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Contact: John R. Polito
john@whyquit.com
(843) 797-3234

Addiction to Smoking Nicotine a Mental Illness and Disease

by [John R. Polito](#)

People who have schizophrenia commonly hear voices, while dependent smokers sense want for more nicotine. Although the title of this article sounds horrible, romanticizing smoking while denying the existence or true nature of dependency dooms millions to early graves. The good news is that freedom from nicotine is vastly more rewarding than the dread-filled message playing inside the fooled addict's diseased mind.

According to Dr. Nora D. Volkow, Director of the U.S. National Institute on Drug Abuse (NIDA), "drug addiction is a mental illness. It is a complex brain disease characterized by compulsive, at times uncontrollable drug craving, seeking, and use despite devastating consequences - behaviors that stem from drug-induced changes in brain structure and function."

[Five million](#) smokers annually smoke themselves to death. Every puff destroys additional tissues while introducing up to [81 cancer causing chemicals](#). Smoking claims [half](#) of adult smokers and is projected to kill [one billion](#) before century's end. Here in the U.S., males claimed by smoking lose an average of 13 years of life, while females lose 14. Frankly, there's no nice way of saying it. Smokers are committing slow suicide, and they know it. But why?

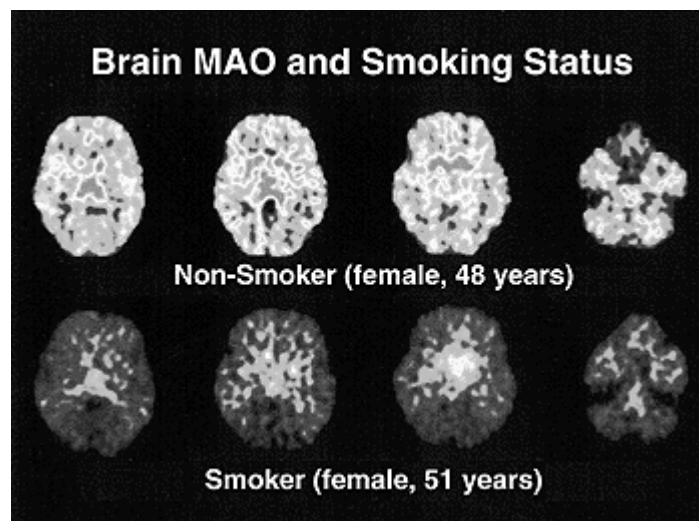




These photos of 34 year-old Bryan Lee Curtis were taken 66 days apart. As shown, small cell lung cancer is extremely aggressive. One-quarter of adult smokers are claimed by their addiction during middle-age.

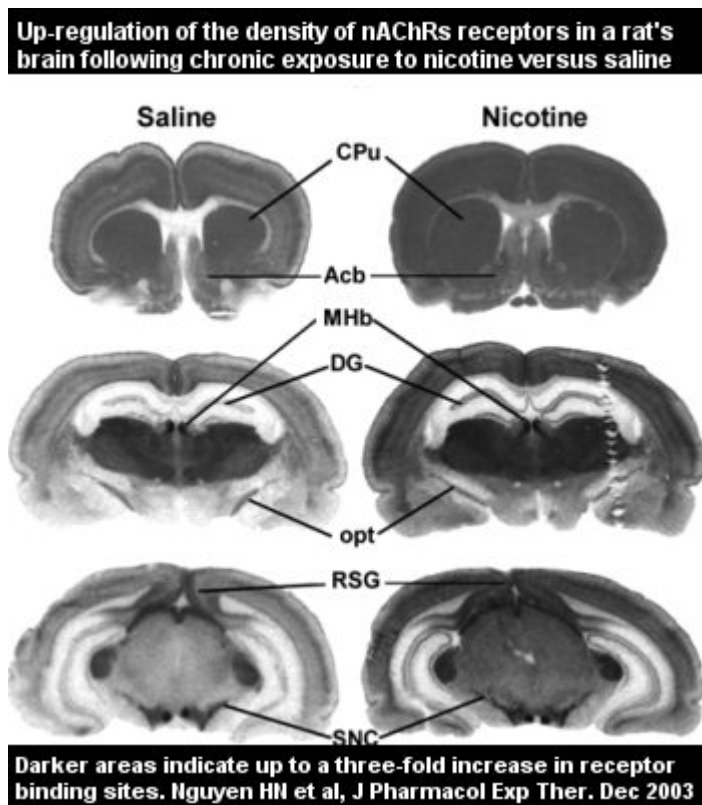
Smoking nicotine is extremely addictive. An alarming 26% of youth [report](#) signs of loss of control over continued smoking after just 3 to 4 cigarettes, rising to 44% after 5 to 9 cigarettes. There's growing consensus among addiction experts that nicotine dependency is as permanent as alcoholism, that it hijacks the same brain dopamine pathways as illegal drugs, and that successfully arresting nicotine dependency is as hard or [harder than quitting heroin](#).

