

Noah Church is a 26-year-old part-time wildland firefighter in Portland, Ore. When he was 9, he found naked pictures on the Internet. He learned how to download explicit videos. When he was 15, streaming videos arrived, and he watched those. Often. Several times a day, doing that which people often do while watching that genre by themselves.

After a while, he says, those videos did not arouse him as much, so he moved on to different configurations, sometimes involving just women, sometimes one woman and several guys, sometimes even an unwilling woman. “I could find anything I imagined and a lot of stuff I couldn’t imagine,” he says. After the appeal of those waned, he moved on to the next level, more intense, often more violent.

In his senior year of high school, he had an opportunity to have actual sex, with a real partner. He was attracted to her and she to him, as demonstrated by the fact that she was naked in her bedroom in front of him. But his body didn’t seem to be interested. “There was a disconnect between what I wanted in my mind and how my body reacted,” he says. He simply couldn’t get the necessary hydraulics going.

He put it down to first-timers’ nerves, but six years went by, and no matter which woman he was with, his body was no more cooperative. It responded only to the sight of porn. Church came to believe that his adolescent Internet indulgence had somehow caused his problems and that he had what some are calling porn-induced erectile dysfunction (PIED).

A growing number of young men are convinced that their sexual responses have been sabotaged because their brains were virtually marinated in porn when they were adolescents. Their generation has consumed explicit content in quantities and varieties never before possible, on devices designed to deliver content swiftly and privately, all at an age when their brains were more plastic—more prone to permanent change—than in later life. These young men feel like unwitting guinea pigs in a largely unmonitored decade-long experiment in sexual conditioning. The results of the experiment, they claim, are literally a downer.

So they’re beginning to push back, creating online community groups, smartphone apps and educational videos to help men quit porn. They have started blogs and podcasts and take all the public-speaking gigs they can get. Porn has always faced criticism among the faithful and the feminist. But now, for the first time, some of the most strident alarms are coming from the same demographic as its most enthusiastic customers.

Of course there are much broader concerns about porn’s

effect on society that go beyond the potential for sexual dysfunction, including the fact that it often celebrates the degradation of women and normalizes sexual aggression. In February, these issues led British Prime Minister David Cameron’s government, which had previously asked Internet service providers to filter adult content unless a user opted in, to begin the process of requiring porn sites to verify the age of their users or face a fine. Shortly afterward, the Utah legislature unanimously passed a resolution to treat pornography as a public-health crisis. And compelling new research on visual stimuli is offering some support to the young men’s theories, suggesting the combination of computer access, sexual pleasure and the brain’s mechanisms for learning could make online porn acutely habit forming, with potential psychological effects.

For Gabe Deem, 28, porn was as much a part of adolescence as homework or acne. “It was normal and it was everywhere,” he says. He grew up in an era when what used to be considered X-rated was becoming mainstream, and he and his friends used to watch explicit videos constantly, he says, even during class, on their school-issued laptops. “It wasn’t something we were ashamed of.” Deem, who lives in Irving, Texas, is the founder of Reboot Nation, a forum and online video channel that offers advice and support for young people who believe they are addicted to pornography, have sexual dysfunctions as a result and wish to quit.

He’s a little different from many of the porn activists, because he was sexually active at a young age and consumed porn only as a side dish. But it came to dominate his diet, and some years after high school, “I got with a gorgeous girl and we went to have sex and my body had no response at all,” he says. “I was freaked because I was young and fit and I was super attracted to the girl.” He went to his doctor. “I said, I might have low T,” Deem says, using slang for a testosterone deficiency. “He laughed.”

Many of the details of his story are confirmed by his girlfriend at the time, who would prefer to remain anonymous. “He would try to start something, and then in the middle he would say, ‘I think we should wait,’” she recalls. “I was just really confused and I would think, Does he not like me? What’s going on?” It took nine months after he told her about his problem for him to be able to perform with her.

Having a partner with ED isn’t the primary problem most young women face with porn, and only a fraction of women report feeling addicted, yet they are not immune to the effects of growing up in a culture rife with this content. Teen girls increasingly report that guys are expecting them to behave like porn starlets, encumbered by neither body hair nor sexual needs of their own.

