set, in two studies[37]. Niklas Johannes and colleagues found that a visible phone was enough to make people feel more vigilant and distracted, more so when notifications were on, but that it didn't affect their ability to stop a response on a laboratory test[38]. Matthias Hartmann and colleagues found no overall effect of a phone on the desk on short-term or prospective memory[39]. And Alessandra Ruiz Pardo and John Paul Minda ran a pre-registered direct replication of Ward's second experiment and found no difference by where the phone was, on working memory or on a test of response inhibition[40].

The meta-analyses don't settle it. Tobias Böttger and colleagues pooled 43 effects from 22 studies and found a significant negative effect of a phone's presence overall, with wide variation between studies[41]. Douglas Parry pooled studies covering 7,093 people and found a significant effect only on working memory, smaller than originally theorized, and noted that many of the studies were underpowered and their results varied widely[42]. Andree Hartanto and colleagues pooled 166 effects from 33 studies of 4,368 people and found no effect at all, with a pooled effect size close to zero (d =

-0.02), and no stronger effect in people more dependent on their phones[43]. The fairest reading is that if a phone's mere presence harms thinking, the effect is small and unreliable, and nobody should expect to think much better just by moving the phone across the room.

The evidence is clearer about other people. In an experiment by Andrew Przybylski and Netta Weinstein, pairs of strangers who talked with a phone lying nearby reported less closeness and lower conversation quality than pairs with a notebook in the same place, and the difference was largest when the topic was meaningful[44]. Ryan Dwyer and colleagues asked more than 300 people to share a meal with friends or family, with their phones either on the table or put away. With phones on the table, people felt more distracted and enjoyed the meal less[45]. These are short-term effects, measured in a single conversation or meal, but they match what many heavy users say about their evenings.

So why do we still tell clients to put the phone in another room? Not because of the brain drain effect, which may not exist, but because of everything in Section 4. A phone within reach is a trigger that will be acted on dozens of times a day, and a phone in another room isn't. Distance doesn't need to make you smarter to work. It only needs to put a decision between the urge and the screen, and in the time it takes to walk to another room, the urge often passes.

Section 07

Why do I scroll in bed, and what does it do to my sleep?

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In brief

Bed is where the day's last bit of control runs out and the phone is still within reach, so scrolling pushes bedtime later. Using a device at bedtime is consistently linked to less sleep, worse sleep and more tiredness the next day, and even having the phone in the bedroom is linked to worse sleep. The single most effective change most people can make is to charge the phone in another room.

People scroll in bed because bed is where the last of the day's self-control runs out while the phone is still in reach, and because a feed has no natural stopping point to tell them it's time to sleep. It also feels like rest, which makes it easy to justify. The research on what it does is consistent: using a phone or tablet at bedtime goes with less sleep, worse sleep and more sleepiness the next day, and

even having one in the bedroom without using it is linked to worse sleep. Most of that research is observational, so it can't prove cause on its own, but the pattern is strong and the change it points to is simple: the phone sleeps in another room.

The largest summary of the evidence comes from Ben Carter and colleagues, who combined 20 studies of 125,198 children and adolescents with a mean age of 14.5. Using a portable screen device at bedtime went with about twice the odds of inadequate sleep (odds ratio 2.17), higher odds of poor sleep quality (1.46) and higher odds of daytime sleepiness (2.72). Children who had a device in the bedroom but didn't use it at bedtime also had higher odds on all three: 1.79, 1.53 and 2.27[46]. An earlier review of 67 studies of school-aged children and adolescents found that screen time was adversely associated with sleep in 90% of them, mostly through later bedtimes and less total sleep, while noting that the studies couldn't establish cause[47].

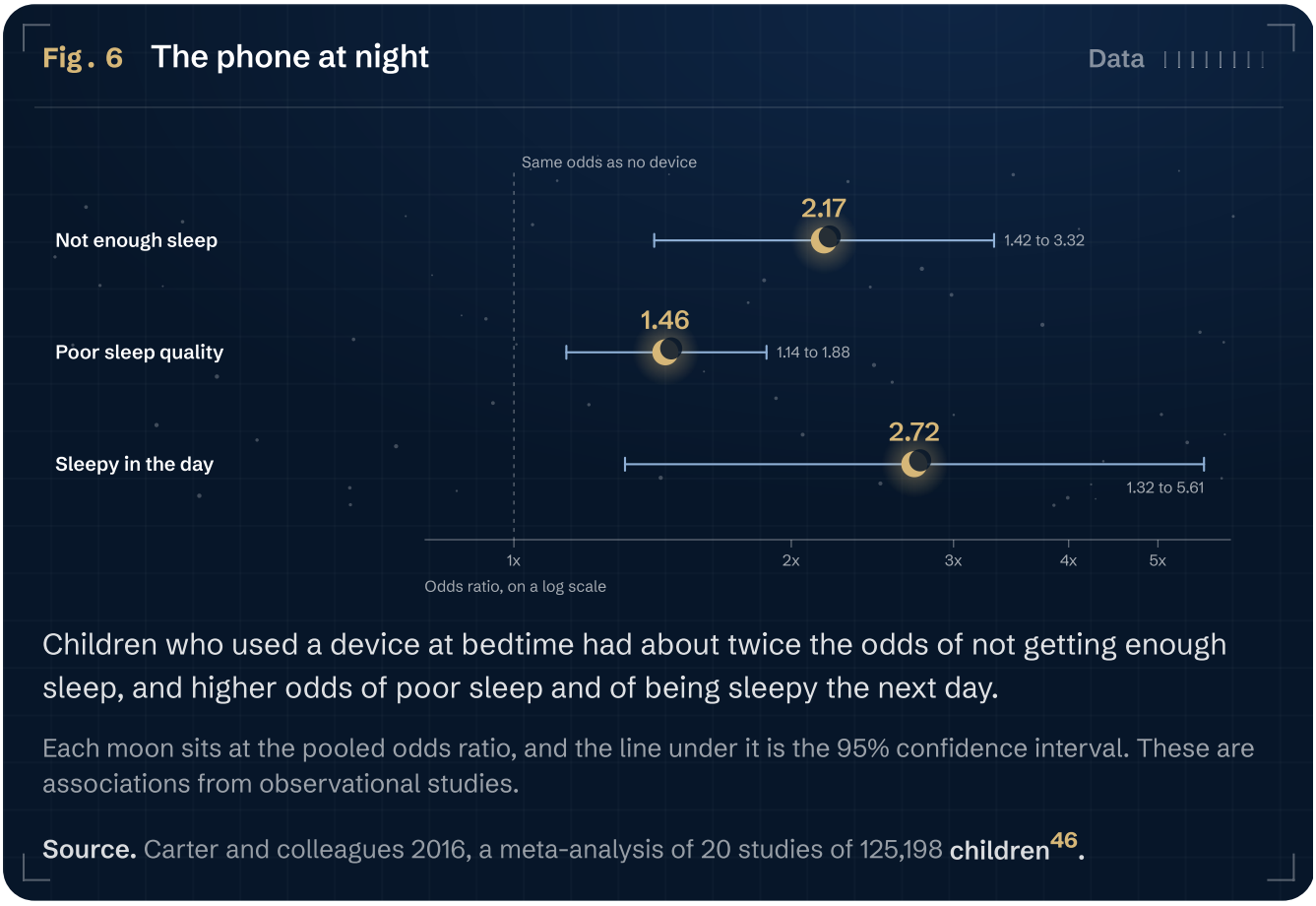


Figure 6. Odds of three sleep problems in children who used a device at bedtime, and in children who had one in the room but didn't use it, compared with children who had no device at bedtime. Each moon sits at the pooled odds ratio, and the horizon line under it is the 95% confidence interval, on a log scale. Switch between the two groups to watch the moons move.

