<u>Freedom from Nicotine – The Journey Home</u>

Chapter 11: Subconscious Recovery

The Unconscious Mind

Unwittingly assaulted by flavor, aroma, pleasure, friendship, adventure, rebellion, or affordability marketing, our subconscious is the target of nicotine addiction industry marketing.

If it didn't work they wouldn't annually spend billions doing it. The subconscious is listening. It sees the store's cigarette powerwall, magazine tobacco ads, the website address on littered packs, and Marlboro's red race cars. It hears the tease of every e-cigarette television ad use invitation.

Twice the traveling cessation hypnotist sold me a full day of unbelievable hypnotic bliss before I tested it and relapsed.[1]

But looking upon our subconscious only in terms of being the playground of others cheapens and makes it look dumb while ignoring our conscious ability to retrain it.

If so dumb, why can our subconscious see subliminal messages invisible to the conscious mind, or feel the influence of tobacco marketing that our consciousness has totally ignored? Why can it react to triggering cues written upon it by hypnotic suggestion or self-conditioning, cues meaningless to conscious awareness?

Dumb? When typing on a keyboard, what part of the mind and level of awareness is locating and correctly striking each key? While operating a vehicle, who is really controlling which foot needs to push on which pedal and how hard, or doing the driving as we read billboards, talk on the phone or daydream?

Our conscious mind has unknowingly aided in helping teach our subconscious skills and how to perform activities, including using nicotine.[2] Now, it's time to knowingly teach it how to function without it.

Whether referred to as our subconscious, unconscious or preconscious, science is still in the early stages of discovery in understanding the scope of its involvement in day-to-day life.

It's every bit as real as the never-seen portion of an iceberg. Think of Disney World and awareness of the magic above ground, while a massive unseen city beneath lives and breathes in bringing the magic to life

It's normal for us to deeply believe that our consciousness is the one doing things, that it causes our actions after careful deliberation, that our behavior was our idea.

While this is our self-perception, a growing body of evidence suggests that like Disney's puppets, the conscious mind is not the primary source in motivating behavior, that in many cases our subconscious has already made up our mind for us.[3]

It's suggested that our subconscious has evolved as a highly adaptive "behavioral guidance system" which acts on impulse. It's becoming more widely accepted that the impulse for behavior flows from our subconscious, that our consciousness then seizes upon the idea as its own.

It's suggested that the real role of our consciousness is as impulse gatekeeper, and trying to make sense, after the fact, of behavior that the gatekeeper allowed to occur.[4]

Sources of subconscious impulses can include evolutionary motivations, past personal preferences, cultural norms, family values, past experiences in similar situations, or how others in the same situation are currently behaving. They can also be the product of conditioning, both through reinforcement (operant) and association (classical).

Multiple sources of subconscious behavioral impulses make conflicts inevitable. Drug addiction reflects a conflicts war zone.

Our subconscious has its own behavioral goals, goals hidden from awareness.[5] Reading these words is clear evidence that "you" want to break free. It's likely that, deep down, your subconscious does too.

But after being conditioned by years of urges and wanting for more, and by false gatekeeper explanations as to why use was again about to occur, without honesty and teamwork, subconscious recovery can be messy and longer than necessary.

- 1. Abbot NC, et al, Hypnotherapy for smoking cessation, Cochrane Database of Systematic Reviews, 2000; (2):CD001008, which examines 9 hypnotherapy studies and concludes: "We have not shown that hypnotherapy has a greater effect on six month quit rates than other interventions or no treatment."
- 2. Bargh JA, et al, The Unconscious Mind, Perspectives on Psychological Science, January 2008, Volume 3(1), Pages 73-79.
- 3. Galdi S, et al, Automatic mental associations predict future choices of undecided decision-makers, Science, August 22, 2008, Volume 321(5892), Pages 1100-1102.
- 4. Wegner DM, Precis of the illusion of conscious will, Behavioral Brain Science, October 2004, Volume 27(5), Pages 649-659; as reviewed in Bargh JA, et al, The Unconscious Mind, Perspectives on Psychological Science, January 2008, Volume 3(1), Pages 73-79.
- 5. Bargh JA, et al, The automated will: Unconscious activation and pursuit of behavioral goals, Journal of Personality and Social Psychology, December 2001. Volume 81, Pages 1004-027.

Operant Conditioning

Operant conditioning is a form of associative learning that flows from the operation or consequences of behavior. In our case, the behavior is nicotine use, where the consequences of use gradually strengthen use via reinforcement and/or punishment.[1]

Initially, even though hot toxic smoke may have caused our throat and lungs to rebel, our brain sat up and took notice. Within seconds, that first puff of nicotine caused an unearned release of dopamine and fight or flight neurochemicals.

Even though we may not have liked the taste, these positive reinforcing effects were sufficient to cause us to return and inhale nicotine again, and again, and again.

Quicker for some than others, hijacked motivational circuitry was beginning to behave as though nicotine were food. While positive reinforcement alone was sufficient to begin growing dependency's roots, for most, punishment and negative reinforcement were about to begin.