In April 2015, Alexander Rhodes left a good job with Google to develop counseling and community-support sites for those who are struggling with a porn habit. He had started the NoFap subreddit—a list of posts on one subject—on the popular website Reddit and a companion website called NoFap.com in 2011, but it’s now a full-time endeavor. (The name derives from fap, Internet-speak for masturbation.) The 26-year-old says his first exposure to porn was a pop-up ad—no, really, he swears!—when he was about 11. His father



was a software engineer in Pennsylvania, and he had been encouraged to play with computers since he was a 3-year-old. “For as long as there had been an Internet, I had relatively unfiltered access,” says Rhodes. The ad was for a site that showed rape, but he says he only understood there was a naked lady. Pretty soon he was printing out thumbnails of his image-search results for “women’s tummies” or “pretty girls’ boobies.” By the time he was 14, he says, he was pleasuring himself to porn 10 times a day. “That’s not an exaggeration,” he insists. “That, and play video games, was all I did.”

In his late teens, when he got a girlfriend, things did not go well. “I really hurt her [emotionally],” says Rhodes. “I thought it was normal to fantasize about porn while having sex with another person.” If he stopped thinking about porn to focus on the girl, his body lost interest, he says. He quit porn a couple of times before finally swearing off it for good in late 2013. His two sites have about 200,000 members, and he says they get about a million unique users a month.

These men, and the thousands of others who populate their websites with stories of sexual dysfunction, are all at pains to make it clear that they are not antisex. “The reason I quit watching porn is to have more sex,” says Deem. “Quitting porn is one of the

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“The reboot movement started for one reason,” says Deem. “Young guys wanting to have functioning penises. Nothing to do with morals.”

most sex-positive things people can do,” says Rhodes. One online commenter, sirrifo, put it more simply: “I just want to enjoy sex again and feel the desire for another person.”

DO THEIR CLAIMS of porn-induced ED have any merit? Recent statistics suggest some correlation. In 1992, about 5% of men experienced ED at age 40, according to the U.S. National Institutes of Health (NIH). A study in the July 2013 *Journal of Sexual Medicine* found that 26% of adult men seeking help for ED were under 40. In a 2014 study of 367 U.S. military personnel younger than 40, a third reported ED. And a 2012 Swiss study found the condition among a third of even younger men: 18 to 25.

Of course, there could be any number of reasons for these findings. Since the advent of Viagra and similar medications, awareness and acceptance of erectile dysfunction is much higher, and thanks to all those TV commercials, the stigma is correspondingly lower, so more people may be admitting to it. Diabetes, obesity, social anxiety or depression can also cause the condition, as can drug or alcohol abuse. As these have risen among the young, so may have instances of ED. But urologists aren’t willing to rule out that pornography could be partly to blame. “I think it’s possible,” says Dr. Ajay Nangia, former president of the Society for Male Reproduction and Urology. “There’s a kind of desensitization of these men, and they only reach the point of feeling stimulated when sex is like it is on a movie.”

If the causes of the spike in ED are up for debate, the unprecedented access to porn via streaming video in the past decade is not. The advent of video sites that, like YouTube (which launched in 2005), allow users to upload, aggregate and organize videos has transformed the way people encounter porn. There’s a staggeringly diverse array of free explicit content that’s constantly expanding because anyone, from amateurs to professionals, can put a video online. One independent web-tracking company clocked 58 million monthly U.S. visitors to adult sites in February 2006. Ten years later the number was 107 million. One of the world’s largest adult sites, Pornhub, an explicit-video-sharing site, says that it gets 2.4 million visitors per hour and that in 2015 alone, people around the globe watched 4,392,486,580 hours of its content, which is more than twice as long as *Homo sapiens* has spent on earth. Porn is so ubiquitous, it has spun off memes, including Rule 34, which says, “If it exists, there is porn of it.” (Leprechauns? Check. Pterodactyls? Check. Pandas? Check.) The Internet is like a 24-hour all-you-can-eat buffet restaurant that serves every type of sex snack.

