Freedom from Nicotine – The Journey Home

Chapter 7: Roadmap Overview

Starting Point: Dependency

This chapter provides a brief recovery overview. It's a start to finish look at four distinct yet overlapping recovery layers, followed by a list of health benefits bestowed by navigating them. It lays a foundation and framework for the four chapters which follow:

- Chapter 9: Physical Recovery
- Chapter 10: Emotional Recovery
- Chapter 11: Subconscious Recovery
- Chapter 12: Conscious Recovery

As detailed in Chapter 1, nicotine addiction resulted from the introduction of a chemical into our body, a chemical which by happenstance was able to unlock and activate the same brain cells and pathways as the neurotransmitter acetylcholine.[1] Through cascading, scores of neurochemicals were released, most notably dopamine and adrenaline.

For us, nicotine's repeated activation of those receptors caused stimulation and permanent compromise of the brain's dopamine pathways, our mind's priorities teacher.

The brain's dopamine pathways were designed to foster urges, wanting and desire, so as to make events which stimulate them (species survival activities) extremely difficult to forget or ignore. But reflect on the fact that prior to nicotine dependency onset, there was no "wanting" or "urge" to use again.

Initially, arriving nicotine triggered the release of a burst of unearned dopamine. It provided wanting satisfaction for wanting that didn't yet exist. For those susceptible to dependency onset, continued use would soon bring an end to consequence-less stealing of adrenaline-amped satisfaction.

Our nicotine activated priorities teacher started seeing and treating nicotine as if food. At some point, our brain's tonic dopamine level started declining in response to falling blood nicotine levels. This, in turn, activated wanting, desire, and anxiety for more. That wanting was soon being reinforced by an ever-increasing number of old wanting satisfaction memories.
Each of those high-definition memories documented exactly how wanting was satisfied, by the arrival of a new supply of nicotine. Arrival would generate a sudden phasic burst of dopamine, temporarily restoring our tonic dopamine level and temporarily satisfying wanting.

Although still poorly understood, continued use caused our brain to attempt to desensitize itself to nicotine's presence by increasing the number of acetylcholine receptors in multiple brain regions. Continued use also conditioned our subconscious to expect a new supply of nicotine when specific times, locations, people, activities, or emotions were encountered.

Now, any attempt to stop using nicotine would result in the same wanting related anxieties felt when deprived of food or water.

Declining by roughly half every two hours, years of struggling to keep enough nicotine in our bloodstream, so as to hold wanting at bay, left us falsely convinced that nicotine was core to our existence, as fundamental as eating. Educated recovery is about understanding both the lies we lived and our dependency's effects upon us.

As if starving yourself to death, nicotine's above feeding cycle has deeply conditioned you to dread life without it, to fear coming home. It's my hope that dependency understanding fosters growing awareness of the reality that recovery is 100% healing, that it's good, beautiful, and wonderful not bad.

Will big picture awareness aid in helping calm dependency induced fears of life without using? Will diminishing needless anxieties make it easier to notice, focus upon and savor the long-forgotten joys that recovery is about to gradually unfold before you?

It's my hope that understanding aids in appreciating the awe and glory of arriving here on Easy Street, of experiencing an uninterrupted calm that was long ago smothered by an ever-growing pile of anxiety satisfaction memories.

But turning fear into desire, that's my wish for you, not yours. Once home, whether your journey is best characterized as having been a lovefest, a cakewalk, non-event, frantic, or a nightmare, the only thing that matters is that each day remained and remains totally do-able.

Understanding where we now stand is the window to where we've been. An opportunity to awaken is at hand.

As you continue reading, will nicotine-induced beliefs remain open to the possibility that emerging after years of being buried by earthquake rubble is to be celebrated not feared? Will it willingly review years of junkie thinking, the depths to which those years of lies took you, and where truth stands?
While such awareness itself can be a tad frightening, why spoil healing with fear? Why fear the arrival of a calm and comfortable day where thoughts of using never once enter your mind? Why fear such days soon becoming your new sense of normal?

1. See Chapter 1 for references to the dependency summary presented here.

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**Ending Nicotine Use**

That first courageous step is "huuuuge," the biggest baby step of all.

Mustering the courage to at last say "no" to that next nicotine fix is the only path to the wonderfulness beyond: return to a calm, quiet and beautiful mind that blind obedience to dependency wanting has for far too long keep hidden from view.

Contrary to the marketing of those pushing an exploding array of nicotine delivery devices, the only way out is to stop bringing nicotine in. And the speed of natural recovery can be seen within an hour of remaining 100% nicotine-free, as the amount of nicotine within your blood falls by 25 percent.