Adults show the same pattern. In a survey of 844 adults in Belgium, six out of ten took their phone to the bedroom, and using it after lights out went with worse sleep, more insomnia and more tiredness the next day[48]. In a national sample of 1,788 US adults aged 19 to 32, the people in the top quarter for time spent on social media had nearly twice the odds of sleep disturbance of those in the bottom

quarter (adjusted odds ratio 1.95), and the people in the top quarter for how often they checked had nearly three times the odds (2.92)[49]. That second figure matters: it was how often people checked, more than how long they spent, that went most strongly with poor sleep.

There are at least three ways the phone could do this. The first and probably largest is simple displacement: time spent scrolling is time not spent asleep, and an endless feed makes it easy to keep going. Floor Kroese and colleagues named the pattern bedtime procrastination, failing to go to bed at the time you intended when nothing is stopping you, and found in a survey of 177 people that it went with lower self-control and with getting too little sleep[50]. The second is arousal: a message, an argument or a worrying headline at midnight wakes the mind up just when it needs to wind down. The third is light. In a carefully controlled laboratory study, young adults who read on a light-emitting tablet for about four hours before bed took longer to fall asleep, made less of the sleep hormone melatonin in the evening, had their body clock pushed later and felt less alert the next morning than when they read a printed book[51]. Four hours is more than most people spend reading in bed, so the light effect from a short session is probably smaller than the effect of the lost time.

Lost sleep then feeds the habit. After a night without sleep, the brain's emotional center reacted more strongly to unpleasant images, and its connection with the prefrontal cortex, which normally keeps it in check, was weaker[52]. A tired person is more reactive and less able to override an impulse, which makes the next day's scrolling more likely, and the next night's bedtime later. The loop runs on its own once it starts.

That's why sleep comes first in the program. Section 14 describes it in detail, but the order is the point: fixed sleep and wake times on Day 3, and on Day 5 the phone leaves the bedroom for the night, ten days before scrolling itself stops. Our client in the Netherlands noticed the change in his mornings first: “Now I happily wake up at 5:30, 6:00 a.m. I get out of bed and start working, start working out, take some time for myself to meditate. So my day-to-day has gotten really structured.” A phone charging in the kitchen can't be scrolled in bed, and it can't be the first thing you reach for in the morning either.

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Why the phone leaves the bedroom first

Charging the phone in another room removes the trigger, the time and the light at once, and it protects the sleep that every other change depends on. Use a cheap alarm clock if the phone was your alarm. It is the single change we ask every client to make in the first week.

Section 08

Does social media cause anxiety and depression?

In brief

The honest answer is that researchers disagree. Teenage depression and loneliness rose as smartphones spread, and heavy use goes with worse mental health, but across whole populations the average link is small, it differs a lot from person to person, and low mood can drive use as well as follow it. Short experiments that cut use show small improvements. Your own experience is the best guide to whether it's hurting you.

Nobody can yet say for certain whether social media causes anxiety and depression, and serious researchers have reached different conclusions from the same data. One side points to the timing: rates of depression, self-harm and loneliness among teenagers rose sharply in many countries in the 2010s, as smartphones and social media spread. The other side points to the size: across large populations, the average link between social media use and well-being is small, and it varies a lot from one person to the next. Both are true at once. For an individual, the useful question isn't whether social media harms people on average, but whether it's harming you, and that's something you can test.

The case for concern starts with the trends. Jean Twenge and colleagues analyzed national surveys of 506,820 US adolescents and found that depressive symptoms, suicide-related outcomes and suicide rates rose between 2010 and 2015, especially among girls, and that adolescents who spent more time on new media, including social media and phones, were more likely to report mental health problems[53]. Twenge, Jonathan Haidt and colleagues later examined surveys of 1,049,784 teenagers in 37 countries and found that loneliness at school rose between 2012 and 2018 in 36 of them, with nearly twice as many teenagers reporting high levels of loneliness in 2018 as in 2012. Loneliness was higher where and when smartphone access and internet use were higher, while unemployment, income inequality and family size didn't explain the rise[54]. The authors read this as a decline in well-being that began alongside the rise of smartphones. Their own paper states the limit: causation can't be proven from these patterns.

The case for caution starts with the size. Amy Orben and Andrew Przybylski analyzed three large datasets covering 355,358 adolescents, testing many reasonable ways of running the analysis rather than one. The association between digital technology use and well-being was negative but small, explaining at most 0.4% of the differences in well-being between teenagers[55]. Candice Odgers argued in the same period that phones are bad for some teenagers, not all, that the average effects are small, and that the teenagers most at risk online are often the ones already facing difficulties

offline[56]. An umbrella review of 25 reviews by Patti Valkenburg and colleagues found that most of them described the links between social media use and adolescent mental health as weak or inconsistent, while a few described them as substantial and harmful[57]. The same studies, read by different researchers, produced both readings.

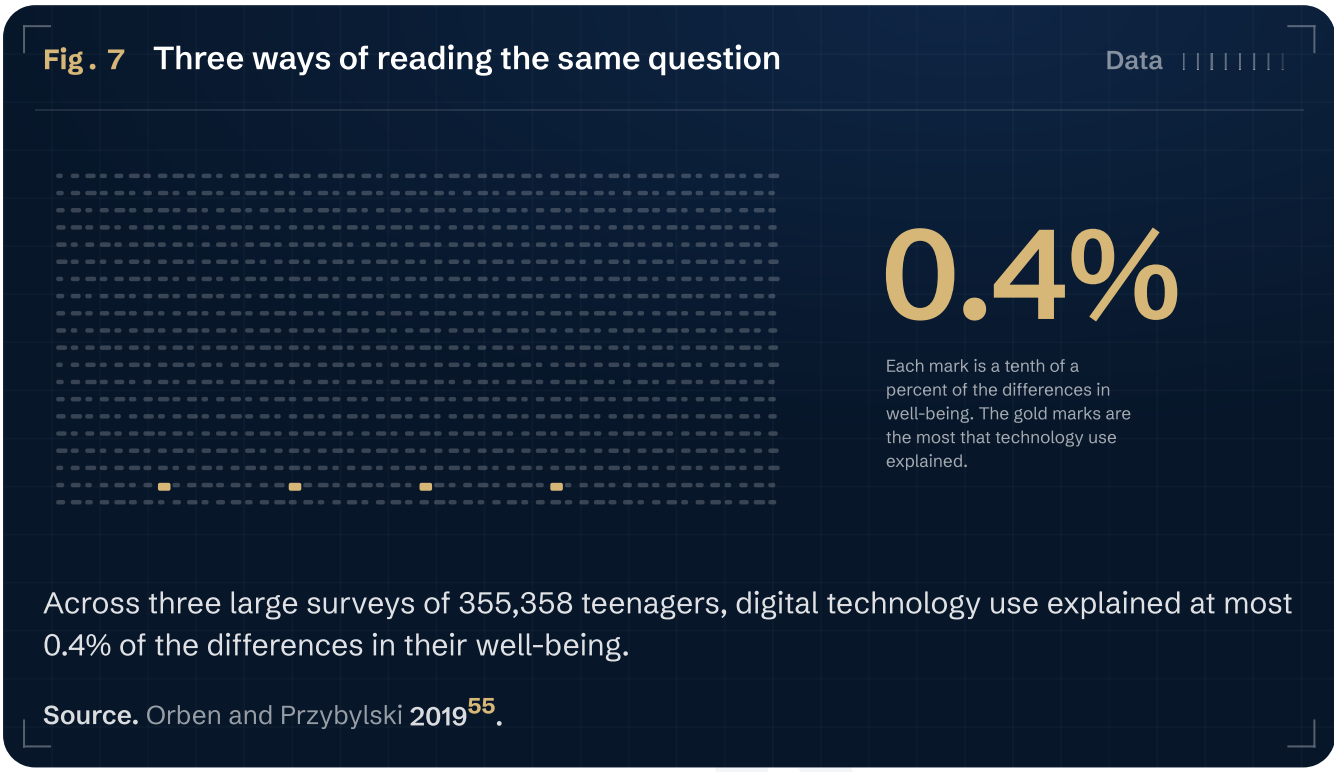


Figure 7. Three views of the debate about social media and well-being. How much it explains: a thousand marks, one for each tenth of a percent of the differences in teenagers' well-being, with the share technology use explained in gold. Teen by teen: a hundred figures, set by how teenagers felt after passive social media use. The trend: the rises over time that the concerned side points to. Each view keeps its own source.

