

Shrink Rap Radio #374, October 24, 2013, Exploring the Impact of Internet Pornography on the Brain

David Van Nuys, Ph.D., aka “Dr. Dave” interviews Gary Wilson

(transcribed from www.ShrinkRapRadio.com by John Eastman)

Introduction: My guest today is Gary Wilson, who somewhat accidentally has become an expert on addiction to internet pornography. Gary Wilson is the host of www.yourbrainonporn.com. His website arose about three years ago in response to a growing demand for solid scientific information by heavy internet erotica users experiencing perplexing, unexpected effects, escalation to more extreme material, concentration difficulty, sexual performance problems, radical changes in sexual taste, social anxiety, depression, lack of motivation, inability to stop, and loss of attraction to real partners. As an anatomy and physiology teacher with a particular interest in addiction neuroscience, Gary was aware that such symptoms might be the result of neuro-plastic changes. Applying the website’s concepts of brain plasticity, many former users have braved withdrawal, reversed their symptoms, and restored normal sexual responsiveness. In 2012, Gary delivered a popular TEDx talk entitled, “The Great Porn Experiment.” He also blogs for *Psychology Today*.

Now here’s the interview.

Dr. Dave: Gary Wilson, welcome to Shrink Rap Radio!

Gary Wilson: Hi, how are you doing?

Dr. Dave: I am doing well and I’m really happy to have you on the show. I heard about your work from one of my listeners in Sweden. David Rundolf, I think is his last name—I’m not sure I’m saying that right—and he sends his greetings to you.

Wilson: Oh, great.

Dr. Dave: I gather you guys have had some exchange back and forth.

Wilson: Well, he did write after he wrote you. He did write me.

Dr. Dave: Oh, okay. Well you’re doing a lot of blogging, writing, and presenting about brain mechanisms, in particular related to pornography. So I need to ask you at the outset, what’s your academic background for this?

Wilson: Well, let’s see, my academic background is, in terms of—I’ve taught anatomy and physiology—I’m semi-retired now—for about 20 years, and pathology, human anatomy and

physiology. So that's my largest background, but my real background in this area started about 12 years ago when I met my wife and we eventually wrote two books and it was about, well, about a form of Tantra. Now in doing that, I decided to look into all the research associated with love, bonding, sex, orgasm, ejaculation, and so I've kept up to date on that on the last 12 years and we wrote a couple of books that involved the neurobiology of love, what goes on before and after sex, bonding, etc. So that's where I really got into all of this. Now of course, the reward center and addiction mechanisms are involved with bonding and love and they are also involved with sex and ejaculation and the events around that. So, what occurred, was about 7 years ago my wife's website, which had nothing to do with internet porn, started to fill up with guys posting on her forum, asking for help, and that's because Google puts together the words ejaculation, dopamine, orgasm, addiction. And, she's like, what are you guys doing here? Well, Google put together their posts and more of them started showing up until her website forum just got buried with all these guys looking for help with their porn addiction, with their alterations in sexual taste, and especially with sexual issues, like ED and delayed ejaculation.

Dr. Dave: So, that's fascinating—so her website was about tantric yoga?

Wilson: Yeah, a form of it called Karezza.

Dr. Dave: I'm sorry, called what?

Wilson: Karezza

Dr. Dave: How do you spell that?

Wilson: K-A-R-E-Z-Z-A

Dr. Dave: Oh, okay. And you know I was initially skeptical when I first heard of your work. And my first reaction was, I bet this guy has some kind of a religious axe to grind. Do you? Is that any part of your motivation?

Wilson: No, I'm agnostic. I have, I don't have religious beliefs, neither does my wife, and the reason we got into this is because what we saw on her website was guys with, especially sexual issues, started to give up porn, and they were really desperate, some of them were suicidal, like, "I'm ruined for life, I can't get an erection with a real woman."

Dr. Dave: Wow.

Wilson: I can't, you know, some of them were young, but they couldn't function and they gave up porn for a period of time and they went through what they call a reboot and their erections came back. It took a few months—their desire, the libido, their attraction to real women started to come back. And then more and more started doing it and we saw this huge gap between what was being said about porn and what was actually happening out there. And about that time we started blogging for *Psychology Today*. So we just wrote a few little articles about it. One of

them was called “Porn Induced ED”, or something like that. And my god, it just blew up. So many people looked at that post—it’s over a million. More people started showing up on her website. And finally she said, “You know, you’ve got to create a separate website.” So about two and half years ago I created Your Brain on Porn and I had it organized so guys could get to the material easily. And that blew up. I mean, just so many visitors, so many links to other websites, well over a thousand forums where guys were giving up porn, or discussing internet porn and how it affected their sexuality.

Dr. Dave: Was that term “reboot,” was that your term, or were people spontaneously using that term?

Wilson: Yeah, people I think were spontaneously using that term, because the first guys that started to do the reboot were actually IT professionals, because they had early access to high speed internet.

Dr. Dave: Ah.

Wilson: And they were the first to start to come down with problems, sexual issues, or morphing sexual tastes.

Dr. Dave: Oh, fascinating. Now, you talk about blowing up, it actually has blown up to the point where you gave a TEDx presentation in Glasgow that had over a million and half hits on the web so far. Was that Glasgow, Scotland?