"Half-life" is defined as "the time required for half of the quantity of a drug or other substance deposited in a living organism to be metabolized or eliminated by normal biological processes."[1] Most older cessation literature firmly fixes nicotine's elimination half-life at about two hours.[2]

But nicotine's half-life can vary substantially based upon genetic, racial, hormonal, diet, activity, and age factors.[3] For now, let's ignore genetic differences, as we have no idea which genes we do or don't have.

As for racial variations, a 1998 study found an average nicotine half-life of 129 minutes in Caucasians and 134 minutes in African-Americans.[4] A 2002 study compared Chinese-American, Latino, and Caucasian smokers. It found that Latinos had the shortest half-life (122 minutes), Chinese-Americans the longest (152 minutes), with Caucasians in the middle (134 minutes).[5]

Nicotine's half-life is shorter in women (118 minutes) than men (132 minutes), and even faster in women taking oral contraceptives (96 minutes). This is thought to be associated with estrogen.[6]

Nicotine's half-life is shorter during pregnancy (97 minutes) than after giving birth (111 minutes).[7] Sadly, newborn babies whose mothers smoked endure a nicotine withdrawal period five times longer than what their mother's would have been. Instead of the newborn having a 2-
hour elimination half-life, it balloons to 11.2 hours.[8] If considering breastfeeding, nicotine's breast milk half-life averages 97 minutes.[9]

Interestingly, a 1993 nicotine patch study found that when nicotine was administered directly into the bloodstream (intravenously) it had a 2-hour elimination half-life but when administered through the skin via the nicotine patch (transdermally), once the patch was removed nicotine's half-life was 2.8 hours.[10] This finding was confirmed by a second patch study which found it to be a minimum of 3.3 hours.[11]

Most nicotine is broken down into six primary metabolites by the liver (mostly cotinine: 70-80%). The kidneys remove (eliminate or excrete) nicotine and its metabolites from the bloodstream.[12]

Thus, any activity which increases blood flow through the liver (exercise or eating) accelerates nicotine metabolism. Liver blood flow increases by 30% after meals, with a 40% increase in the rate that nicotine is removed from arriving blood.[13]

As we learned in Chapter 4, acidic urine accelerates the rate by which nicotine is metabolized, while alkaline urine actually allows re-absorption back into the body.

As suggested by the above half-life data, most of us had enough nicotine reserves to make it through 8 hours of sleep each night (4 half-lives leaving us with a minimum of 6.25% of our normal daily supply).

In fact, the amount of nicotine remaining after sleep is actually higher than simple division suggests. It makes sense, as the amount of blood flow and nicotine passing through and being metabolized by the liver decreases while sleeping.

As you can see, remaining reserves become so small within 24 hours of ending use that nicotine becomes difficult to detect (.02 or just 2/100ths of our normal daily level). It's here that surgery (nicotine extraction/detox) is nearly complete and deep dependency healing begins in earnest.

Within 3 days, with absolute certainty, you will inhabit a nicotine-free body and mind.

As for detection, we often get the question, how long after I stop using nicotine will my insurance company or employer be able to detect nicotine in my system? As seen above, unless examining hair, which permanently records nicotine use, trying to measure rapidly falling nicotine levels in blood, urine and saliva are all but useless as markers of use.

That's why insurance companies and employers normally test for cotinine, one of nicotine's longer-lasting metabolites. Cotinine's generally recognized half-life of about 17 hours.[14]

Regarding recovery, what's important is that remaining levels become so small within 24 hours
of ending use that re-sensitization and the brain's adjustment to functioning without nicotine have no choice but to begin.

The mind and body begin experiencing overlapping recovery on four levels within 24 hours of ending use: physical, emotional, subconscious, and conscious. Keep all nicotine on the outside and within 72 hours, regardless of your body's nicotine half-life or elimination rate, you'll stand atop withdrawal's mountain.

The most challenging part of recovery will be behind you. While your climb was quick, the slope of the journey down the other side, although initially brisk, is continuous yet ever so gradual. Easier time with fewer bumps, the balance of the journey becomes an exercise in patience.

Yet, violate the "Law of Addiction" - just one hit of nicotine - and forget about any gradual downslope or doing easy-time. It's called relapse. You'll either resume life as an actively feeding addict or need to again endure nicotine detox and another climb to the top.

The price of each climb is further depletion of core dreams and desires. Although able to rest and rejuvenate once at or over the top, amazingly few have the stamina of purpose needed to make back-to-back climbs.