The average hides large differences between people. Ine Beyens and colleagues asked adolescents how they felt six times a day for a week, 2,155 assessments in all, and measured the effect of passive social media use for each teenager separately. Most felt no different afterward (44%) or a little better (46%). About one in ten (10%) felt worse[58]. Orben and colleagues, analyzing data from 84,011 people in the UK, found that the link between social media use and later life satisfaction was strongest at particular ages, which differed between girls (11 to 13 and 19) and boys (14 to 15 and 19). They also found the reverse: lower life satisfaction predicted more social media use a year later[59]. Low mood can drive scrolling as well as follow it.

How people use social media may matter as much as how long. In experiments by Philippe Verduyn and colleagues, being asked to use Facebook passively, scrolling without posting or messaging, led to drops in mood, and in daily life passive use predicted lower mood through envy[60]. Ethan Kross and colleagues texted young adults five times a day for two weeks and found that the more they used Facebook at one point, the worse they felt the next time they were asked, while direct contact with

people didn't have the same effect[61]. In a national panel of 5,208 adults with objective measures of their Facebook activity, more likes, link clicks and status updates went with worse self-reported mental health one year later[62]. But the simple rule that active use is good and passive use is bad hasn't held up across the whole literature: a review of 40 studies and 172 associations found that most didn't support it[63].

Experiments get closer to cause than surveys, and they are reviewed in Section 10. In brief, randomized trials that cut social media use or switched it off for one to four weeks found small improvements in well-being, loneliness, depression or anxiety[64-66], and a review of 21 such studies found mixed results overall[67]. Those are small effects in short trials, mostly in young adults who weren't selected because they had a problem. They don't show that social media is the main cause of anyone's depression. They do show that, for many people, using it less makes them feel a little better, and almost nobody feels worse for it.

For the person reading this, two things follow. First, if your scrolling sits alongside weeks of low mood, anxiety, poor sleep or thoughts of harming yourself, treat those directly. See a doctor, and if you're in danger, contact a crisis line: 988 in the US, Samaritans on 116 123 in the UK and Ireland, Tele-MANAS on 14416 in India. Cutting down on scrolling may help, but it isn't treatment for depression. Second, you don't need the research to settle the argument before you act. The trials in Section 10 suggest a few weeks of much lower use is a safe experiment, and your own record of how you feel during it will tell you more about your case than any population average.

Section 09

Why do I reach for my phone when I'm bored?

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In brief

Because most people find even a few minutes with nothing to do surprisingly uncomfortable, and the phone ends that discomfort in a second. People who get bored easily are more likely to use their phones in a problematic way. The answer isn't to never be bored, but

to fill the day so there are fewer empty gaps, and to get used to the ones that are left.

You reach for your phone when you're bored because boredom is uncomfortable, and the phone ends it faster than anything else. Most people dislike being left alone with their thoughts more than they expect to. Before phones, the gaps in a day were filled with looking around, thinking or simply waiting. Now they can be filled instantly, every time, and each time the relief teaches the habit again. The more prone someone is to boredom, the more likely their phone use is to become a problem.

A series of 11 studies by Timothy Wilson and colleagues measured how people cope with having nothing to do. Participants were asked to sit alone in a bare room for 6 to 15 minutes and simply think, with no phone, no book and nothing to write with. Most didn't enjoy it: in the first studies, 89% said their mind had wandered and 57.5% found it hard to concentrate. When some were asked to do the same at home, 32% admitted they had cheated. In the best-known study in the series, people were first given a mild electric shock and asked whether they'd pay to avoid another. Those who said they would were then left alone for 15 minutes, with a button that would shock them again. Twelve of the 18 men (67%) and six of the 24 women (25%) pressed it at least once[68]. Rather than sit with their own thoughts, they chose a shock they had just said they'd pay to avoid.

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Figure 8. The empty room drawn as a clock face set at fifteen minutes, and beside it every participant in the shock study, one figure each. The gold figures gave themselves at least one electric shock rather than sit with their thoughts. Press the button to sit with nothing for fifteen seconds.

The phone is the shock button everyone carries, except that it's pleasant. Jon Elhai and colleagues surveyed 298 college students and found that proneness to boredom predicted problematic smartphone use, though not how often people used their phones, and that boredom proneness explained part of the link between depression and anxiety and problematic use[69]. Their reading was that students who were depressed or anxious found it hard to focus on their work, got bored, and turned to their phones for relief. That's a small, cross-sectional study, so it can't show cause, but the pattern fits what clients describe: the phone comes out when the task in front of them is dull, difficult or empty, and the scroll is a way out of the feeling, not toward anything in particular.

Our client in the Netherlands put it plainly. The phone filled every moment in between, on the toilet, in any ten minutes without a task. A gap in the day had become a trigger. Pshem, a founder and social media operator in Poland who came to us for gaming, doomscrolling and procrastination, described what changed when those gaps stopped going to the phone: “My mental clarity is on point. I can focus on my goals.”

There are two responses to boredom, and a method needs both. The first is to have fewer empty gaps in the first place. A day with fixed anchors, a morning routine, exercise, meals, a planned evening, leaves fewer stretches with nothing in them, and a demanding pursuit gives the mind something to

return to. Animal research shows that an enriched environment, with novelty, exercise, social contact and challenge, reduced relapse-like behavior with drugs[70], and Warren Bickel and colleagues describe addiction as an excessive value placed on a reward that comes immediately, at the expense of others, with building those other rewards as one route out[71]. The second response is tolerance: getting used to a few minutes of nothing without reaching for relief. That is a skill, and it can be practiced. Meditation trains it directly, and a walk without the phone is a gentle version of the same thing[34, 35].

What this means in practice

Look at where your scrolling happens and you'll usually find gaps: waiting, transitions, the end of a task, the evening with nothing planned. Fill the ones you can with something you've chosen in advance, and practice sitting through the rest. A minute of boredom passes. An hour of scrolling usually doesn't.

Section 10

Do app limits, grayscale and social media breaks work?

In brief

Cutting down and taking breaks do help a little, on average: randomized trials of limits and breaks from one to four weeks found small improvements in well-being, loneliness, depression or anxiety. But the effects are modest, a review found them mixed, and most limits only work if they're hard to override. Limits work best as one part of a plan, not as the whole plan.

They help, but less than people hope, and they work best when they're hard to undo. In randomized trials, holding social media to a set time each day or switching it off for one to four weeks produced small improvements in well-being, loneliness, depression or anxiety. A review of digital detox studies found the results mixed: some positive, some showing no effect and some negative. Screen-

time limits that can be dismissed with one tap are easy to ignore, and we know of no rigorous trial showing that grayscale on its own reduces scrolling over time. The pattern in the evidence is that limits help as part of a larger change, not as a substitute for one.

Start with what the time is. The figure below sets a waking day as a page of minutes, one mark for each, and lights the minutes from three different studies. In the study of young adults whose phones were logged, total use averaged 5.05 hours a day, about 303 minutes, close to a third of a 16-hour waking day[1]. In the largest deactivation experiment, switching Facebook off for four weeks freed about an hour a day[65]. And in one limiting trial, students held three apps to 10 minutes each a day, half an hour in all[64]. These are different groups of people, so the figures don't add up, but together they show the scale. The phone is not a few minutes here and there. For many people it's the largest single use of their waking time after work and sleep.