And the young are devouring it. Almost 40% of British boys ages 14 to 17 said they regularly watch, according to a February 2015 study by the University of Bristol. Chyng Sun, an associate professor of

media studies at New York University, says nearly half of the 487 men she surveyed in one study had been exposed to porn before they'd turned 13. A study in the *Journal of Sex Research* puts first exposure at, on average, 12 years old for young men.

A massive social shift involving the health of young people usually prompts a robust round of research to assess what's really going on. But in this case, not so much. It's hard even to get funding to study how widespread porn use is, says Janis Whitlock, a former sex educator who is now a researcher in mental health at Cornell University. NIH staff reportedly advise researchers against using the word *sexual* in their funding applications if possible. Neuroscientist Simone Kühn, whose study on porn watching and brain structure was published in the esteemed *JAMA Psychiatry*, says her employers at the Max Planck Institute were unhappy to be associated with it.

THE LACK OF RESEARCH is exacerbating a bitter fight in the academic community about the effects of excessive porn use. And there's not a lot of hard science to decide the outcome.

The young porn abstainers do have an unlikely guru: Gary Wilson, 59, a former part-time adjunct biology professor at Southern Oregon University and various vocational schools and the author of *Your Brain on Porn: Internet Pornography and the Emerging Science of Addiction*. His website, yourbrainonporn.com, or more commonly YBOP, is a clearinghouse for information that supports the link between heavy adolescent pornography use and sexual dysfunction. Many people find him through his 2012 TEDx talk, which has more than 6 million views.

YBOP contends that watching too much onanistic material in adolescence affects the brain in multiple ways. "Porn trains your brain to need everything associated with porn to get aroused," Wilson says. That includes not only the content but also the delivery method. Because porn videos are limitless, free and fast, users can click to a whole new scene or genre as soon as their arousal ebbs and thereby, says Wilson, "condition their arousal patterns to ongoing, ever changing novelty."

A heavy porn schedule and the resulting sustained high levels of dopamine reinforces these patterns. "The result in some Internet porn users is higher brain activation to internet porn, and less arousal to sex with a real person," Wilson argues. And then there's habituation: the need for more to get the same hit. "Extreme novelty, certain fetishes, shock and surprise and anxiety—all those elevate dopamine," he says. "So they need those to be sexually aroused."

Other researchers are dismissive of any link between porn and erectile dysfunction. "In the absence of supporting scientific data, the strength of [these young men's] belief that porn causes ED is not evidence for the validity of their belief," says David J. Ley, a clinical psychologist and the author of *The Myth of Sex Addiction*. "The overwhelming majority of porn users report no ill effects. A very, very small minority are reporting these concerns about ED."

Ley points to recent studies of young men who use porn, like a 2015 paper in the *Journal of Sexual Medicine*, in which researchers from the University of Zagreb in Croatia analyzed studies of about 4,000 sexually active heterosexual young

THE RISE OF PORN

Widespread access to streaming video has driven an exponential increase in the viewing and sharing of explicit content. At the peak of *Playboy's* popularity in 1975, the magazine had a circulation of 5.6 million. Today more than 100 million people in the U.S. visit adult sites monthly.



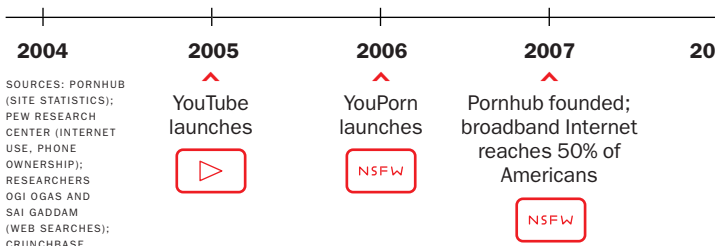
58 million

Monthly U.S. visitors to adult sites (Feb. 2006)