Dr. Volkow's 1999 brain [imaging study](#) showed smoked nicotine's amazingly quick arrival time, its stimulation of dopamine pathways, and how cigarette smoke diminishes MAO (a killjoy enzyme), making smoked nicotine possibly the most perfectly designed drug of addiction. Not only does nicotine stimulate dopamine release within ten seconds of a puff, suppression of MAO and normal dopamine clean-up allows it to linger far longer than a natural release, such as occurs when eating food or quenching thirst.



More recently, scientists have documented how nicotine physically alters the brain. Nicotine activates, saturates and [desensitizes](#) dopamine pathway receptors, which is followed by growth or activation of millions of extra receptors, a process known as [up-regulation](#). One cigarette per day, then two, then three, the longer nicotine is smoked, the more receptors become saturated and desensitized, the more grown, and the more nicotine

needed to satisfy resulting "want" for replenishment.

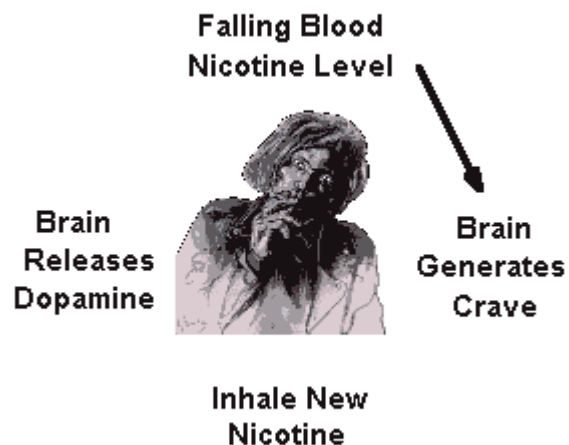


[According to Dr. Volkow](#), addiction is a disease where brain changes translate into an inability to control drug intake. These drug induced brain modifications then signal the brain with a message that's equivalent to "when you are starving," the signal to "seek food and eat it," that the drug is "necessary to survival."

Dr. Volkow has documented how the brain's dopamine system makes us take notice and "pay attention" to critical survival events such as food, water and reproduction, how it generates extremely durable memories, its effects upon motivation and drive, and how certain drugs like nicotine are able to take the system hostage. As Dr. Volkow puts it, dopamine ensures "long-lasting memory of salient events."

A true priority or "[wanting](#)" disease, it's why the dependent user seems deaf to their loved one's pleas to quit, and blind to articles such as this.

What right do any of us have to expect to awaken them to truth when their mind's priorities teacher is pounding home the contrary message that smoking nicotine is as important as eating food? Whom should they believe, us or their mental illness? It doesn't mean we'll stop trying.



Dr. Volkow [teaches](#) that drug addiction damages impulse control, the ability of the rational, thinking mind to control unhealthy impulses flowing from the primitive limbic mind. "So, it's like when the brakes in your car don't function, and an onlooker says, 'You should have stopped at the red light! Why didn't you brake?'"

Priorities hijacked, their mental disorder leaves them convinced that smoking nicotine defines who they are, gives them their edge, helps them cope, that life without it would be horrible, that quitting would mean endless suffering and feeling deprived for the rest of their life.

The Good News

The good news is that it's all a lie, that drug addiction is about living a lie. It's hard work being an actively feeding drug addict, and comfortable again being you. The good news is that knowledge is power, that we can each grow smarter than our addiction is strong, and that recovery is entirely do-able. In fact, today there are more ex-smokers in the U.S. than smokers.