Figure 9. Sixteen waking hours set as a page of type: each line is an hour and each mark a minute. Each view lights the minutes one study measured: phone use logged in young adults, the time freed by switching Facebook off for four weeks, and the half hour a day three apps were held to in a limiting trial. Where in the day the minutes fall is drawn for illustration, and the three studies aren't added together.

The best-known limiting trial is by Melissa Hunt and colleagues. After a week of baseline monitoring, 143 students at the University of Pennsylvania were randomly assigned either to limit Facebook, Instagram and Snapchat to 10 minutes per platform per day for three weeks, or to use social media as usual. The limited group reported significant reductions in loneliness and depression compared with the control group. Both groups reported less anxiety and fear of missing out than at the start, which the authors put down to the benefit of monitoring their own use[64]. A later trial by the same group found that limiting social media to 60 minutes a day reduced depression in the most depressed participants, and that muting strangers on Instagram and dropping TikTok, on top of limiting time, reduced fear of missing out and social comparison[72]. Who you follow seems to matter as well as how long you spend.

The largest trial is by Hunt Allcott, Luca Braghieri, Sarah Eichmeyer and Matthew Gentzkow, who paid Facebook users to deactivate their accounts for four weeks before the 2018 US midterm elections. Of 2,743 users who received an offer, 1,661 formed the main sample the effects were measured in. Deactivation freed about 60 minutes a day, and much of that time went offline: to watching television alone, to other activities on their own, and to time with friends and family. It raised a combined index of well-being by 0.09 standard deviations, a small effect, and it also lowered people's knowledge of the news and their political polarization. Several weeks after the experiment, people who had deactivated were still using the Facebook app less than the control group, by about 11 minutes a day, or 22%. The authors noted that the effects on well-being were much smaller than correlational studies would suggest[65].

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Fig. 10 The experiments, set out as a tide table Data

Study	People	What changed	How long	What it found
Tromholt, 2016	1,095 Facebook users	Quit Facebook	1 week	**Higher life satisfaction, better mood**
Hunt and colleagues, 2018	143 students	Three apps held to 10 minutes each a day	3 weeks	**Less loneliness and depression**
Allcott and colleagues, 2020	1,661 Facebook users	Facebook deactivated	4 weeks	**A small rise in well-being**
Lambert and colleagues, 2022	154 adults	A one-week break from social media	1 week	**Better well-being, less depression and anxiety**

Tromholt, 2016. A week off Facebook raised life satisfaction and improved people's emotions, more so for heavy users, passive users and people who envied others on it[73]. As in every trial here, people knew whether they had quit, so their expectations may explain part of the effect.

A review of 21 studies with 3,625 people, 12 of them randomized trials, found the results of digital detox mixed: some positive, some showing no effect and some negative.

Source. The four trials, in the order **shown**[64-66, 73]. Review: Radtke and colleagues **2021**[67].

Figure 10. Four randomized trials that took social media away or cut it down, one row each: who ran it, how many people, what changed, how long it lasted, drawn as a length of tide line with one swell for each week, and what it found. Choose a row to read its detail. The review that pooled the field, and found the results mixed, is noted underneath.

Two shorter trials point the same way. Morten Tromholt randomly assigned 1,095 Facebook users in Denmark either to take a week off or to keep using it; those who took a break reported higher life satisfaction and more positive emotions, especially heavy users, passive users and those who envied others on Facebook[73]. Jeffrey Lambert and colleagues randomly assigned 154 adults with a mean age of 29.6 either to stop using Facebook, Instagram, Twitter and TikTok for a week or to carry on as usual; after a week, the break group had better well-being and lower depression and anxiety scores[66]. In none of these trials could participants be blind to whether they had quit, so expectations may explain part of what they reported. And Theda Radtke and colleagues, reviewing 21 studies

with 3,625 participants, 12 of them randomized trials, found the effects of digital detox mixed across well-being, relationships, self-control and performance: some studies found benefits, some found none and some found harms[67].

Read together, the trials suggest three things. First, using social media less is a safe thing to try, and on average it makes people feel a little better. Second, the effects are small and short-term in the trials, which lasted at most four weeks and mostly involved young adults without a diagnosed problem. Third, limits are hard to keep without help. Allcott and colleagues found in a separate experiment that letting people set limits on their own future screen time substantially reduced their use, which suggests that many people want limits they can't hold on their own[7]. The phrase that matters is set in advance. A limit chosen calmly in the morning, enforced by something the person can't easily switch off in the evening, is a different tool from a reminder that pops up and is dismissed.

That's why limits come in the middle of the program, not at the start or as the whole of it. Section 14 sets out the order: the ground first, then the stop, then the environment, with blockers that hold social media to a set window each day as one part of a reset that also covers where the phone lives, the bathroom, the bed and the layout of the room. A limit on its own changes one thing. Section 3 explained why the habit needs more than that.

Section 11

What happens when you stop scrolling?

In brief

Most people feel restless and keep reaching for the phone for the first days, and the reach fades with time. Many notice an hour or more back in their day, better sleep within a week or two, and less of a pull. The trials suggest small improvements in mood on average, and the time freed has to go somewhere, which is why it pays to decide where in advance.

When you stop scrolling, the first thing most people notice is how often they reach for the phone that isn't there. The reach is a habit, and habits keep firing for a while after the reward stops. Restlessness, boredom and a feeling of missing something are common in the first days. Stopping scrolling has no physical withdrawal, unlike alcohol or some drugs, and there's no medical risk in stopping suddenly. What follows, for most people, is time back, better sleep once the phone leaves the bedroom, and a gradual drop in how often the urge comes.

The research on what people feel when they stop is thinner than the research on what they gain, but some of it is useful. In the notification experiment in Section 5, people with no notifications at all reported more anxiety and more fear of missing out[10], and in the phone separation experiment in Section 4, being unable to answer a ringing phone raised heart rate, blood pressure and anxiety[26]. Those are signs of the same thing: a habit that has learned to expect the phone, protesting when it doesn't arrive. That discomfort fades as the expectation fades. The research on habits and extinction shows how. A learned response weakens when the trigger keeps arriving without the reward, but the old learning isn't erased; new learning is laid over it, and that new learning is tied to the setting in which it happened[74]. That's why the urge can come back in a place or a mood where you used to scroll, even after weeks without it.

The gains are better measured. In the Facebook deactivation trial, people got about an hour a day back, and they spent much of it offline, including more time with friends and family. Their well-being rose a little, weeks later they were still using Facebook less, and they valued it less than before[65]. In the limiting and break trials, loneliness, depression and anxiety scores improved modestly over one to three weeks[64, 66]. Sleep is the gain clients notice soonest, because the phone leaves the bedroom first.

Our clients describe the same shape, and a harder start than people expect. Our client in the Netherlands, who stopped scrolling alongside weed and cigarettes, was honest about it: “It can be painful, emotions come up, sleep gets disturbed. It's a true process, like the first few weeks felt like months and then the last few weeks flew by like it was days.” His difficulty came from three habits at once, so it isn't a fair guide to what stopping scrolling alone feels like. What it shows is the shape: the first weeks are the hardest, and they pass.

The time that comes back has to go somewhere. In the deactivation trial, some of it went to watching television alone and to other solitary activities, not only to friends and family[65]. Without a plan, freed time drifts toward whatever is easiest, and the easiest thing is often another screen. That's why the program in Section 14 builds the replacements before scrolling stops: exercise, a morning routine, a demanding pursuit, time outside. A habit that served a function leaves a gap when it stops, and a replacement placed at the same time and in the same setting can take over its place[23].

How long does the urge take to fade? There's no good study of how long cravings for social media last after stopping, so we won't give a number. What the habit research does show is how long the replacement takes to become automatic. In a study of people building new daily habits, automaticity took a median of 66 days to reach 95% of its peak, with wide variation, and missing a single day didn't undo the progress[75]. That is one reason the program runs for 90 days, not 30, and is followed by six months of aftercare.

Section 12

How do I stop scrolling when my work is on my phone?