167 million

Total U.S. Internet users

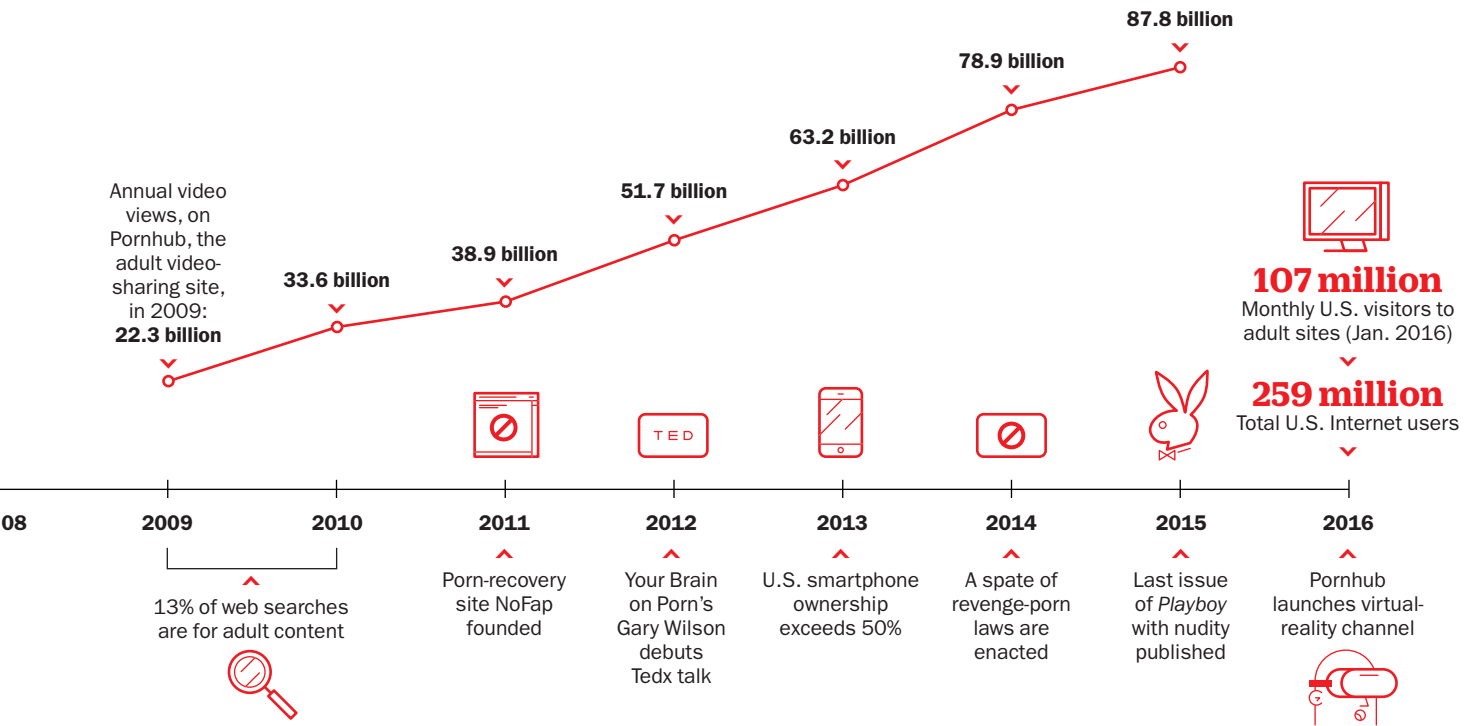


men in three European countries and found only a very slight correlation between pornography use and erectile problems. (And only in Croatia.) Another found that porn users who were religious were more likely to think they were addicted. Nicole Prause, a psychologist and neuroscientist, also believes PIED is a myth: "An overwhelming number of studies have shown that the strongest predictors of ED continue to be depression and drug use."

For the young male activists, however, Exhibit A is always their own physiology. "If you can get a boner with porn and you can't get a boner without porn, that's about as hard as evidence gets in my opinion," says Deem of Reboot Nation. He crosses off every other reason for his sexual dysfunction. Inexperience? "I've been a sexually confident and experienced guy since the age of 14," he says. Obesity? He's a certified personal trainer with, he says, under 10% body fat. Drug use? He claims to have smoked about five joints in his life. And his ED couldn't have been due to performance anxiety, because he says he couldn't get aroused even when masturbating offline on a relaxed Sunday afternoon. "I ran back to my computer to double-check. I turned on porn and *bam!*"

Beyond the issues facing these young men, there's emerging research that should give every porn user pause. A 2014 fMRI study from the Max Planck Institute found that habitual porn use may have an effect on the brain. "The more pornography men consumed, the smaller the brain striatum, the reward center of the brain," says Kühn, the author. "And those who watched more pornography showed less response to pornographic pictures in the same area." Another study showed that more-frequent porn users were more impulsive and had less ability to delay gratification. And a brain-scan study out of the University of Cambridge in 2014 showed that men with compulsive sexual behavior responded to explicit clips in the same way users of drugs respond to drugs; they craved them, even if they didn't like them.