Wilson: Yes, it was, and actually it’s 2 million, because there was a previous version of that particular TED talk. Yeah, so that blew up and that just created more people not only going to my website, but I think it also gave birth to some forums, like Reddit No FAP, or other ones, where guys are experimenting with rebooting, or giving up porn for a certain number of months.

Dr. Dave: Now how does, I’m still curious about Glasgow, how did you happen to be giving a TEDx presentation in Glasgow, Scotland, given that you live in Oregon?

Wilson: Yeah, that’s strange, still strange to me, but evidently some of the people over there who were putting it together knew about my material and then they invited me over to give a talk.

Dr. Dave: Wow.

Wilson: And I, I did.

Dr. Dave: And you did such a great job. I’m always blown away by TED presenters. Did they give you any particular training for your presentation?

Wilson: No, they gave us about 3 pages of rules of what not to do and I think I broke some of the rules, and they are very adamant, “if you go over 15 minutes we’re going to cut you off.” But when you arrive there, they said, “ah, you can talk as long as you want, we don’t care.” Now, if I

had known that, I would've added in a few more bits of information in the TED talk, but as it was it was 15 minutes and that's all I could get in.

Dr. Dave: Wow. Now you start the presentation off with a reference to a presentation given by Philip Zimbardo, well-known psychologist, on The Demise of Guys. What's Zimbardo's thesis?

Wilson: Yeah, so, one of the rules associated with the TEDx is that you show a very popular TED presentation and then you have a response to it. That means you have someone who embellishes upon it or expands on it and that's what my job was, is to expand on it. So, Zimbardo has The Demise of Guys, an extremely popular TED talk, and he was pointing to the fact that he's seeing a decline in young men's performance, an increase in their social anxiety, increase in social inabilities, and he pointed to the heavy use of internet gaming and internet porn as the cause. That was his thought. So, I then took the internet porn aspect. And we have been seeing this quite a bit, how it affected guys, and then expanded on that.

Dr. Dave: Okay, yeah, you took the ball and you really ran with it. Now, you contend that internet porn is highly addictive. So take us through that. And I know that, that you go into brain mechanisms and assert that it alters the structure of the brain. So feel free to rhapsodize on that a bit here, take us through it.

Wilson: Well, you know I don't know, I mean, is it highly addictive? I think there's two aspects, and my views sort of change on this, is that you can have it really affect young men without them becoming addicted. That's what we're seeing in the last 2 or 3 years, is, many young guys who can stop using it without much problem, but yet it's altered their sexuality so that they're having trouble getting excited to real girls. Now, we're talking about 18, 20, 22-year-olds, some of them are having ED, some of them are having delayed ejaculation, loss of libido. So, I think...

Dr. Dave: Just in case anybody out there doesn't know, ED refers to erectile dysfunction. Yeah, go ahead.

Wilson: So, I just want to preface this with the fact that we're seeing lots of negative effects, without there being an obvious addiction state. So, if you want me to expand on the addiction...

Dr. Dave: Sure.

Wilson: First of all, it's pretty much agreed upon that all addictions share certain fundamental mechanisms and brain changes. Now, this is, it's, it's well known that drugs, when you take a drug, they only amplify the effect of the body, or increase the effect of the body, so that means that in order to get an addiction with a drug like cocaine, it simply amplifies certain mechanisms in the brain that are there for natural rewards, just like food or sex or novelty. So, recent neuroscience, looking at behavioral addictions, whether it's pathological gambling, internet addiction, even eating to obesity, are showing that these same mechanisms are in place and then that results in shared sets of brain changes, in the brain, that then that is correlated with certain

behaviors, signs, symptoms, and behaviors that we associate with addiction, such as the inability to control use, cravings to use, continued use despite negative consequences. So, that's what the recent neuroscience is showing. That's where I would start with the explanation.

Dr. Dave: Yeah, and can you say a little bit more about those, those mechanisms, because I know that in your presentation, I think you spoke quite a bit about dopamine, and you showed some very interesting charts of, was it, ram sex? Goats? Something like that?

Wilson: Well, every presentation should have ram sex and goats in it. That's what I think. But no, the charts were showing, the ram sex, were showing the Coolidge Effect, and that's basically the thought that sexual novelty is highly stimulating to all mammals, especially male mammals. So, both novelty—sex of course is the highest level of dopamine available to humans without a drug, and novelty also stimulates dopamine, as do shock or surprise, or even anxiety. And all those can be found on the internet. The shock, the surprise, the novelty, something new, and of course, sexual stimulation. But back to the addiction mechanisms, so the basic root mechanism that's shared by all addictions, according to recent research, is chronically high dopamine in the reward center, that's called the nucleus accumbens, that's what they all share. And then that, if you continue to use, leads to the accumulation of a protein called Delta FosB. And it's called the molecular switch for addiction--there's been lots of study of that in the last ten years. And Delta FosB alters gene expression. So it increases certain genes, decreases others, but what it does at a basic level is it rewires the reward center to get more excited for whatever you are over consuming and the more you over consume it, the more Delta FosB builds up in the reward center, the stronger the rewiring occurs, so it's sort of like a positive feedback loop. You crave it—whatever it is—you build up Delta FosB, you use more of it to keep the dopamine levels high, and then you build up more Delta FosB, and it strengthens the connections until now whatever you've been using, whether it's alcohol or whether it's blackjack or whether it's video games, becomes extremely exciting and any cue or trigger associated with doing your drug or doing your activity really blasts the reward center and makes it super active.