As our blood's nicotine level gradually declined, most of us eventually started experiencing two additional use consequences: positive punishment (the arrival of wanting and urges), and negative reinforcement (the lesson that use satisfies wanting).

While choice was always present, this endless cycle of operant coercion was at first so gradual that few of us were mindful of our loss of use autonomy. For most, the birth of subconscious use governance went unnoticed.

Even if fully aware, we still had to discover a way out, plan our escape, and, at some point, muster the courage to confront and extinguish, what was by then, weeks, months, or years of operant conditioning.

Drug use behavior conditioning reflects unintended expectations training of the subconscious mind. Hundreds or thousands of annual nicotine use repetitions created strong associations between use and satisfaction. Each and every use reinforced using again.[2]

While nicotine's charged "aaah" sensation caused each of us to experience operant conditioning, inside my mind, the more forceful lesson was that use satisfied wanting, urges, and cravings.

Did it really matter how I felt about nicotine's dopamine-adrenaline cocktail? What mattered was silencing the anxieties for it that were building within.

Punishment fear-conditioning pounded home the consequences of ignoring nicotine's two-hour half-life and my brain's level of need (tolerance). It taught me that delaying replenishment can result in feeling anxious, irritable and depressed.

Soon, waiting too long was pounding home the lesson that using early and often helps avoid the onset of withdrawal. Not only were we conditioned to fear withdrawal, inhaling nicotine sooner than needed forced our brains to adjust to tolerating more of it.

Trapped in a perpetual cycle between wanting and relief, is it any wonder that both our subconscious and conscious grew to deeply believe that nicotine use defined who we were, that replenishment was as important as eating, and that life without it would be miserable at best?

The great news is that within 72 hours of ending use that our subconscious has no choice but to begin noticing that we've moved beyond peak withdrawal, which by then is beginning to gradually subside.

While likely still anxious and alert, the most intense part of recovery is over. So long as all nicotine remains on the outside, fears and anxieties associated with avoiding withdrawal's onset will never, ever be encountered again.

While negative reinforcement and punishment operant conditioning are quickly extinguished, positive reinforcement operant conditioning associated with the tease of thousands of old "aaah" replenishment memories will take time and distance to overcome.

While we cannot erase thousands of old "aaah" memories, conscious honesty and dependency mindfulness help us see those memories for what they truly reflect, an accurate record of the times when an actively feeding drug addict briefly satisfied the desire for more.

Recasting them in truthful light can diminish or even end their remaining tease and influence upon us.

But let's not fool ourselves. Each memory remains tied to the same dopamine pathway that created it. Even if we go years without nicotine, the effects of just one powerful puff, dip, chew or vape somehow breathes new life into old "aaah" memories, and at least one aspect of positive operant conditioning.

Whether recognized or not, activated dopamine pathways would immediately re-assign nicotine use the same priority as eating. Whether wanted or not, use would soon have our brain demanding more and us obeying.

The good news is that simply becoming mindful of how operant conditioning controlled us can aid in helping extinguish it and take back control.[3]

Although not always easy, the solution is simple ... no nicotine today!

- 1. Miguel et al, From Theory to Treatment: Understanding Addiction from an Operant Behavioral Perspective, Journal of Modern Education Review, August 2015, Volume 5, No. 8, pp. 778–787.
- 2. Rose JE, et al, Inter-relationships between conditioned and primary reinforcement in the maintenance of cigarette smoking, British Journal of Addiction, May 1991, Volume 86(5), Pages 605-609.
- 3. Brewer JA, et al, Craving to Quit: Psychological Models and Neurobiological Mechanisms of Mindfulness Training as Treatment for Addictions, Psychology of Addictive Behaviors, May 28, 2012.

Classical Conditioning

What is classical conditioning?

As it relates to nicotine, classical or Pavlovian conditioning is conditioning in which, through repetition, a person, place, thing, activity, time or emotion (a conditioned stimulus or CS) becomes subconsciously paired with using nicotine (an unconditioned stimulus or US). Thereafter, encountering the conditioned stimulus alone becomes sufficient to trigger wanting, an urge or a crave (a conditioned

response or CR). [1]

How does classical conditioning relate to operant conditioning, which we just reviewed?

With operant learning, most of us eventually became consciously aware that use operates to reinforce using again, or that we're punished for not using soon enough. Not so with classical conditioning. Use-cue pairings happen subconsciously and are activated automatically upon encountering a previously conditioned stimulus.

While operant conditioning is tied to dependency onset and our basic nicotine replenishment cycle, classical conditioning isn't about the consequences of use. It's about a conditioned stimulus triggering wanting and use, even if not yet time for more.

In classical conditioning, like Pavlov's dogs, which he conditioned to expect food (US) and begin salivating (CR) upon the ringing of a bell (CS), we each conditioned our subconscious to expect (CR) arrival of a new supply of nicotine (US) in specific situations (CS).