The lead researcher in that study, neuroscientist and neu-



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"I fantasized about porn while having sex," says Rhodes. "I had to depersonalize [partners] to achieve sexual satisfaction."

ropsychiatrist Valerie Voon, says many of her heavy-porn-using subjects report having erectile issues. But she and Kühn both note that none of this is proof that porn shrinks brains; it could be that people who have smaller reward centers have to watch more porn to get the same thrill. "I would be cautious about using

a single imaging study to imply that there has been 'damage' to the brain," says Voon. "We just need more studies."

The porn-addiction debate is a rancorous subset of a disagreement in the medical and scientific communities about whether it's possible to classify so-called behavioral addictions, like those to gambling and eating, in the same category as substance addictions, like those to alcohol or prescription drugs. Prause argues that using the word *addiction* to describe what could simply be a high sexual appetite is unhelpful and may be worsening the problem by stigmatizing it.

But to Voon, who studies addictions, compulsive porn watching sure looks like one, even though it has different properties, including a higher appetite for novelty than other addictions. "It's possible that the combination of pornographic stimuli being highly rewarding in addition to the novelty might have some kind of greater effect," she says.

Brian Anderson, a cognitive neuroscientist at Johns Hopkins University, has an intriguing theory. His specialty is habit formation; in February his team released a study showing that visual stimuli that are linked to a reward are harder to ignore when they are encountered again. When the brain detects evidence of the enjoyable stimulus, it pays more attention and blocks out other stimuli. "Your brain is wired to develop those patterns, and when you tie them to something like porn it can be very disruptive and difficult to break," says Anderson.

He hypothesizes that the visual nature of porn makes it particularly appealing for the brain. "It lends itself to a strong and quick attention bias," he says. "The brain is going to learn that association very quickly." And because people's modern lives are very

computer-heavy, there are reminders of porn everywhere. “There probably comes a point in time,” he says, “where you open up your browser and you just start thinking about porn.” (And that’s before virtual-reality tech takes things to a whole new level.)

Since the teenagers guzzling all that porn are digesting it in a brain that is still developing, it’s possible they are particularly susceptible. Philip Zimbardo, emeritus professor of psychology at Stanford University (and the guy who did the famous Stanford prison experiment), notes that porn often goes hand in hand with video games and is similarly finely tuned to be as habit-forming as possible.

“Porn embeds you in what I call present hedonistic time zone,” he says. “You seek pleasure and novelty and live for the moment.” While not chemically addictive, he says, porn has the same effect on behavior as a drug addiction does: some people stop doing much else in favor of pursuing it. “And then the problem is, as you do this more and more, the reward centers of your brain lose the capacity for arousal,” he says. At a time when young men are at their physical peak, he says, all the inactivity may be contributing to the unexpected sexual dysfunction.

NOAH CHURCH DEVOTES about 20 hours a week to trying to help others eliminate porn from their lives, or at least to cut out the habit known as PMO (porn, masturbation, orgasm). He has written a free book about it, *Wack*, runs addictedtoporn.com and counsels people via Skype for a \$100 fee. Rhodes, meanwhile, tries to help guys get their mojo back by arranging “challenges,” during which young people try to abstain from PMO for a certain span of time. There are different levels of abstinence: the most extreme (known, ironically, as “hard mode”) is keeping away from any sexual activity, and the least extreme is having all the sexual encounters that present themselves, including those that occur alone, but without visual aids. Deem’s site offers similar strategies, along with a lot of community support and educational materials. He makes money from speaking fees. A group of young men from Utah have started an organization called Fight the New Drug, which has a free recovery program for teens called Fortify.