Dr. Dave: Somebody on your website quoted a comedian as, “once you've seen one woman, you want to see them all,” which is funny and true. There's something kind of peculiarly male about that. What is it about us males that are so driven to, you know, this constant hunger to see more female flesh? I don't think women suffer from that.

Wilson: Well, I don't think they do either so much, at least the women I've met. And that goes back to this primitive mechanism, it's called the Coolidge Effect, and the Coolidge Effect gets its name—well, I'm not going to talk about where it gets its name—but the idea is that you throw a rat into a cage with a female and it'll copulate a few times and it'll get bored. But if you throw a new female rat in, it'll go after it again, and you place that with a new female rat, and it'll go after it again. Now, the mechanism behind that is sexual novelty, the search for sexual novelty. And the theory behind that, or the hypothesis, is that males want to spread their genes far and wide, right? So, novelty itself raises dopamine, and so everyone likes novelty, both males and

females, but I guess males really are programmed to like sexual novelty. And now with the internet, you know, it's just endless sexual novelty.

Dr. Dave: Yeah, you say that our brains have not evolved, or are not prepared to deal with the onslaught of so much and such easy novelty.

Wilson: Yeah, and the reason I say that is because think about all mammals, think about even our hunter-gatherer past—we only maybe bumped into a few acceptable females for reproduction. Then you move up to maybe the era of the *Playboy*, in the 50's, the 60's, and finally, well finally guys have access to pictures of naked females. That's extremely interesting. Then you move up to just the internet and they can download pictures, it might take 2 or 3 minutes with dial-up, but then you move into 2006 and you have widespread, high speed internet, and you have what are called "tube" sites, so instead of a male sitting there and looking at a *Playboy* centerfold or two and just imagining touching them or just getting excited, now a male can put up about 20 tabs, go to a tube site, and have little 3 minute videos of real people having real sex and just click from one to the next to the next to the next. So, now not only do you have tremendous novelty, you also are wiring, in my belief, wiring the brain to view sexuality, to become a voyeur, and you're seeing people have real sex, and it's replacing your imagination of looking at a picture, or looking at a girl, or looking at a person. So, it's quite a different parameters now.

Dr. Dave: So, long ago a male might have seen one or two or three or four naked women in his life. That was probably true for a long time, at least in Western culture. So at some point after we all sort of started wearing clothes, and then it's amped up to this place where now a male can see *thousands* of naked women.

Wilson: Yeah and it's not nakedness, it's really novelty. And again I really want to point out the difference, well, let's talk about adolescence, let's talk about someone who doesn't know sex and it's quite a different experience then say a 50-year-old using porn.

Dr. Dave: Okay.

Wilson: The adolescent spends years watching people have sex before he even kisses his first girl or first guy, or even holds hands, so, he has no understanding, he has nothing to, as a base, he is training his brain to need not only this certain level of stimulation, but he is conditioning his brain to, Oh, this is how sex is, this is how people do it. So, it's really two types of learning. One is, conditioning the brain to need a certain level of stimulation and you control that level of stimulation with a mouse, and if you get bored you just click to the next, click to the next. And you are also training your brain to, Oh, this is how it's done. So, that's quite a difference now that we have videos of people doing sex and you can start watching them as early as having an internet connection.

Dr. Dave: Yeah, yeah I think you pointed out in your presentation that some pretty high percentage of 10-year-olds have seen internet porn. Do I remember that correctly?

Wilson: Yeah, that was Professor Loginess (sp?) he was looking at college age men, and this was about four years ago and he said he couldn't find any that hadn't used internet porn. Now, those guys are 25 now. So, think about that's really 15 years old, because now, with smart phones and wireless and a computer in every room, an 11-year-old, a 12-year-old has easy access to free videos on the internet. So, this is really a new stimulus that we've never really encountered before.

Dr. Dave: And so, part of your point is, the brain, the brain is encountering stuff that it's never encountered before, that it's not evolved to handle.

Wilson: Yeah, so when did a 12-year-old have full access to any type of sex act, and be able to click from genre to genre, from BDSM to femdom to gang rapes to lesbian and just go from video to video, and do that even hours on end every day, and this is the stories we hear, where guys will show up on the forums and say, "my god, I can't get an erection to a real girl, I'm 22 and I've spent the last 10 years just escalating through all these different genres and now, you know, I need midgets with donkeys to get off and I can't even get excited to a real girl." So, this is really a new phenomenon.

Dr. Dave: Year, and so, part of what you are pointing out then, is that they may have developed a very distorted view of sex, of sexuality and sexual relationships. There's so many different directions we could go with this because it has implications and tentacles in a way that reach out all over the place.