In brief

Separate the tools you need from the feeds you don't. Keep work on a computer where you can, keep work apps on the phone but move the feeds off it, check messages at set times instead of all day, and use a blocker that holds social media to a fixed window. The goal isn't to stop using the phone. It's to stop the phone deciding when you use it.

You stop scrolling when your work is on your phone by separating the tools you need from the feeds you don't, and by deciding in advance when you'll look. Email, messages, calendars and work apps can stay. The endless feeds, short-video apps and the social accounts you scroll for entertainment don't have to live on the same device, or be open at the same times. If social media is part of your job, it gets a fixed window, set in advance and enforced by a blocker, instead of being open all day.

This is the most common objection we hear, and it's a fair one. For many people the phone is where clients call, the team messages and the work arrives. But the objection usually mixes two different things. Needing to reply to a message within the hour is not the same as needing a phone in your hand all day, and needing to post for work is not the same as needing to scroll for an hour afterward. The first step is to write down what the phone is actually needed for, app by app, and to notice how much of the time on it falls outside that list.

Then change how the work reaches you. The notification experiment in Section 5 is the best guide: people who received notifications in three batches a day, rather than as they arrived, felt more attentive, more productive and less stressed, and people with none at all felt more anxious[10]. For most jobs, that means turning off every alert that isn't from a person who needs you, and checking messages at set times. Interruptions cost more than the time they take, because people work harder and more stressfully to make up for them[28]. The same week-on, week-off experiment showed that keeping alerts off and the phone out of reach reduced inattention[29]. Where work can move to a computer, move it. A laptop doesn't come to bed, and it doesn't come out in a queue.

Then put distance between you and the feeds. Remove the apps you scroll for entertainment from the phone, or at least from the home screen. Log out after each use, so getting back in takes a deliberate effort. If social media is part of your work, use a blocker that limits it to a fixed window each day, set when you're calm, not when you're tempted. Letting people set limits on their own future screen time substantially reduced their use in a large experiment[7], and situational strategies of this kind work better than resisting an urge once it has started[8]. Unfollowing or muting accounts you don't know also seems to matter: in one trial, muting strangers on Instagram and dropping TikTok, on top of a time limit, reduced fear of missing out and social comparison[72].

People who work in social media can do this too. One of our clients, Pshem, is a founder and social media operator in Poland. His work happens on the platforms, and he came to us for doomscrolling, gaming and procrastination. The distinction that matters is between using a platform for a task you've chosen and scrolling a feed that has chosen for you. Search, posting and replying to messages are tasks. The endless feed and autoplay are where the habit lives, and they are the features that undermine people's sense of control[17].

Finally, plan for the moments that remain. Work on a phone produces small gaps all day: waiting for a reply, a call that hasn't started, a file that's loading. Those gaps are the triggers that matter most, because the phone is already in your hand. Decide in advance what you'll do in them, and write it down as a plan of the form when this happens, I will do that. Plans in that form had a medium-to-large effect on reaching goals across nearly a hundred studies, in part because they make the critical moment easier to recognize and trigger the response with little thought when it arrives[9]. Chris, the tech lead who came to us for porn and social media, described what he took away in exactly those terms: “When challenges do arise I have sort of a system or a standard operating procedure now to kind of deal with it.”

Table 3. Keeping the phone for work and losing the feed: what to change, and the evidence behind each change.

Change	What it does	Evidence
Notifications batched, set times for messages	Work reaches you when you've decided to look	Batched notifications improved attention, mood and stress[10]
Work moved to a computer where possible	The phone stops being the place work lives	Alerts off and the phone away reduced inattention[29]
Feeds off the phone, or off the home screen	Distance between the urge and the feed	Changing the situation beats resisting an urge[8]
A blocker holding social media to a fixed window	A limit set calmly, enforced later	Self-set limits substantially reduced use[7]
Strangers muted, short-video apps removed	Less of the content that drives comparison	Reduced fear of missing out and social comparison[72]
A plan for each gap in the working day	The decision is made before the moment	Implementation intentions have a medium-to-large effect[9]

Section 13

What should I do if I start scrolling again?

In brief

Treat it as information, not as proof that you can't stop. Work out what set it off, fix that one thing, and go back to the plan the same day. How you explain a relapse to yourself predicts whether it turns into a full return to the old habit, and blaming your character is the explanation that does most harm.

If you start scrolling again, stop as soon as you notice, work out what set it off, change that one thing, and go back to the plan the same day. One evening lost to a feed doesn't undo weeks of change, but the way you explain it to yourself can. People who treat a relapse as proof that they lack willpower are more likely to give up altogether. People who treat it as a specific failure of a specific plan, in a specific situation, usually fix the plan and carry on.

The research on relapse comes mostly from alcohol, tobacco and other drugs, and the patterns there are a useful guide. Across studies of people stopping alcohol and tobacco, the risk of starting again is highest soon after stopping and falls with time, without disappearing[76]. Witkiewitz and Marlatt described relapse as a process in which stress, urges, confidence and mood interact, so that small changes in one can produce sudden shifts in behavior, in either direction[77]. And in a study of people who had stopped smoking, those who blamed a single cigarette on something internal, stable and global about themselves, a deep personal weakness, were more likely to go on to a full relapse than those who put it down to the situation[78]. The thought that matters most after a relapse is the explanation.

Phones make relapse easy, because the habit is always in your pocket and much of the old learning is still there. Bouton's work on extinction explains why: the new learning laid down while you were stopping is tied to the settings in which it happened, and the old response can return when you're back in the setting, mood or company where you used to scroll[74]. A holiday, a stressful week, a new job, a breakup or a few bad nights of sleep are the classic settings. So is reinstalling an app for a single reason, which then quietly becomes the old reason.

Most relapses have a short list of causes, and each points to a fix. Was it a gap in the day that had nothing planned in it? Was it a trigger that had no response yet? Was it tiredness, after a run of late nights? Was it a thought that argued for scrolling, such as just a minute, or I deserve this? Pushing

such thoughts away tends to make them come back more often[79], and approaches that teach people to notice a thought as a thought, without obeying it, have support across many problems[80]. Each answer tells you which part of the plan to change. None of them is a verdict on your character.

Our client Marcel R. had tried to stop his three habits at least ten times over about 15 years before he came to us. He was clear that the repeated failures were part of what had cost him: “These three things had a huge influence on my life. Not specifically the act of doing it, but the struggle I was going through for years and years and years trying to quit these bad habits.” What changed, by his account, was having a structured process to follow rather than another round of resolve.

If you start scrolling again

Put the phone in another room now. Write down what happened just before: the time, the place, the feeling and the thought. Change the one thing that would have prevented it, a missing response, an app that came back, a late night, and go back to the plan today, not on Monday. If it keeps happening, the plan has a gap. Find it. If the relapse comes with low mood or thoughts of harming yourself, contact a doctor or a crisis line.

Section 14

What does the Phalanx program target for someone stopping scrolling, and when?

Days 15 to 90

In brief

Ninety days in three phases. The first month rebuilds sleep and the shape of the day, takes the phone out of the bedroom on Day 5, and stops scrolling on Day 15. The second month maps every trigger, resets the phone and the places it lives, and builds a response for each

trigger that's left. The third works on identity and on replacing what scrolling did. Six months of aftercare follow.

The Behavior Control System is the same 90-day program for every habit, applied to the loop beneath each person's scrolling. Days 1 to 30 rebuild the ground the habit has been running on: sleep, the body clock, exercise, stress and a structured day with fewer empty stretches. The phone leaves the bedroom on Day 5, and the client stops scrolling on Day 15, along with every other cheap, easy reward on their list, after two weeks of that work. Days 31 to 60 work on the moment the phone comes out: every trigger is mapped, the phone and the places it lives are reset, and each trigger that's left gets a prepared, rehearsed response, including the thoughts that argue for just a minute. Days 61 to 90 work on identity and on replacing each thing scrolling did. Six months of aftercare follow. It asks for about thirty minutes of focused work a day: a short lesson each morning, a brief log each night, and a set of daily practices, which the program calls north stars, built into the routine the person already has.