While the first few days may feel like an emotional train wreck, beyond them, with each passing day the challenges grow fewer, generally less intense and shorter in duration. Recovery leads to a calm and quiet mind where addiction chatter and wanting gradually fade into rarity, where the ex-smoker begins going days, weeks or even months without once wanting for nicotine.

Recovery is good, not bad. It needs to be embraced not feared. The good news is that everything done while under nicotine's influence can be done as well or better without it.

"Our brain has tremendous capacity for recovery," says Dr. Volkow. But the addicted person "has to take responsibility that they have a disease."

While no cure for the disease, there is only one rule that if followed provides a 100% guarantee of success in arresting it -- no nicotine today.

Successful Recovery

Each year, more successful ex-smokers stop smoking cold turkey than all other methods combined. Their common thread? No nicotine, just one hour, challenge and day at a time. The common element among all who relapsed? A puff of nicotine.

On a conscious level, roughly 70% of daily smokers want to stop. But few understand how and even fewer appreciate that they're dealing with a permanent priorities disorder and disease of the mind. Instead, they invent justifications and rationalizations to explain why they must smoke that next cigarette. Subconsciously, they've established nicotine use cues. Their use cues trigger urges or craves upon encountering a specific time, place, person,

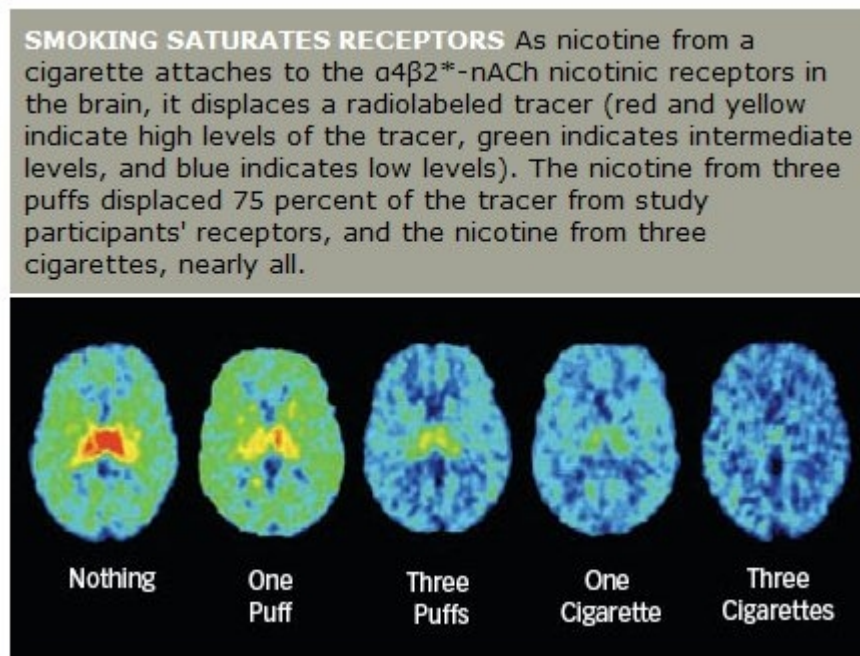
situation or emotion during which they've trained their mind to expect a new supply of nicotine. But the catalyst and foundation for both conscious rationalizations and subconscious conditioning is their underlying chemical dependency.

Trapped between nicotine's two-hour elimination half-life and a gradually escalating need to smoke harder or more, the dependent smoker faces five primary recovery hurdles: (1) appreciation for where they now find themselves, (2) reclaiming their hijacked dopamine pathways, (3) breaking and extinguishing smoking cues, (4) abandoning smoking rationalizations, and (5) relapse prevention.

The Law of Addiction

Most quitting literature suggests that it normally takes multiple failed quit smoking attempts before the smoker self-discovers the key to success. What they don't tell you is the lesson eventually learned, or that it can be learned and mastered during the very first attempt.

Successful recovery isn't about strength or weakness. It's about a mental disorder where by chance and happenstance dopamine pathway receptors have eight times greater attraction to nicotine than the receptor's own neurotransmitter, where just one puff and up to 50% of those receptors become occupied by nicotine.