Wilson: Yeah, and one of the things I'd like to point out, we've talked a lot about sex, but one of the biggest reasons that my site exists is because when these men, primarily young men, late teens, and in their 20's, give up porn, for usually sexual reasons, they find that other conditions, or other symptoms, abate. Some of the most common things they see is an increase in confidence, an increase in motivation, less social anxiety, better concentration, less brain fog, and emotions that they haven't felt before start to come back, they are able to feel things. So what they are seeing is other effects of continued porn use, and I know this sounds a bit crazy, but this is what we've been chronicling over and over again. So, it's quite, that's a big message I would like to put forth, is that some of the younger guys are really being affected by this.

Dr. Dave: Yeah, and you know, we haven't even talked about the view of women. I mean women have certainly complained, many women have complained about pornography, its existence at all, as demeaning and objectifying of women, and this certainly speaks to that and if you cruise through some of these porn sites, it's kind of mind-boggling, where are all these women coming from?

Wilson: Well, I don't know, I don't investigate the porn industry. I have no interest in that. But what we see, now here's the thing about studying porn. I won't go into too much depth, but the one thing you can't do with studying porn or it hasn't been done is to remove the variable, is to have someone who has been using porn pretty much their entire sexual life and then take it away and then monitor the effects. One study did that for three weeks and actually saw some changes in perception. The man really viewed their partners in a different light. But to remove the variable for several months, what guys have found is they report over and over again, they viewed women differently, they no longer see them as body parts, they can look at their face, they can communicate with them, they get fluttery feelings in their bellies again, so they really see a change in perception, and the reason I mention it is that the few studies that have asked about internet porn, and they ask guys to, again, this is self-reports, self-perceptions, has porn affected your perception of the opposite sex? Well, if all you have ever known is using internet porn, what are you going to say? You are going to say no, because you don't know how it has affected it. But until you remove that single variable, you don't really know. That's the point I'd like to make.

Dr. Dave: Yeah, now it was synchronistic for that as I was preparing for this interview, there's a new Hollywood movie out called "Don Jon," which seems right on point for our discussion. Have you seen it? And if so what are your thoughts about it?

Wilson: Yeah, I saw it last Wednesday. Interestingly enough, the original title was "Don Jon's Addiction," but the company decided to take out the addiction word. What did I think about it? I thought it was pretty good. There are some unrealistic aspects and some realistic aspects. One unrealistic aspect is, here he is, he's using porn quite heavily, and yet he's out there getting the best babes every night and having sex with them. Now, certainly that can happen. But a lot of what we see is that young guys who are really heavily into porn, it inhibits their motivation to pursue partners, it causes social anxiety or increases it, it decreases confidence. So, when they remove the porn, they report over and over again how it makes them much more motivated, they feel more confident. So, I think that might have been a little bit unrealistic, but there are guys like that. Another thing that was unrealistic, even though he talks about, oh, I was masturbating to porn 11 times a day when I broke up with Scarlett Johansson it was very, relatively easy for him to give it up. The guys we're in contact with, they really struggle. They go through, often severe withdrawal symptoms, lethargy, anxiety, insomnia, depression. So, it's a lot harder to give up. So those are maybe unrealistic parts.

Dr. Dave: I don't know if you know the back-story for that movie—I don't—but I think it's an interesting question to know, you know, where did the idea for the story come from and is there a possibility that, you know, somebody may have discovered your site or seen your TEDx presentation and gotten the idea to do this movie?

Wilson: Well, I didn't think so at first. The actor who produced it and wrote it—I forget his name right off—he said he got the idea because his mother, every time commercials, when he

was a kid, commercials would come on showing females using sex to sell products, she would just tell him, “That’s not the way it’s supposed to be!”, so that was drilled into him. But it made me think that perhaps they did see my site because of what occurred when the one actress said, now, why don’t you give up porn. Now, he gave up porn and he couldn’t masturbate without it. And that’s one of the suggestions on our site, is why don’t you stop using porn and then compare your excitement or your erection quality when masturbating to porn to masturbating without porn? And if you see a really big difference, especially if you can’t get an erection without porn, that tells you something’s happened. And that’s what happened to Don Jon, he just couldn’t masturbate without it.

Dr. Dave: Yeah, now do you think internet porn is more addictive than the internet itself and other digital activities such as texting, gaming, gambling, etc.?

Wilson: Well I think a recent study from Germany really pointed to two specific internet activities that appear to be the most addicting. And that’s video gaming and internet porn. I just want to point out that in the last 3 years, 4 years, there’ve been about 60 brain studies on internet addiction and internet video game addiction and every single one of them have shown the same fundamental brain changes as seen in drug addicts, so we just need to put that on the table. And if we look at gaming and we look at internet porn they have similar qualities. And that’s the ability to keep dopamine elevated pretty much for hours on end. With video gaming, again, it’s novelty. Internet porn, it’s novelty. With video gaming you have shock, surprise, violating expectations—all those raise dopamine. And you have the same thing with internet porn. What you have with internet porn that is different than video gaming is you have the addition of sexual excitement and sexual excitement measured in dopamine levels is much higher than any other natural rewards. A second aspect is you have the adolescent. A 12 or 13-year-old boy who is extraordinarily fascinated by anything sex, and he’s going to be searching and looking for anything that’s interesting and him and his friends are going to be exchanging porn on their iPhones and talking about it at school so it has another extra quality there that every adolescent boy just loves.