The young men who wish to reboot their brains describe similar consequences as they titrate off the habit. Some of them have withdrawal-like symptoms such as headaches and sleeplessness. Many of them talk about “flatlining,” a period of joylessness, zero libido and even shrunken genitalia that can last several weeks. “I felt like a zombie,” says Deem. Older guys have reported similar symptoms, but they generally recover faster, possibly because they had more sexual experiences in real life. Football player turned actor Terry Crews recently posted a series of Facebook videos about the damage his porn habit did to his marriage, and his life, though not his viril-

ity. He went to rehab. Others report bouncing back more quickly. “I felt more focused, awake, socially confident, connected to others, more interested in daily activities and more emotionally sensitive,” says Church. “I started feeling these changes very soon after quitting.”

Because consuming porn is often done on impulse, NoFap’s newest product is an online emergency button, which when clicked takes users to a motivational picture, video, story or advice, like this: “PMO is not even an option. The way eating yellow snow is not an option. It doesn’t even factor into the decisionmaking process.” The Brainbuddy app, which was developed after a young Australian named David Endacott noticed how difficult it was for him to give up porn, offers a series of alternatives—an activity or an inspiring video. Not watching porn is only half the battle, he says. The brain has to develop new and different pleasurable associations with the computer. Like a Fitbit, the app also tracks how many days users have gone without resorting to the habit. It has had more than 300,000 downloads so far.

THE ONE THING that these young men are not suggesting is an end to porn, even if that were possible. “I don’t think that pornography should be legislated or banned or restricted,” says Rhodes. In any case, legislating porn has always been fraught, and today that’s not just because of the First Amendment but also because of technology. One challenge facing the British proposal to force porn sites to verify the age of their consumers is figuring out how to make that work without invading adult privacy and despite the ease with which most teenagers can subvert online filters. (Reports showed that 1.4 million unique visitors to adult sites in Britain were under the age of 18 in May 2015, after Internet providers’ opt-in filters were in place.) Although one U.S.-based site, Pornhub, has pledged to adhere to the new British rules, the industry is dubious about the health claims. “My No. 1 gripe with the porn industry is that they have been generally unaccepting of the whole porn-addiction recovery movement,” says Rhodes. “They really trivialize it.” (Pornhub declined to answer any questions about legislation or health concerns for this story.)

“As an industry we have seen a lot of moral panics,” says Mike Stabile, communications director for the Free Speech Coalition, the adult-entertainment industry’s trade association. “There doesn’t seem to be a whole lot of reputable science. Should something emerge it might spur discussions.” The industry is not in favor of the British approach that makes Internet users opt in to adult content rather than opting out, says Stabile: “Those filters can block access to LGBTQ groups and sex-education sites.” But that’s exactly the model that state senator Todd Weiler is hoping will be used in Utah. “We’ve changed how we’ve approached tobacco, not by banning it but by

Who’s watching

Adult entertainment in the U.S. is as popular as it is controversial

46%

of men and

16%

of women ages 18 to 39 intentionally view pornography in any given week

11–13

average age of first porn viewing by boys

12 million

hours a day are spent viewing porn globally on the adult-video site Pornhub

20%

of men and

35%

of women believe that pornography should be illegal for everyone

SOURCES: REGENERUS, GORDON & PRICE, 2015 (PERCENTAGES); JOURNAL OF SEX RESEARCH AND OTHER STUDIES (AVERAGE AGE); PORNHUB

putting reasonable restrictions in place,” says Weiler. He’d like places like McDonald’s and Starbucks—and even libraries—to filter their wi-fi so that they would be porn-free.

PROVIDING A COUNTERNARRATIVE for teens about the porn they’ll inevitably encounter, despite whatever filters are put in place, is a key goal of the young activists. “Thirteen- and 14-year-olds have access to unrestricted and endlessly novel Internet porn way before they discover that it could potentially have harmful side effects,” says Rhodes. Deem points out that he stayed away from cocaine because he was taught it would harm him. He’d like to see porn treated the same way, with schools teaching about the possible side effects of pornography during sex ed. “I would tell my son, I’ll be straight up with you, all superstimulating things, like Internet porn, junk food and drugs, can be fun and pleasurable, temporarily,” says Deem. “However, they also have the potential to desensitize you to normal, natural things and ultimately rob you of the one thing you thought they would give you, the ability to experience pleasure.”