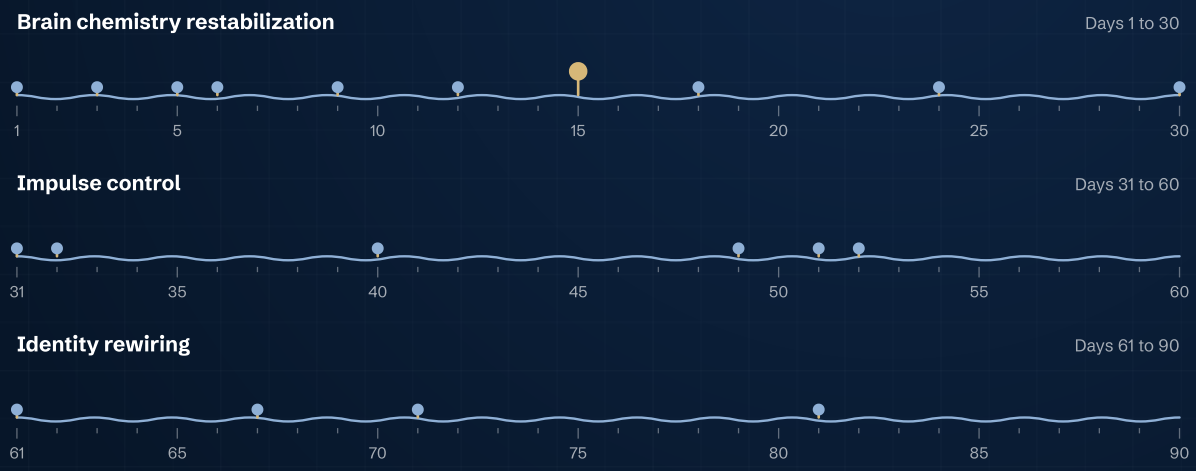
14.1 Before Day 1

Every program starts with a Root-Cause Diagnostic: an application describing the habits involved and what has already been tried, followed by a thirty-minute, one-on-one conversation with our team. For scrolling it has two jobs. The first is to check what travels with it: the other habits, the state of the person's sleep and mood, and whether low mood, anxiety or thoughts of self-harm need a doctor's involvement first (Sections 8 and 16). The second is to identify the loop beneath the scrolling: what it does for the person, the earliest recurring trigger, the conditions that make it likely, why earlier attempts broke down and what's missing for change to hold. Two people who both lose two hours a day to their phones rarely have the same loop. One scrolls in bed because it's the only time of day that belongs to them; another reaches for the phone every time a piece of work gets hard; a third checks out of a low mood that has its own causes. The structure of the diagnostic parallels the three domains the Addictions Neuroclinical Assessment proposes for addictive behavior: the urge set off by triggers, negative emotion and executive function[81]. It is not a clinical assessment.

A preparatory phase, Phase 0, follows before Day 1 and doesn't count toward the 90 days. It separates the decision to stop from the start. The client sets out in concrete terms the life they are building and what the habit has cost it, makes a commitment to someone who matters to them, chooses a start date that marks a real boundary in their life, and proves to themselves that they can hold one full day of control. The choice of start date rests on the fresh start effect: temporal landmarks such as the start of a week, a month or a meaningful date were followed by increases in aspirational behavior[82]. The day of control rests on Bandura's finding that direct experience of succeeding at a behavior is the most dependable source of belief that one can do it[83]. A commitment that is recorded and made to another person holds better than a private one[84]. Marcel R. took this step seriously: “I made the commitment. I wrote down my commitment.”

Fig. 11 The 90 days for someone stopping scrolling

Timeline



Day 15. Scrolling stops, along with every other cheap reward on the list. Habits that travel together, such as scrolling and late-night snacking, stop together.

Brain chemistry restabilization

Days 1 to 30. Homeostasis

Day 1	Nightly log begins
Day 3	Fixed sleep and wake times
Day 5	Phone out of the bedroom
Day 6	Exercise and food
Day 9	A day built on fixed anchors
Day 12	Every cheap reward listed
Day 15	Scrolling stops
Day 18	Noticing the reach
Day 24	Where attention has gone
Day 30	How triggers work

Impulse control

Days 31 to 60. Abstinence with systems

Day 31	Full trigger map
Day 32	The phone environment reset
Day 40	The 'just a minute' thoughts
Day 49	Watching an urge pass
Day 51	The bigger, later reward
Day 52	A response for every trigger

Identity rewiring

Days 61 to 90. Burn down the old subconscious and unconscious thinking models

Day 61	Identity work begins
Day 67	Self-image, thirty days
Day 71	Rehearsing high-risk moments
Day 81	Replacing what scrolling did

Phase 0, before Day 1, sets the commitment and the start date. Six months of aftercare follow Day 90.

Source. The Behavior Control System, Phalanx Labs. The targets only: the exercises themselves are not published.

Figure 11. The program drawn as a tide almanac: one line of water for each thirty-day phase, a tick for every day, and a buoy on each day the program introduces a target that bears on

scrolling. Scrolling stops on Day 15. Phase 0 comes before Day 1, and six months of aftercare follow Day 90. Choose a day in the key to read its target. The exercises themselves are not published.

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Table 4. The day map for someone stopping scrolling: what each stretch of the program targets, and the evidence behind the choice. Days refer to the program calendar. The table states the target only; the exercises themselves are not published.

Days	Target	Why it matters for stopping scrolling
Before Day 1	Root-Cause Diagnostic: the loop beneath the scrolling, what travels with it, sleep and mood	The loop is read across trigger-set urges, negative emotion and executive function[81]
Before Day 1	Commitment, a meaningful start date, one day of control	Fresh starts and direct experience of success raise follow-through[82, 83]
1 to 2	How the loop works; the nightly log	People badly underestimate how often they use their phones[1]; recorded monitoring improves goal attainment[84]
3 to 5	Sleep and wake times, a daily walk, daylight, evening light, the phone out of the bedroom overnight	Bedtime device use goes with less and worse sleep[46]; sleep loss weakens control of emotion[52]
6 to 8	Training, cardio, meditation and food	Mindfulness training improved working memory and reduced mind wandering[35]
9	A day built on fixed anchors	Boredom proneness predicts problematic phone use[69]
10 to 14	The loop, every cheap reward listed with social media named, self-assessment	Social media use is habit-forming, and self-control problems drive part of it[7]
15	Scrolling stops, with every other cheap reward; habits that travel together stop together	Each scroll keeps the learned links to its triggers alive[74]
16 to 24	Heat and cold exposure, a demanding new pursuit, noticing the reach, breathing, memory and strategy training, where attention has gone	Other rewards compete with the quick one; vigilance controls strong habits[27, 71]
25 to 30	Why stopping completely rather than cutting down; how dopamine and triggers	Unpredictable rewards teach strong habits[19, 20]; context triggers habit[23]

Days	Target	Why it matters for stopping scrolling
	work, lying in bed with the phone included	
31 to 32	Full trigger map; blockers that hold social media to a set window; the phone out of the bed and the bathroom; the room rearranged	Changing the situation beats resisting an urge already under way[8]
33 to 39	Impulsivity, situations that can't be avoided, interrupting the pattern	Self-control suffers under stress, loneliness and lack of sleep, and improves with practice[5]
40 to 43	The thoughts that argue for scrolling	Suppressed thoughts return; noticing them without obeying them helps[79, 80]
44 to 51	Emotion, stress, breathing, relaxation, watching an urge pass, the bigger later reward	Urge surfing weakened the link between craving and use[85]; stress shifts behavior toward habit[4]
52 to 60	A response for every trigger; daily practice	Implementation intentions have a medium-to-large effect on reaching goals[9]
61 to 70	Identity, self-image, motivation and the pressures around the habit	Identity shapes which actions feel natural[86]
71 to 80	Rehearsal of high-risk moments	Mental practice improves performance[87]
81 to 90	Replacing each function scrolling served; review of the 90 days	A new routine takes weeks to months to become automatic[75]
After 90	Self-forgiveness, identity reinforcement, six months of aftercare	How a relapse is explained predicts whether it becomes a full return[78]

14.2 Why the order matters for scrolling

The order follows from the research in Sections 2 to 13. Sleep comes first because a tired brain has less control over impulses and bedtime scrolling is one of the habit's strongest settings[46, 52]. The phone leaves the bedroom on Day 5, ten days before the stop, because it removes one of the habit's

strongest settings for very little effort, and because it gives the client an early experience of succeeding. Scrolling stops on Day 15, after two weeks in which exercise, structure and a fuller day have started to fill the gaps the feed used to fill. The phone environment is reset systematically at the start of the second month, guided by a full map of the triggers, so that the changes cover every route back to the feed rather than only the obvious one, and the responses that follow have room to work in the delay those changes create[8]. Identity comes last, because it changes slowest and because a new self-description needs weeks of evidence behind it to be believed.