Dr. Dave: Yeah. In terms of the research you raise the whole issue of the challenge of finding a control group because virtually all young men have been exposed to internet porn and so that set me to wondering about that and I wondered, well, well what about women? Could they be used as a control group? What about cloistered communities, such as monasteries? Or how about prisons? I think they’re not allowed to watch the internet.

Wilson: Well, you know, that statement was really to point out that we can’t use questionnaire studies to find out the effects of porn if most everyone is using it. You can find control groups of people who really don’t use it that much, just because they’ve been exposed to it. And you can compare those to guys that are self-identified as having a severe addiction. And the reason I say you can do it, because just two weeks ago, Cambridge University announced that in fact that’s what they did. They did the first brain scan study on internet porn addicts and compared them to

a control group of age-matched young men who claimed not to have an addiction and guess what they found? They found similar brain changes as seen in those with drug addiction. So, that's the first ever brain study done by Valerie Voon at Cambridge University. So, yes, I think we can do that, but you really, really have to be selective in your controls and you have to be very selective in the people who do have the addiction.

Dr. Dave: Yeah. I found myself thinking about depression and the fact that comparison in general, the sort of, a finding from positive psychology is that when we compare ourselves to other people who are more accomplished than we are, or who seem to be smarter or richer or whatever, that kind of comparison can be depressing and can lead to unhappiness. So, I have to think of the impact of seeing all these very desirable women and the impact that that can have over time, seeing male actors who appear to have really easy access, not to mention prowess, greater size, etc.

Wilson: Yeah, now, we see this too, in fact, from Don Jon, one of the statements he said was, when he was talking to the older woman, she said, "you know, porn's not real." And he looked at her confused and said, "Well, the porn I watch is real." So, guys will actually get on the forum and ask other guys, "Is this real? Is this real?" And yet, they will compare themselves to other guys both in performance, both in penis size, and they have to be reminded, you know, this is a movie, this is not reality, the porn actors are probably taking drugs or being injected or you just can't compare yourself to a movie. So, yes, that is a very good point and some people have suggested that with all this viewing, that this may also cause increased anxiety once young males enter into real sexual relationships.

Dr. Dave: And I'm wondering about the impact on women, you know, is anybody doing research on that, on how many women are watching internet porn? And this has to impact their expectations of what they're expected to do, how they're expected to look, etc.

Wilson: Yeah, that, you know that's a tricky question because a lot of the research is sort of vague, it'll talk about exposure to porn, or use of porn, and they'll break it down into, oh, every month, once a year, and so it doesn't really give you a good idea of how much each group of males and females are using. The general consensus is that most males use it, at least occasionally, and most females do not, but it's really hard to get statistics. Now...

Dr. Dave: Well, have you had any women log onto your blogs, your wife's website, your website, talking about these issues? Because I'd be interested in qualitative research about this.

Wilson: Yeah, so one of the very last *Psychology Today* posts my wife did was going onto one of the major sites where guys are giving up porn, it's a new site called No FAP Reddit, it has about 75,000 members now and she went back....

Dr. Dave: Don't lose the thought, but can you spell that for us.

Wilson: Yeah, no, N-O, F-A-P, no fap, that means no masturbation, but they're really talking about porn, no fap Reddit, R-E-D-D-I-T.

Dr. Dave: How does "fap" mean masturbation? I don't get that.

Wilson: Fap, fap, fap, the sound, fapping.

Dr. Dave: Oh, okay, thank you, now, where were you going before I interrupted you?

Wilson: Well, she decided to, they break down the members into females and males, so she went back and looked at the posts of females to find out, now are the females coming on there to complain about boyfriends and husbands? Or are they coming on because they have porn problems? Well, she found that the large majority were coming on because they were having problems with porn. And the primary problems were sexual issues. They could no longer get excited or have orgasms with their partners or even had trouble having orgasms masturbating any more.

Dr. Dave: Wow.

Wilson: So, yes, women are having problems, but how many? Who knows? The other aspect I think you're asking is, is partners of men who are using porn. Well, some women it's really a problem because once they find out, and usually they find out because their guy isn't really interested in them that much, isn't giving them sex like they used to, isn't having sex like they used to, and once she finds out that the guy is masturbating every day to porn, but doesn't want to go to bed with her, it's pretty devastating, especially when maybe she finds out and looks at the porn he's looking at and then she compares herself to all those endless porn stars.

Dr. Dave: Now, I'm wondering if you have critics, you know, anybody who is as visible and out front as you are is likely going to have some critics. What do your critics say?