Expect to be teased during both your climb and descent by those selling chemicals that stimulate brain dopamine pathways (tobacco products, cigarettes, e-cigarettes, replacement nicotine, bupropion, and varenicline). Expect them to try to discourage you. Listen for the false and deceptive implication that few succeed in stopping on their own. Truth is, it's how the vast majority will succeed this year, and they know it.

Clearly, they want your money. And sadly, nearly all are willing to lie to get it.

Expect their tease to falsely suggest that their product makes the climb easy, or as suggested by recent Nicorette commercials, that it makes quitting "suck less." Don't listen. If the product stimulates dopamine pathways, physical withdrawal's climb cannot be completed until product use ends.

Continued stimulation does not aid recovery but delays it. That's why advertising the product's cessation results while study participants were still under the chemical's influence (varenicline's half-life is 24-hours, 12 times longer than nicotine's), isn't about science but salesmanship.

As Joel Spitzer says, we'd only have ourselves to blame for intentionally extending what should have been a few days of withdrawal into weeks or months.

Not only do users face the side-effect risks posed by each product, they face having to someday adjust to living without the dopamine stimulation the product provides.
Let's turn our attention to what happens once fright musters the courage to say "no." Let's start with the body's physical response to ending use.


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**Recovery Layers**

**Physical Readjustment**

Chapter 9 focuses upon the time needed by the brain to re-adjust its equilibrium or homeostasis to again functioning without nicotine.

Nicotine caused both activation and deactivation of nicotinic-type acetylcholine receptors.[1]
Animal studies suggest that a significant increase in the number of receptors (up-regulation) may have occurred in as many as 11 different brain regions.[2]

Brain healing is at the mercy of the patience necessary to allow time to restore natural sensitivities. If allowed, it will work around-the-clock returning neurotransmitter receptor counts and sensitivities to normal.

As explained, the pace of healing is amazingly fast. Within three days, the mind and body become nicotine-free and we move beyond peak withdrawal.

While the vast majority of physical re-adjustments are generally recognized as being complete within the first two weeks, recent studies suggest that some symptoms, primarily related to neuron sensitivity restoration and emotions, may persist for 3-4 weeks.

Aside from the brain, the body needs time for its physiology to adjust to again functioning without nicotine and all other chemicals introduced by our method of delivery. As it does, the withdrawal symptoms experienced may be none, few, some or many.

Although Chapter 9 provides a detailed list and discussion of possible withdrawal symptoms, I strongly encourage you to skip it. That's right. Don't read it. If needed, it'll be there.

Such lists have a tendency to transform a sensation that may have been barely noticeable into a full-blown concern. FFN-TJH's primary goal is to destroy fears, not foster them.

Since 1999 our online support sites at Freedom and Turkeyville have worked with thousands navigating recovery. While most report heightened anxieties and emotional challenges, many experience almost no noticeable physical symptoms whatsoever.

Also, don't confuse the time needed for the mind to adapt to functioning without nicotine's influence, with the time needed for deep tissue healing and purging of tobacco tars. As suggested by the recovery timetable at the end of this chapter, it takes significant time to fully expel toxins and carcinogens and heal from their assaults.

**Emotional Readjustment**

Although chemical in nature, a long and intense relationship is ending. For most, it was the most dependable relationship we'd ever known.

Even if our fix was bummed or borrowed and the flavor of the brand was horrible, even if the cigarette was damp, slightly torn, broken and in need of repair, even if the gum was rock hard, the dip stale, or the butt from an ashtray, the nicotine was always there.

Never once did nicotine let us down in providing temporary relief from urges and wanting.
Once inside our bloodstream, within seconds we experienced replenishment: nicotine's stimulation of our nervous system accompanied by satisfaction of our mind's latest cycle of need.

But now that's all behind us. It's over, finished, done. And as with ending any long-term relationship, we must navigate the sense of loss emotions flowing from it.

Denial, anger, bargaining, and depression are normal emotional phases associated with any significant loss. Navigating each brings us closer to the final phase marking the completion of emotional recovery (Chapter 10), acceptance.

**Subconscious Readjustment**

Nicotine's two-hour half-life compelled us to select replenishment times, situations and patterns. While you may not have recognized the patterns, your subconscious was expert in doing so.

When did you replenish? Upon waking each morning, entering the bathroom, before or after a meal, in the yard or garage, while traveling, surrounding work, around friends, while drinking, on the telephone, before bed, when happy, sad, stressed, or mad?

Whether or not aware of our use patterns, our subconscious recorded the times, places, circumstances and emotions during which nicotine replenishment occurred. Those situations became conditioned use-cues, alerting our subconscious that it was time for more.