In the program · Phase 1, Brain chemistry restabilization **Day 15**

Scrolling stops

On Day 15 the client stops scrolling for entertainment, along with every other source of quick, easy reward on the list they made in the second week, such as junk food, late-night videos or games. Habits that travel together stop together, because each one keeps the other's triggers alive. Where social media or messaging is needed for work or family, it stays, and from Day 32 it runs inside a fixed window rather than all day.

Stopping everything cheap at once can sound harsher than cutting down one thing, and Section 10 showed that cutting down does help a little. The reason for the full stop on Day 15 is the habit research. A learned response weakens when the trigger keeps arriving without the reward, but each time the reward comes, the old link is renewed[74]. A person who still scrolls a little keeps feeding the habit at random intervals, which is the schedule that sustains behavior longest[18]. And habits that share a setting, the phone in bed and the late-night snack, the feed and the video game, tend to set each other off. Stopping them together removes the setting rather than one of its occupants.

In the program · Phase 2, Impulse control **Days 31 to 32**

The trigger map and the phone environment reset

The client maps every trigger for scrolling: the times, places, feelings, people and gaps in the day that come before it. Then the environment is reset against that map. Blockers hold social media to a set window each day, the phone stays out of the bed and the bathroom, and furniture and routines are rearranged so that old sequences don't run on their own.

This is where the situational research does its work. Changing the situation before an urge begins is more effective than resisting one already under way[8], and a limit set in advance and enforced later reduces use where a good intention alone doesn't[7]. The bathroom is on the list because it's one of the places the phone fills a gap most reliably, as Marcel R. noticed for himself. Moving furniture can sound trivial, but a habit is triggered by its context[23], and a chair that faces a different way, or a charger that lives in a different room, breaks a sequence that has run thousands of times.

In the program · Phase 2, Impulse control **Days 40 to 51**

The thoughts, the feelings and the urge itself

The client learns to catch the thoughts that argue for scrolling, such as I'll just check for a minute, and to answer them. They work on the feelings that set the habit off, stress, boredom, loneliness, and on watching an urge rise and fall without acting on it. They practice choosing the bigger, later reward over the quick one.

Thoughts like just a minute are the habit's best argument, because they're usually true the first time and almost never true in practice. The program's own example on Day 40 is the thought that you'll just browse YouTube for a minute and then get back to work. Pushing such thoughts away doesn't work well[79]; noticing them as thoughts and choosing what to do anyway has better support[80]. For an urge already under way, urge surfing, noticing the urge in the body and watching it rise and fall, reduced the link between craving and use in a study of smokers[85]. We use it for scrolling on the strength of that mechanism, and say so.

In the program · Phase 3, Identity rewiring **Days 61 to 90**

Identity and replacing what scrolling did

The third phase works on how the person sees themselves, through thirty days of work on self-image from Day 67, rehearsal of the moments most likely to bring scrolling back, and confirmation that each function scrolling served, filling a gap, numbing a feeling, putting off a task, has a replacement in place. The client reviews the full 90 days against their log.

Identity matters because people act in line with the identity that feels relevant at the moment[86], and someone who thinks of themselves as a person who's always on their phone will find the old behavior natural in any setting the program didn't plan for. Replacement comes last because a gap left empty tends to be filled by whatever is closest. A replacement placed at the same time and in the same setting as the old habit can take over its context[23], and by Day 90 it has been in place long enough to begin running on its own[75]. Adam, a crypto investor and founder in Vietnam who came to us for nicotine, junk food and social media, described where the time and energy went: “I exercise every day like hell, and I am living my best life ever.”

14.3 In our clients' words

Several of our clients whose published stories include phone scrolling or social media have described their experience on the record, and we quote them as they said it. Marcel R., the commercial director in the Netherlands who stopped weed, cigarettes and phone scrolling together: “I’m totally done with all three of these bad habits. I haven’t been doing them, not a single time. It’s out of my system.” Chris M, the tech lead in the United States who came to us for porn and social media after about ten years: “This is the best that I’ve been in those 10 years.” Pshem, the founder and social media operator in Poland: “My mental clarity is on point. I can focus on my goals.” Yousef,

who came to us for porn and social media: “Before starting, I felt lost and unsure of my direction. This program has been a game changer for me.” Each of them came with more than one habit, so none of these quotations is about scrolling alone. Their words are shared with consent. They are individual experiences, not evidence that the program works for everyone, and the evidence we do report, with its limits, is in Section 15.

What this paper does not publish

This paper states what each part of the program targets for someone stopping scrolling, on which days and why, with the evidence for each choice. It does not publish the exercises, their steps, scripts, worksheets or wording. A reader can evaluate the reasoning from this paper, but can't reproduce the program from it.

Section 15

What do our results show, and what can't this paper tell you?

In brief

We report a 97% success rate, meaning clients who ran the program and stayed off the habit through the program and six months of aftercare. It comes from our own client follow-up, not from a controlled trial, and the research in this paper supports each part of the method without testing the whole. Some of that research is mixed, and we've said where.

Phalanx Labs has worked with 290+ clients across 12 countries over 7 years. Of those clients, 98.4% had already tried and failed to stop before they came to us. Our success rate is 97%, defined as the share of clients who ran the program and stayed off the habit through the program and the six months of aftercare that follow it. That rate covers all of our clients and all of the habits they came with. We don't publish a separate rate for scrolling. Because the definition matters as much as the number, we set out below what each figure counts, how it is known and what it does not establish.

Table 5. The figures we report, what each one counts and how it is known. All figures are drawn from our own client records and cover every habit we work with, not scrolling alone.

Figure	What it counts	How it is known
290+ clients	People who have worked with Phalanx Labs over 7 years	Client records
12 countries	Countries in which those clients lived while working with us	Client records
98.4%	Share of clients who had already tried and failed to stop before they came to us	What clients reported about their history in their application and the diagnostic
97% success rate	Clients who ran the program and stayed off the habit through the program plus 6 months of aftercare	Client follow-up across the program and the six months of aftercare

15.1 How outcomes are tracked

Throughout the program, the client keeps a nightly log and completes a weekly progress update. These are written records of what happened, what was difficult and what was handled; they are not scored instruments. At the end of each of the first two phases the client has a progress call with our team, the first around Day 28 and the second after Day 60. During aftercare we follow up with clients on whether they have stayed off the habit. A client counts as a success when they have run the program and stayed off the habit through the program and the full six months of aftercare.

15.2 What our figures do not show

- Self-report. Whether a client has stayed off scrolling is known from what the client tells us, not from screen-time logs. Section 4 showed that people underestimate how often they use their phones, and that applies to anyone's account of their own use, including our clients'.
- A less sharp line. For a drug, staying off the habit is easy to define. For scrolling, the line between the habit and the ordinary use of a phone for work and family is less sharp, and whether a client has stayed on the right side of it rests on their own account.
- Selection. Clients choose to apply, are accepted after a diagnostic in which we decline people we can't help, and are counted only if they ran the program. People who decide to work with us may differ in motivation or circumstance from people who don't.