Wilson: Yeah, well, I definitely have critics. What do my critics say? Well, the first thing they say, which is now incorrect, is that there's no studies showing porn is addiction, is addictive. Well, that was sort of a red herring because there were no brain studies yet done on porn addicts. However, the first brain scan study done on porn addicts, in Cambridge University, in fact showed the same brain changes as those that occur in drug addicts. So, I can make the claim now that 100% of brain studies on porn addicts show it to be addictive. So, that was the first claim. And the other claim really sort of centered around the idea that drug addictions are true addictions and behavioral addictions are not. That was their argument point, but that's a false argument because for years gambling addiction has been in the DSM. Recently, as I said, we've had 60 brain studies, and that doesn't even include the hundreds of questionnaire studies that show that internet addiction has the same brain changes, and now there is lots of research looking in both animals and humans on food addiction, eating to obesity, and all of those show similar mechanisms and similar brain changes, so that argument has really been flushed down

the toilet, in my belief. So, those are a couple of the major arguments against the site. The other argument is that it's a lot of anecdotes, which is true. However, if you want to look at it, in these anecdotes what these people are doing is they have used porn for years, then they remove this single variable, then we see the effect of what occurs when they remove that variable, so, in a way, that's a pretty good experiment, even though it's not random samples.

Dr. Dave: Yeah, yeah. Now you mentioned the DSM that, I think you said that gambling is recognized in the DSM. How about pornography or internet pornography?

Wilson: Oh, no, the DSM has not recognized hyper-sexuality, I don't like that term, and they are, I think in the appendix, they do have internet addiction under consideration, so I don't know if it put internet porn under that, but that's for further consideration, which may be 15 years down the road and, you know, the DSM, to me, the DSM doesn't reflect reality, because the DSM is constantly changing and reality doesn't constantly change. So, they have committees, as you well know, you can explain it better than I, they get together, these committees may have prejudices, like the committee for high, for sexual issues, a lot of sexologists, to be honest, do not believe that either sex addiction or porn addiction cannot exist, so if that committee is the one that's heading, well, looking into approving internet porn addiction, then they are unlikely to accept it. Then you may have other committees which are dealing with addictions, like drug addictions or behavioral addictions such as gambling, and yet they are not dealing with the sex addiction or the internet porn addiction, so, in essence internet porn addiction is like this, like this strange animal that no one knows where to put. Does it go under internet addiction? That's where I think it should be. Does it go under hyper-sexuality? That's where some people think it should be, but I don't believe in that. So, it's, it's you know, and then recently Tom Insel, the head of the NIMH, said the DSM is really just not a good, I don't have the words for it, but it's really sort of ancient, it doesn't really do a good job of defining what are psychological conditions.

Dr. Dave: Yeah, I saw that, I was struck by that as well, it seemed to, seemed to undo all the work that these committees had put so much time into. He's kind of saying it's not really a good guide for future research or for judging, you know, the quality of research, or the eligibility for funding.

Wilson: Yeah, so there's a lot of pushback against the DSM. And again my bottom line is does it represent reality? Right now we have a brand new stimulus and that's highspeed internet and so the research has not caught up even if they, heck, they've only done one brain study yet, so the research has definitely not caught up with the effects of this brand new stimulus in our environment.

Dr. Dave: You know, one of the things that we haven't talked about in terms of a possible impact of this internet porn is an impact on judgment and what caused me to think about that was I was thinking about the case of Anthony Weiner, among other, you know, high profile

politicians who get, quotes, caught with their pants down, and the irony of Anthony Weiner and his name and what he did, it's like, they talk about stranger than fiction. I mean, if you put this in a novel it would sound far-fetched. So, do we know anything about impact on judgment? Could that possibly be what's going on, you know, with somebody, like, somebody like Anthony Weiner?

Wilson: Yeah, the way I view it, my model is escalation. So, what many of the guys report is that they start off with just straight porn, or lesbian porn, and then they get bored with that. Then they search for something new, maybe it's rape porn, or maybe gang bangs, and then they move into BDSM, they just keep moving over years because they habituate, or maybe they go through addiction changes where they now have lower dopamine, or lower dopamine sensitivity, and they need more and more stimulation. It could be akin to tolerance, with drugs you need more and more stimulation, so how a porn user would do it is they'd go through newer and newer genres, in addition to using more and more, so, someone like Anthony Weiner, or maybe some other guys would then need to act it out. So, we see that as though they'll go through the porn, the porn and finally they'll be on Craigslist, searching for someone to act out that particular porn scene with them because now looking at it isn't enough. So, maybe Anthony Weiner, he just needed to act this out because it's the next level to get the same buzz. That's the way I view it.

Dr. Dave: Yeah, and it's also, it was an instance of sexting, and so there's this whole new phenomenon and concern about teens and sexting, you know, what comment would you have about that? Does that in some way tie into what we're talking about?

Wilson: Yeah, I think that's pretty common. The biggest age group now that's on these forums that link to my site are probably about 16 – 30, 16 – 25, and it's common for them to get on Skype and have Skype sex, and occasionally they take pictures, and they, they have them on their computers, so they do this with partners, so, they have downloaded pictures of their sex with each other and they'll even ask, a common question is, "Can I use the pictures I took of myself having Skype sex to masturbate to? Is that really porn, do I have to give that up?" So, this is just common, this is just the norm for them. Now think about my worry is that a lot of these young guys, they're doing it in their teens, they take a picture of their girlfriend, who's also in their teens. Now, if he spreads that around, now you have child pornography and now he is, you know, a sex offender for life if he gets caught, so that's very worrisome.