While most quitters walk away from trying to cheat when quitting feeling like they have gotten away with it, it isn't long before their awakened dependency is wanting or begging for more. It's called the "[Law of Addiction](#)" and it states, "Administration of a drug to an addict will cause reestablishment of chemical dependence upon the addictive substance." Again, it isn't about a lack of willpower. It's about the design, purpose and function of our brain's dopamine pathways, to make events which activate that circuitry nearly impossible in the short term to forget or ignore.

NEVER TAKE ANOTHER PUFF!

The benefit of fully accepting that we have a true chemical dependency and permanent brain priorities disorder cannot be overstated. It greatly simplifies recovery's rules while helping protect against relapse. Key to arresting our disease is obedience to one simple concept, that "one is too many and a thousand never enough." There was always only one rule, no nicotine just one hour, challenge and day at a time.

Navigating Withdrawal and Reclaiming Hijacked Dopamine Pathways

Like clockwork, constantly falling nicotine reserves soon had hostage dopamine pathways generating "want" for more. Sensing that "want" thousands of times per year, how could we not expect the dependent smoker to equate quitting to starving yourself to death? The essence of drug addiction is about dependency quickly burying all memory of the pre-dependency self. The first step in coming home and again meeting the real us is emptying the body of nicotine.

It's surprisingly fast too. The amount of nicotine remaining in the bloodstream is cut by half every two hours. The new ex-user experiences peak withdrawal and becomes 100% nicotine-free within 72 hours of ending all use. Extraction complete, healing can now begin. While receptor sensitivities are quickly restored, down-regulation of the number of receptors to levels seen in non-smokers may take [up to 21 days](#). But after two to three weeks the ex-user's dependency is no longer doing the talking.



It's critical during early withdrawal [to not skip meals](#), especially breakfast. Attempting to do so will likely cause blood sugar levels to plummet, making recovery far more challenging than need be.

Nicotine is a stimulant that activates the body's fight or flight response, feeding the smoker instant energy by pumping stored fats and sugars into the bloodstream. It allowed us to skip breakfast and/or lunch without experiencing low blood sugar symptoms such as feeling nervous or jittery, trembling, irritability, anxiousness, anger, confusion, difficulty thinking or an inability to concentrate. Eat little, healthy and often.



Also, heavy caffeine users need to know that (as strange as this sounds), [nicotine doubles the rate by which caffeine is removed](#) from the bloodstream. One cup of coffee, tea or one cola may now feel like two. While most caffeine users can handle a doubling of intake, consider a modest reduction of up to one-half if feeling anxious or irritable after using caffeine.

If your diet and health permit, drink some form of natural fruit juice use for the first three days. Cranberry juice is excellent. It will aid in stabilizing blood sugar while accelerating removal of the alkaloid nicotine from the bloodstream.

One caution. While we need not give-up any activity except nicotine use, use extreme caution with early alcohol use as it is associated with roughly 50% of all relapses.