Introducing porn to sex ed at school would seem a quixotic quest. Sex education is already the source of much conflict, and schools do not wish to be accused of introducing kids to pornography, even if the science of its effects were settled. Parents too are wary of broaching the subject, afraid of what questions might be asked. But curiosity abhors a vacuum; on-line porn is becoming de facto sex ed for many young people.

Whitlock, the former sex educator, says she has been surprised by how reluctant her erstwhile colleagues are to speak up about porn. She believes that because sex educators were fighting a negative image of sex for so long during the years of abstinence-only education, they’re allergic to anything that questions sexual appetites. She has found that even asking students to reflect on what their watching habits are doing to their mental health is met with pushback. “It makes no sense to me,” she says. “It’s like saying if you question the value of eating Dunkin’ Donuts all the time that you’re ‘food negative.’”

An ideal way to deliver the message might be online, but ironically, many of these efforts are thwarted by porn blockers. That’s a problem for Brainbuddy. Its creator feels it’s important to get it to the 12-and-older crowd, but users must be over 17 to download it.

The shame around a compulsive porn habit makes asking for help difficult, even though neuroscientists say it could happen to anyone. Then there’s the reverse stigma for young men who speak against the genre in a culture that celebrates sexuality. Deem and other advocates know they are walking into a headwind of apathy, antagonism and ridicule. But they’re not dissuaded. “If anything is going to change,” says Deem, “it’s going to have to come through the guys who went through the trenches, who were actually clicking the tabs and watching the hardcore porn when we were 12.”

One of the newer NoFap members (known as Fapstro-nauts), a 30-something gay man just starting a 30-day challenge, puts it this way: “When I think about it,” he writes, “I’ve wasted years of my life looking for a computer or mobile phone to provide something it is not capable of providing.”

BOOKS

How porn is changing a generation of girls

By Peggy Orenstein

WATCHING NATURAL-LOOKING PEOPLE ENGAGING in sex that is consensual, pleasurable and realistic may not be harmful—heck, it might be a good idea—but that is generally not what the \$97 billion global porn industry is shilling. Its producers have one goal: to get men off hard and fast for profit. That means eroticizing the degradation of women. In a study of behaviors in popular porn, nearly 90% of 304 random scenes contained physical aggression toward women, who nearly always responded neutrally or with pleasure. More insidiously, women would sometimes beg their partners to stop, then acquiesce and begin to enjoy the activity, regardless of how painful or debasing.

Over 40% of children ages 10 to 17 have been exposed to porn online, many accidentally. By college, according to a survey of more than 800 students titled “Generation XXX,” 90% of men and one-third of women had viewed porn during the preceding year. Even if what kids watch is utterly vanilla, they’re still learning that women’s sexuality exists for the benefit of men. An 11th-grade girl confided to me, “I watch porn because I’m a virgin and I want to figure out how sex works.”

There is some indication that porn has a liberalizing effect: heterosexual male users are more likely than their peers to approve of same-sex marriage. On the other hand, they’re less likely to support affirmative action for women. And porn users are also more likely than their peers to measure their masculinity, social status and self-worth by their ability to score with “hot” women.

Perhaps because it depicts aggression as sexy, porn also seems to desensitize: female porn users are less likely to intervene when seeing another woman being threatened or assaulted and are slower to recognize when they’re in danger themselves. Boys, not surprisingly, use porn more than girls. Slightly under half of male college students use it weekly; only 3% of females do.

“Porn has terrible effects on what young women believe they are supposed to look like, particularly during sex,” said Leslie Bell, a psychotherapist and author of *Hard to Get*.

“I’ll be hooking up with some guy who’s really hot,” confided a high school senior in Northern California, “then things get heavier and all of a sudden my mind shifts and I’m not a real person: it’s like, This is me performing. This is me acting . . . And I don’t even know who it is I’m playing, who that ‘she’ actually is. It’s some fantasy girl, I guess, maybe the girl from porn.”

*Orenstein is the author of *Girls & Sex* (Harper/HarperCollins Publishers), from which this was adapted. © 2016 by Peggy Orenstein.*

► For expert advice on talking to kids about porn, visit time.com/ideas