Dr. Dave: Oh, yeah. Wow. Wow. As I say this has tentacles that just go in so many different directions. I invited David in Sweden to, kind of asked him if he had any questions that he'd like me to put to you, so here's one from him. What do you think of the anecdotal stories of ex-users experiencing much more energy, positive mindset, confidence, motivation, drive, clear head, etc, after rebooting? Is it real or placebo? What could the possible neurological mechanisms behind these experiences be?

Wilson: Well, I don't think it's placebo because, you know, my site just started a few years ago and then some of these forums just started maybe a year and a half ago and we've been monitoring this on my wife's old site for 7 years and the same benefits keep showing up again and again. And, in fact, that No Fap Reddit—many of the guys who go on there to do what they call a 90-day reboot, which they give up porn, and sometimes masturbation, is many of those are skeptics and then they'll report these same benefits and one of the most common is an increase of brainpower, their brain fog will go away, increased concentration, increased memory, ability to work longer. That's really been amazing. Some of them will go back to school, their grades will just shoot up. We see this again and again. So, you know, what could possibly be behind that? So I just take what is known neurologically and try to match it up, it's just a guess, and what all these benefits have in common is, ah, dopamine, so, if we think about social anxiety, that's associated with low dopamine and low dopamine receptors. Depression—new studies on rats have shown dopamine is central to depression. Certainly ADHD is associated with low dopamine and low dopamine D-2 receptors because they give Ritalin and Adderall and that increases dopamine and you could go on and on, but reward circuitry dopamine is sort of the central player in many of these benefits that guys experience. So, I tag it onto—maybe years of porn use has affected their dopamine systems. But again, it's just a guess.

Dr. Dave: Well, David asks another question directly related to that as, in your mind, what are the best strategies for reversing de-sensitization, that is, increasing one's dopamine receptors to normal levels? How can we jack up our dopamine in non-destructive ways?

Wilson: Yeah, a lot of guys ask this because about three years ago when I opened up my site I quickly put out a video called “Your Brain on Porn” and it has quite a bit about dopamine in it and if I had to do it again, which I will, I'd probably de-emphasize the dopamine. So, they're all a little obsessed with dopamine D-2 receptors, but, actually there's a site called Getting Stronger which is put together by a really sharp guy with about four degrees in biochemistry. And he talks about the natural ways you can increase dopamine, that's a few of his articles, and one of them of course is exercise. Studies have found that regular exercise, aerobic exercise, increases dopamine and perhaps increases dopamine receptors. Another one is meditation. They found in meditators they have spike of about 60% higher dopamine when they meditate and it may, they're not sure yet, increase dopamine receptors. Another one, interesting enough, is called intermittent fasting, where they may take a whole day off of eating, and that has been shown to increase dopamine receptors also. Some even suggest cold showers—a big thing that guys do is start taking cold showers in the morning, something I will never do. But they find benefits from it, they just love it, it really perks them up, they just feel happy all day, but I don't know if there's any research behind cold showers.

Dr. Dave: That's kind of folk wisdom, or old wives' tale, isn't it? “You need to take a cold shower!”

Wilson: Yeah, but isn't there some truth behind folk wisdom?

Dr. Dave: Yeah, much of it, I'm just struck by that. So, I would think that we need more research on recovery, on the recovery process, on the whole rebooting thing. Are you aware of anyone working on this, that is any serious scientists that are working on this?

Wilson: No, I'm not, and that's what I would hope would happen. The only report we got was some press releases from the head of the top urology organization in Italy, where he did a couple reports at their yearly conference and what he noticed, Doctor Carlo Foresta that was mentioned in my TED talk, is that about 70% of the young people coming to about five different clinics, the cause of their ED, erectile dysfunction, was porn, and the reason he said that is because he had them get off of porn and their sexual functioning came back. So I think the best experiment, the most solid experiment could be taking young men, have them completely checked by urologists, make sure there's no other cause to their chronic ED, we're talking chronic ED, ED where you can't get an erection by masturbating, and then have those young men go through a reboot process and then monitor the results. So, if their erections came back to baseline, whatever that is, that would show a definitive medical condition that has been caused by use of internet porn. I think that'd be a great experiment.

Dr. Dave: Yeah, you know I have a certain number of doctoral students that listen to this show and I just want to put the thought out there that it seems to me like there are a lot of potential doctoral dissertations in what we've been talking about here.

Wilson: Yeah, and I think, you could also, you guys are the experts in this, you know, do certain psychological exams, examinations or questionnaire, have them do it before they reboot and then have them do it 6 months later after they reboot and see the difference in those, that might be an experiment.

Dr. Dave: Yeah, yeah, so where do you see all this going?

Wilson: Yeah, I have no idea. We see Your Brain on Porn as sort of a clearinghouse, a place where we're trying to fill in the gaps of information between what has been said about the effects of old porn, you know, magazines or a rental DVD, and what's going on, actually going on in young men and men who have been using this brand new stimulus of high speed internet porn, so we're filling in a gap and we're hoping that good research done will eventually show that it can cause problems. And I think that's the first step to acknowledge that continued use of internet porn, starting in adolescence, where the adolescent brain is highly malleable, and it's rewiring itself to all these sexual cues, during adolescence, that that can have effects, it can have negative effects, and that'd be the first step I'd want to see happen, is acknowledgment of that and research on that.