Extinguishing Use Conditioning

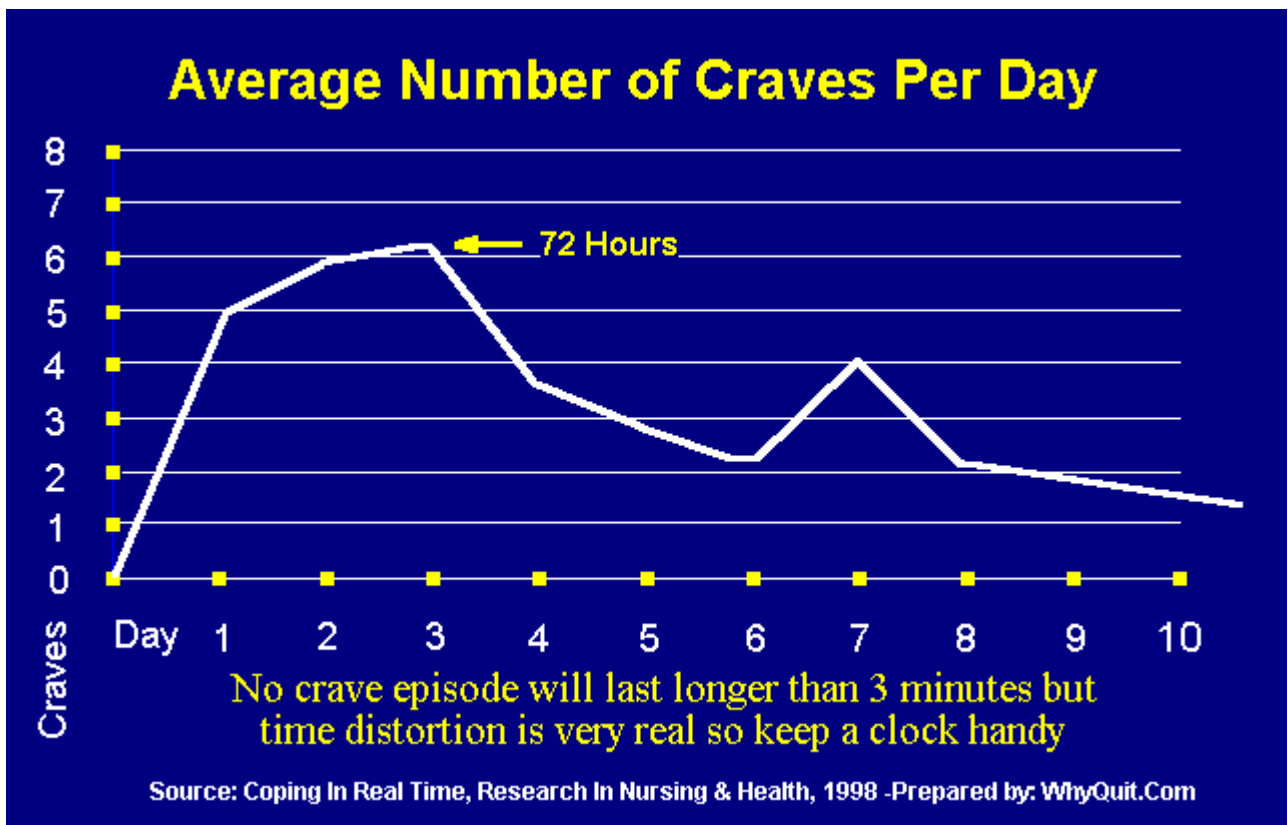
Embrace recovery don't fear it. Why fear a temporary journey of re-adjustment that transports us to a point in time where we're going days, weeks and eventually months without wanting to smoke nicotine?

Each cue driven crave episode presents an opportunity to extinguish additional conditioning and reclaim another aspect of life. We may have trained our mind to expect nicotine during stressful events, when walking in the back yard, while driving a car, talking on the phone or encountering a smoking friend. Attempting these activities after quitting may generate a short yet possibly powerful crave episode.



Success in moving beyond each episode awards the new ex-user return of another slice of a nicotine-free life, a surprising sense of calm during crisis, return of their yard, car, phone or friends. But be sure and look at a clock during craves as cessation time distortion can combine with fear or even panic to make a less than 3 minute episode feel much longer.

Research suggests that the average quitter experiences a maximum of 6 crave episodes per day on the third day of quitting, declining to about 1.4 per day by day ten. If each crave is less than 3 minutes and the average quitter experiences a maximum of 6 on their most challenging day, can you handle 18 minutes of challenge?



But what if you're not average or normal. What if, instead, you've created twice as many nicotine use cues as the "average" smoker? Can you handle 36 minutes of significant challenge if it means arresting your dependency, improving your mental and physical health and the prospect of a significant increase in life expectancy? Absolutely!

Key to success in navigating a less than 3 minute crave episode is to relax and not panic. Panic can activate the brain's impulsive fight or flight defenses, depriving you of rational thinking and reason. Slow deep breaths into the bottom of both lungs. Clear your mind of needless chatter. Feel the crave's energy peak in intensity and begin to decline, knowing that victory is again yours!

Abandonment of Use Rationalizations

Acceptance that drug addiction is a mental disorder, and that we're just as addicted as the alcoholic, heroin or meth addict, destroys the need for nicotine use rationalizations. Try this. List your top ten reasons for smoking. Now go back and cross off all the reasons except the truth, that hijacked pay attention pathways kept us wanting for more.

We didn't continue destroying our body's ability to receive and transport life giving oxygen because we wanted to. We did so because a rising tide of withdrawal anxieties would begin to hurt when we didn't.