- No comparison group. We can't say how many of the same people would have stopped through another route, such as a limit, a break or on their own, over the same period. The trials in Section 10 show that simpler interventions help some people too.
- Time window. The success rate covers the program and six months of aftercare. It doesn't describe what happens after that, and the relapse research in Section 13 shows that risk continues beyond it.
- All habits together. The rate is across every habit our clients bring. We don't report a rate for scrolling alone, and a single rate doesn't predict the outcome for any one person.

15.3 What the research in this paper does not show

The research on phones and social media is young, and some of its best-known findings haven't held up. The figure below sets out the main claims in this paper by how much weight the evidence can bear, with the type set heavier where the evidence is stronger. The firmest findings are that people use their phones far more often than they think[1, 2] and that bedtime device use goes with worse sleep[46]. The findings on notifications and on cutting down rest on real experiments, but small ones with short follow-up[10, 64, 65]. The brain drain effect and the claim that social media is the main cause of rising teenage depression are genuinely disputed[43, 54, 55]. And the idea that heavy media multitasking permanently damages attention, and the idea that phone use is an addiction in the same sense as a drug, are weakly supported[11, 31].

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Fig. 12 How much weight each claim can bear — Evidence

Strong	**People use their phones far more often than they think.** Logged use against estimated use, and a meta-analysis of 106 comparisons[1, 2].
Strong	**Using a screen at bedtime goes with shorter, worse sleep.** A meta-analysis of 20 studies and 125,198 children, and a review of 67 studies, mostly observational[46, 47].
Moderate	Notifications pull attention off the task in hand. Laboratory and field experiments[10, 24, 29].
Moderate	Cutting down social media for a few weeks improves well-being a little. Randomized trials with small effects, and a review that found the results mixed[64, 65, 67].
Mixed	*A phone nearby drains your thinking even when you don't touch it.* One influential study, a failed direct replication and meta-analyses that disagree[36, 40, 43].
Mixed	*Social media is the main cause of the rise in teenage depression.* Clear trends over time, small average associations and effects that differ from teen to teen[53, 55, 58].
Weak	*Heavy media multitasking permanently damages attention.* An early finding that later replications and a meta-analysis didn't hold up[30, 31].
Weak	*Phone use is an addiction in the same sense as a drug.*

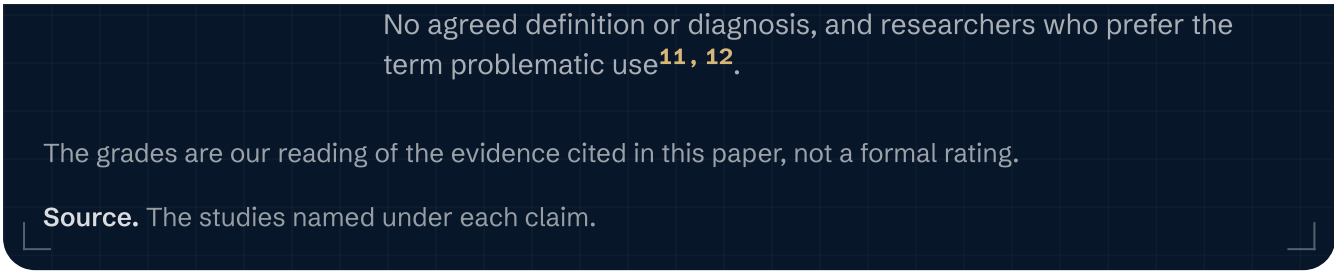


Figure 12. The main claims about phones and feeds in this paper, set in type whose weight shows the strength of the evidence: bold where it is strong, medium where it is moderate, light italic where it is mixed and lightest where it is weak. The basis for each grade is printed under the claim. The grades are our reading of the evidence cited, not a formal rating. Filter by grade to see one at a time.

The studies cited here have other limits too, and readers should weigh them. Many were done with teenagers or university students, and some with small samples: the logging study in Section 4 had 23 participants[1], and the boredom study's shock experiment had 42[68]. The large surveys on well-being and sleep show associations and can't show cause[46, 55]. The trials that cut social media use lasted one to four weeks, participants knew whether they had cut down, and the outcomes were self-reported[64, 66, 67]. The research on dopamine and uncertainty was done in monkeys[20]. Some of the methods described in this paper, such as urge surfing, implementation intentions and the research on how a relapse is explained, were tested mainly with other habits[9, 78, 85], and we use them for the mechanism they describe and say so where we cite them.

Our method has not been tested in a randomized or controlled trial, its outcomes have not been assessed independently, and it has not been published in a peer-reviewed journal. The research supports the reasoning behind each element. It doesn't show that the combination works, or how much each element contributes. The figures in Table 5 are our evidence for the combination, with the limits stated above. A controlled evaluation would need independent outcome assessment, ideally with logged screen time rather than self-report, a comparison condition such as a limit or a break, and follow-up beyond six months. We would welcome one.

The definition, stated once more

97% success rate: clients who ran the program and stayed off the habit through the program plus 6 months of aftercare. Tracked through client follow-up, across all habits. Not a clinical trial, with no randomization and no control group.

Section 16

When should you get help straight away, and what is this program not?

In brief

Get help straight away if you're thinking about harming yourself, and see a doctor if low mood, anxiety or poor sleep has lasted for weeks. Stopping scrolling has no medical risk, but what travels with it sometimes does. The program is not therapy, medical treatment or a crisis service.

Get help straight away if you have thoughts of harming yourself or ending your life. Contact emergency services or a crisis line: in the US, call or text 988; in the UK and Ireland, Samaritans on 116 123; in India, Tele-MANAS on 14416. These services are free, and you don't need to be in immediate danger to call. Problematic phone use goes with higher odds of depression and anxiety (Section 2)[13], and scrolling late at night can deepen a low mood that has its own causes. Cutting down may help, but it isn't treatment for depression or anxiety. If low mood, anxiety or poor sleep has lasted for weeks, see a doctor.

Safety note

If you're thinking about harming yourself, contact emergency services or a crisis line now: 988 in the US, Samaritans on 116 123 in the UK and Ireland, Tele-MANAS on 14416 in India. See a doctor about low mood, anxiety or poor sleep that has lasted for weeks. If you also drink heavily every day or take sleeping or anxiety medication, don't stop those suddenly without a doctor.

Stopping scrolling itself carries no medical risk. There's no physical withdrawal, and nothing about putting a phone down needs medical supervision. The exception is what sometimes travels with it. If the phone sits alongside heavy daily drinking, sleeping pills or anxiety medication, stopping those suddenly can be dangerous, so any change to them should be planned with a doctor. If the scrolling is tied to another problem, such as gambling, porn or gaming, the papers on those habits explain the risks particular to each.

Phalanx Labs is a behavior and performance engineering firm. The Behavior Control System is a structured method for changing behavior. It is not therapy, clinical care or medical treatment, and it does not diagnose or treat any medical or psychiatric condition. Our team doesn't act as the client's

doctor or therapist, and the program doesn't replace either. Where the diagnostic suggests a medical or psychiatric risk, we tell the person to get that help first.

Some of the program's physical practices carry ordinary risks of their own. Cold and heat exposure and starting a training program aren't suitable for everyone, and people with heart conditions, high blood pressure or other medical conditions should check with their doctor first. The program gives general information about supplements and tells clients to consult a doctor before taking any; it does not prescribe or recommend medication or supplements.

The program is also not designed for every situation. It is not a crisis service. It isn't suitable as the only support for someone with a serious mental health condition, or someone at risk of harming themselves or others. The diagnostic exists partly to identify these situations, and when we can't help, we say so and suggest the person seek appropriate care.

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