Dr. Dave: Yeah, now what about edge cases, I mean, you've talked about adolescence, what about older males who perhaps have a wife who's no longer interested in sexuality, or available to them, or older, older males who are not married and, or are not physically attractive, don't seem to have any prospects—might internet porn be playing a positive role for them?

Wilson: Well it might be, yeah, it could be playing a role for sexual release, and I have no judgment about that. My motto is do whatever you want to do. And whatever you need to do. But, but here's an aspect we want to keep in mind is let's look at some of these older men, like my age, in their 50's, they find that if they give up internet porn, they actually see their partners, their longstanding partner, as much more appealing, so I just want the older men to be open to the idea that once they find their partner more appealing there may be reciprocal action, if you know what I mean.

Dr. Dave: Yeah.

Wilson: It might be good just to do an experiment. Remove porn for about 90 days, 120 days. If you don't see any benefit you can always go back and make up for lost time, right?

Dr. Dave: Right. Again, a question from David in Sweden: If people want to help your crusade or mission grow and gather more momentum, how can they help, what do you need? Researchers? Media exposure? Money? PR? Bloggers? Twitterers? Scholars? Journalists? Tech wizards? How can the community help? Who should they contact? How can we be of service, he asks.

Wilson: Well, I don't like the word "crusade." I, again, I see Your Brain on Porn as an information clearinghouse. What do we need, what do we need? Well, what, what is needed out there is good research by researchers who don't have a preordained agenda in finding that porn is no problem. We need research by neutral researchers. And then we need that research to get out into the media. So that would be the primary thing, I think.

Dr. Dave: And what are your own plans for the future? Are you thinking of a book? Conducting a study?

Wilson: No, I'm not going to conduct a study. And as far as a book? I don't think so, You know I'm pretty much taking it day by day and primarily working on the website and trying to update some of the information, and, because it's constantly, this is a moving target, you know it's been quite a moving target as we see more and more effects on adolescents. So that takes a lot of updating, because when I first started Your Brain on Porn it was really about, oh, if you have a porn addiction, then here's what's going on. Now we're seeing a complete change where a lot of the people having problems are not addicted. They are young men and it's having a negative effect. So that's taking a lot of updates of my website.

Dr. Dave: Yeah, that's an interesting distinction—not addicted, but having problems.

Wilson: Yeah, and that's what surprised me, because this is a big change. So, if you look at the demographics of the guys who started showing up at my wife's website, they were almost all above 30 and they're IT professionals and that was just 6 years ago. In the last 2 years, looking at the demographics of some of the websites and forums that link to Your Brain on Porn, the

demographics have completely shifted to the vast majority being ages 15 to 25, so they're telling us a different story because they are the first generation who grew up using highspeed porn, having access to these videos on tube sites, and they're telling us, "Wow, I'm not addicted, I'm only doing it 2 or 3 times a week, but I'm noticing specific benefits when I stop, and that is surprising to me."

Dr. Dave: Mmm, hmmm. Okay, well maybe that's a good place for us to wrap it up, so, Gary Wilson I want to thank you for being my guest on Shrink Rap Radio.

Wilson: You bet, my pleasure.

Dr. Dave: First of all I want to thank Swedish listener, David Rundolf for alerting me to Gary Wilson and his work. It goes to show that listeners' suggestions don't fall on deaf ears, even though I can't possibly gratify them all. And to be truthful, I initially wrote this one off. But then as David described in an email his own struggle with these issues and the helpfulness he found on Gary Wilson's site, I was kind of haunted by his suggestion, and finally decided to check out Gary's site. My first reaction, as you heard, was my suspicion that maybe this guy was some kind of right wing religious wingnut. Then I noticed the link to his TEDx presentation and as a result of that, as well as some exploration of his *Psychology Today* writing, plus exploring the materials on his website, I became somewhat of a convert. After I scheduled the interview I became even more convinced that it was an important thing to do by the synchronicity of the Don Jon film, which had just come out. I also went into that film with a lot of skepticism, figuring it would be some kind of sleazy Hollywood sex romp. Well, I was wrong again. I actually left thinking it was a courageous exploration of an important topic, as well as being entertaining, alternately funny and moving. So, once again, I get slapped in the face by my assumptions and judgments. While Gary doesn't have the implied authority of a PhD behind his name, I think he's done some really excellent qualitative research here. It was the notion that internet porn might actually be wiring young brains that particularly hooked me. The idea that these brains might be encountering a welter of stimuli for which evolution has not prepared us. There are so many implications and paths to explore in relation to internet pornography. In fact, something I've known from other sources is that it's our largely male greed for pornographic stimulation that has driven much of the technological growth of the internet. It's helped to drive the higher speeds we see today, along with online video technology. It provides a huge source of money to support this rapid technological growth. And let me repeat once more to any doctoral students out there, that I think there is a wealth of potential dissertation ideas here. If you wish to learn more, Gary's website is: www.yourbrainonporn.com. You'll also find links there to his *Psychology Today* blog, as well as his aforementioned TEDx presentation. I hope you'll let me know what you think in the comments area for this episode. I'm imagining that we might get some pretty interesting posts there.