Contrary to convenience store tobacco marketing, we did not smoke for flavor or taste. In fact, there are zero taste buds inside human lungs. Contrary to hundreds of store "pleasure" signs, drug addiction isn't about seeking pleasure but about satisfying a brain "wanting" disorder.

Our mind's priorities disorder had most of us convinced that we liked or even loved smoking. But what basis did we have for making honest comparisons? Try hard to recall the calm inside your mind prior to getting hooked, going days, weeks and months without once having an urge or crave to smoke. You can't do it, can you? Vivid dopamine pathway nicotine use memories long ago buried all remaining memory of the beauty of life without nicotine. It isn't that we liked smoking but that we didn't like what happened when we didn't smoke, the onset of withdrawal.

Most of us convinced ourselves that we smoked to relieve stress when in reality our addiction intensified it. While nicotine is an alkaloid, stress, alcohol and vitamin C are each acid generating events that accelerate elimination of nicotine from the bloodstream. Stressful situations would often induce early withdrawal, forcing immediate nicotine replenishment. Replenishment's temporary silencing of our disease left us falsely convinced that smoking had relieved our stress, when all it had relieved was nicotine's absence and the onset of early withdrawal.

Think about it. Once we finished tanking-up with a new supply of nicotine and had satisfied our dependency, the car's tire was still flat, or the bad news was still bad. One of the greatest recovery gifts of all is an amazing sense of calm during crisis, as we're no longer adding nicotine withdrawal atop every stressful event.

Probably the most destructive rationalization of all is pretending that all we suffer from is a nasty little habit, that like using a cuss word now and then, that we can smoke just once now and then after quitting and get away with it.

Why tease yourself? Willpower cannot stop smoked nicotine from arriving in the brain. Ask yourself, how many marathon runners have the endurance to run two marathons in a row? While we may walk away from one puff and relapse thinking we've gotten away with it, as sure as the sun rises in the sky our disease will soon be begging for more. We can no more take a puff than an alcoholic can take a sip.

"But now just isn't the right time," you say? Frankly, there will never be a perfect time to arrest mental illness. In fact, planning and putting it off until some future date actually breeds needless anticipation anxieties that diminish our odds of success. As backwards as this sounds, two recent studies, [one in the UK](#) and the [other in the US](#), found that unplanned attempts are twice as successful as planned ones. The next few minutes are all within our ability to control and each is entirely do-able.



One concern Dr. Volkow hears is that by telling smokers that they have an addiction that's both a mental illness and disease that it will cause some to use it as an excuse for avoiding responsibility for arresting it. But as she notes, does a person who's told that they have cancer or heart disease pretend helplessness, or do they instead fight to save and extend their life?

Nicotine dependency recovery can be the greatest personal awakening we've ever known. Destruction of needless fears allow us to savor the beauty unfolding before us. Our breathing and taste buds healing, even white flour and rain drops have smell. It's a clean ash free world where the the oil on our skin isn't tar's but ours. Imagine the return of self respect, of being home and residing here on Easy Street with hundreds of millions of comfortable ex-users, of knowing it's a keeper, and never having to quit again.

Relapse Prevention

"One day at a time" is an empowering focus accomplishment skill. Why worry about how much of the mountain is left to climb or how far we could fall when all that matters is our grip upon here and now, the next few minutes? Combining the "[Law of Addiction](#)" with a "[one day at a time](#)" recovery philosophy is all that's needed to remain free and keep our mind's priorities disease arrested for life.

The greatest unsolved mystery is why after having successfully quit for 5, 10 or even 30 years that it normally only takes a single lapse in judgment - smoking on just one occasion - to trigger full and complete relapse. What makes our disease permanent? Did years of smoking somehow burn or etch permanent tracks into our brain? Does new nicotine somehow turn on our addiction switch? Once the brain restores natural receptor counts (down-regulates), is some record kept of how many receptors there once were? Or, does one powerful hit of nicotine simply awaken thousands of old memories of an addict having "wanted" for more?

Frankly, science doesn't yet know. What it does know is that it's impossible to fail so long as all nicotine remains on the outside. There was always only one rule, no nicotine, just one hour, challenge and day at a time. The next few minutes are yours to command and each is entirely do-able. Baby steps to glory. Yes you can!



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Written April 12, 2010 and last updated April 27, 2012 by [John R. Polito](#).