Encountering a use-cue would trigger a gentle urge feeding time reminder. Usually, it wasn't noticed and normally we simply obeyed. But if not and we delayed too long, anxiety alarms may have sounded, triggering a full-blown crave episode.

Subconscious recovery (Chapter 11) is about meeting, greeting, and extinguishing each conditioned use-cue. The subconscious mind does not plot, plan or conspire. It simply reacts to input.

If we say "no" during what's often a less than 3 minute crave episode (which time distortion may cause to feel far longer), in most instances a single encounter will sever and break the nicotine use association, extinguishing the cue that caused it.

We are rewarded each time we extinguish a cue with the return of another aspect of a nicotine-free life. That's right, crave episodes are good not bad. It's how we take back life, just one time, place, person, activity or emotion at a time.

Chapter 11 explores a host of crave coping techniques. For now, understand that: (1) there is no force or circumstance on planet earth that can compel us to introduce nicotine into our bloodstream; (2) we will always be able to handle up to three minutes of wanting anxiety; and (3) the reward at the end of each episode, extinguishing and silencing another use-cue, is worth vastly more than the price of enduring it.
Conscious Readjustment

By far, normally the easiest yet longest layer of recovery is reclaiming normal everyday thinking.

Unlike a less than three-minute subconscious crave episode, the conscious mind can fixate upon a thought of wanting to use for as long as we are able to maintain concentration and focus. How long can you keep your mind focused upon your favorite food? Look at a clock and give it a try. Can you taste it? Does it make your mouth water? Are you feeling an urge?

Now think about your favorite nicotine use rationalization. What was your primary use justification?

Conscious recovery is the period of time needed for new nicotine-free memories to gather, overwrite or suppress all the durable dopamine pathway memories documenting how wanting was briefly satisfied by using more. It's the time needed to move beyond their conscious tease.

Conscious recovery is very much within our ability to accelerate. For example, it isn't necessary to wait for old nicotine use memories to gradually fade away in order to alter their impact upon us.

It's done by seeing our pile of old wanting satisfaction memories for the truth they reflect; that each memory was created by an actively feeding addict in varying degrees of need of more.

It's also accomplished by a willingness to let go of our use rationalizations. This is done by grabbing hold of each use justification, exposing it to honest light, and recasting it using truth.

Chapter 12 (Conscious Recovery) is about using logic, reason and science to accelerate this final phase of recovery. As seen in Chapter 4 (Rationalizations), some use rationalizations can be laughed away. Others require a bit more distance from active dependency before honesty and clarity of thought allows us to appreciate the truth and let go. And there may be one or more which seem harder to move beyond.

Contrary to nicotine industry marketing, there was only one reason we didn't stop using long, long ago. Our new addiction quickly conditioned us to expect anxiety, irritability, anger, and depression to begin building if we waited too long between feedings.

We didn't continue using because we liked it. We did so because we didn't like what happened when we didn't.[3]

1. Picciotto MR, et al, It is not "either/or": activation and desensitization of nicotinic acetylcholine receptors both contribute to behaviors related to nicotine addiction and mood, Progress in Neurobiology, April 2008, Volume 84(4), Pages 329-342; also see, Even N, et al, Regional differential effects of chronic nicotine on brain
alpha 4-containing and alpha 6-containing receptors, Neuroreport, October 8, 2008, Volume 19(15), Pages 1545-1550.

**Recovery Timeline**

Most but not all benefits listed below are related to smoking. Why? Here in the U.S., there are ten times as many smokers as oral tobacco users.[1] Smoking, by far, reflects the greatest health risks of any form of nicotine delivery. And until the e-cigarette's arrival, the vast majority of research focused upon it.

Remember, the absence of evidence isn't evidence of absence. Just because science can't yet tell us when most oral tobacco, NRT, or e-cig recovery benefits occur, it doesn't mean that they're not happening.

Let's review a few health benefits of life on the free side of dependency's bars.[2]

When ending all tobacco and nicotine use, within ...

- 20 minutes - Our blood pressure, heart rate, and the temperature of our hands and feet return to normal.
- 8 hours - Remaining nicotine in our bloodstream will have fallen to 6% of normal peak daily levels, a 94% reduction.
- 12 hours - The ex-smoker's blood oxygen level will have increased to normal while carbon monoxide levels have dropped to normal too.
- 24 hours - Anxieties peak and within two weeks should return to near pre-cessation levels.
- 48 hours - Damaged nerve endings have started to re-grow and our sense of smell and taste are beginning to return to normal. Cessation anger and irritability peaks.
- 72 hours - Our body is 100% nicotine-free and over 90% of all nicotine metabolites (the chemicals it breaks down into) have been ionized or excreted via urine. Symptoms of withdrawal have peaked in intensity, including restlessness. The number of cue-induced crave episodes will peak for the "average" ex-user. Lung bronchial tubes leading to air...
sacs (alveoli) are beginning to relax in recovering smokers. Breathing is becoming easier and the lung's functional abilities are starting to increase.

- 5 to 8 days - The "average" ex-smoker will encounter an "average" of three cue-induced crave episodes per day. Although we may not be "average" and although serious cessation time distortion can make minutes feel like hours, it is unlikely that any single episode will last longer than 3 minutes. Keep a clock handy and time them.

- 10 days - The "average ex-user is down to encountering less than two crave episodes per day, each less than 3 minutes.

- 10 days to 2 weeks - Recovery has likely progressed to the point where our addiction is no longer doing the talking. We are beginning to catch glimpses of where freedom and healing are transporting us.

- 2 weeks - Blood circulation in our gums and teeth is now similar to that of a non-user.

- 2 to 4 weeks - Cessation related anger, anxiety, difficulty concentrating, impatience, insomnia, restlessness, and depression have ended. If still experiencing any of these symptoms get seen and evaluated by your physician.

- 3-4 weeks - Brain acetylcholine receptor counts up-regulated in response to nicotine's presence have now down-regulated, and receptor binding has returned to levels seen in the brains of non-smokers.[3]

- 2 weeks to 3 months - If an ex-smoker, heart attack risk has started to drop and lung function continues to improve.

- 3 weeks to 3 months - If an ex-smoker, circulation has substantially improved. Walking has become easier. Any chronic cough has likely disappeared. If not, contact your physician.

- 1 to 9 months - Any smoking related sinus congestion, fatigue or shortness of breath have decreased. Cilia have re-grown in our lungs, thereby increasing their ability to handle mucus, keep our lungs clean, and reduce infections. The body's overall energy level has increased.

- 1 year - If an ex-smoker, excess risk of coronary heart disease has dropped to less than half that of a smoker.

- 5 to 15 years - If an ex-smoker, the risk of stroke has declined to that of a non-smoker.

- 10 years - If an "average" ex-smoker (one pack per day), our risk of death from lung
cancer has declined by almost half. The risk of cancer of the mouth, throat, and esophagus has also decreased.

- 15 years - Our risk of coronary heart disease is now that of a person who has never smoked.

**Arriving Home**

What was it like to go entire days without once thinking about wanting to smoke, dip, chew, suck, or vape nicotine? What was it like being "you"?

Don't feel alone if you can no longer recall. That's what drug addiction is all about, quickly burying nearly all remaining memory of the beauty of life without using.

Trust in your common sense and dreams. It's my hope that you're curious about what it's like to go days, weeks, and then months without once wanting to introduce nicotine back into your bloodstream. Don't be afraid as there's nothing to fear, except for the delay in taking that first courageous step.

We leave absolutely nothing of value behind. In fact, every neurochemical that nicotine controlled already belonged to us. As recovering addicts, we can do everything we did while enslaved, and do it as well as or better once free.

Why fight and rebel against freedom and healing when within just two weeks it will be savored, embraced, protected, hugged, and loved? Why see challenges, freedom's stepping-stones, as frightening when they provide indisputable evidence of just how infected our life had become?

My prior attempts failed because I fought recovery, and did so in ignorance and darkness. Yes, now and then I'd get lucky and land a punch, but freedom was short-lived. But this time was different.

This time Joel and his insights effectively turned on the lights. Now my opponent couldn't be clearer. My eyes and mind were opened to exactly what it takes to both fail and succeed.

Joel burned an extremely bright line into my mind, one I'll do my very best to keep clean and clear every remaining day of my life. He taught me that I get to stay and live here on the free side of that line so long as it's never crossed, so long as all the world's nicotine remains on the other, so long as complacency isn't allowed to obscure it.

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Freedom from Nicotine – The Journey Home

Originally released on January 1, 2009, the 4th revision was completed October 15, 2020. Individual book topics are shared below and a full 10.8MB 415 page PDF is available at WhyQuit.com/FFN.pdf.

All images have been removed from the following PDF chapters so as to make the files smaller and faster opening on mobile devices. All chapter topics (136) are available with images as topic web pages in HTML format.

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Only one rule. No nicotine today!

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Freedom from Nicotine – The Journey Home

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