For example, your mind can be trained to want nicotine upon simply seeing a picture of a green triangle. A 2012 classical conditioning study did just that. It conditioned smokers to associate smoking (US) with an object that had previously been entirely neutral (CS).[2]

The conditioning was created by 80 times pairing a picture of a green triangle (CS) with a smoking-related picture of people holding or smoking cigarettes (US). Each pairing was shown to smokers for less than half a second (400 milliseconds). Although less than a second, the subconscious mind was watching and learning.

Not only did smokers report increased cravings (CR) upon being shown the green triangle alone without the smoking-related image, brain responses recorded by EEG (electroencephalograph) supported their claims.

Researchers have successfully used sight, smell, and hearing to establish new conditioned use cues in smokers. Encountering the new cue will trigger use expectations and an urge to smoke, with an increase in pulse rate.[3]

Interestingly, researchers find it easier to establish new cues among light smokers, who obviously have fewer existing cues than heavy smokers.

Urges & Cravings

If crave episodes feel real and physical in nature there's good reason. Although nicotine-feeding cues are psychological in origin, they trigger physiological responses within the body.

Not only do the stimulant effects of using nicotine increase pupil size, researchers also found that encountering a visual nicotine use-cue will increase pupil size, an autonomic response.[4]

Using brain scans, researchers discovered increased blood flow during cue-induced cravings in brain regions associated with "aaah" wanting relief or anxiety (the ventral striatum, amygdala, orbitofrontal

cortex, hippocampus, medial thalamus and left insula).[5]

They also discovered that the amount of brain blood flow (perfusion) was tied to the intensity of the cue-induced cigarette cravings in brain regions known to control attention, motivation, and expectancy (the prefrontal cortex and posterior cingulate).[6]

Years of subconscious conditioning had us reaching for a nicotine fix and engaging in replenishment without our conscious mind recognizing that we had encountered a use-cue (conditioned stimulus), and often without noticing that replenishment was underway.

Study the next smoker you see. As if on autopilot, it is very likely that the drags you'll watch being inhaled will be taken while their unconscious mind is in full control.

I can't begin to count the number of times I looked down and was surprised to see the ashtray full and the pack empty.

While nicotine's two-hour elimination half-life seems more closely tied to operant conditioning, classical conditioning is tethered to historic use patterns and circumstances. Still, interwoven within nicotine's operant need-feed cycle, it's hard to say which form of conditioning contributes most toward gradually increasing nicotine "tolerance."

What are the consequences of using when full? Might it cause the brain to gradually need a bit more in order to feel nicotine-normal? Or does it simply delay arrival of operant reinforcement?

Although unaware, we each established daily replenishment patterns which trained and alerted our subconscious as to circumstances to expect more.

- 1. classical conditioning . (n.d.). Merriam-Webster's Medical Dictionary. Retrieved August 31, 2008, from Dictionary.com website.
- 2. Littel M and Franken IH, Electrophysiological correlates of associative learning in smokers: a higher-order conditioning experiment, BMC Neuroscience, January 11, 2012, 13:8.
- 3. Lazev AB, et al, Classical conditions of environmental cues to cigarette smoking, Experimental and Clinical Psychopharmacology, February 1999, Volume 7(1), Pages 56-63.
- 4. Chae Y, et al, Subjective and autonomic responses to smoking-related visual cues, The Journal of Physiological Sciences, April 2008, Volume 58(2), Pages 139-145.
- 5. Franklin TR, Limbic activation to cigarette smoking cues independent of nicotine withdrawal: a perfusion fMRI study, Neuropsychopharmacology, November 2007, Volume 32(11), Pages 2301-2309.
- 6. Small DM, et al, The posterior cingulate and medial prefrontal cortex mediate the anticipatory allocation of spatial attention, NeuroImage, March 2003, Volume 18(3), Pages 633-641.

Common Use Cues

When was your subconscious conditioned to expect a new supply of nicotine? Was an urge or crave triggered in the anterior cingulate cortex (ACC) region of your brain[1] upon smelling coffee, starting the car, placing a plate into the sink, the sound of a bottle or can opening, or ice cubes hitting a glass?

The problem with this topic is that while we each have a fair picture of the situations during which we found ourselves both using and not using, few have awareness of the precise cue, or cue combinations, recognized by our subconscious.

While researchers have conducted hundreds of what they call "cue reactivity" studies, until recently nearly all involved what they refer to as "proximal cues" (eg, pictures of cigarettes, lighters, or an ashtray with a lit cigarette). Only recently have they started studying the places or environments which generate cravings, and how proximal cues interact.[2]

What follows is a brief review of possible use-cue situations that may generate brief urges or cravings. Don't be intimidated. Use this list to reflect upon your own use patterns and possible cues. The more mindful of potential cues, the less frightened and unprepared you'll hopefully be.

As you read, imagine navigating each situation and claiming the prize at the end. Why fear extinguishing use cues? Get excited about it!

Proximal Cues

Our closest, most frequent, and possibly most intense urges were likely associated with nicotine use and use paraphernalia. Our five senses (sight, smell, taste, hearing and touch.) alert the brain that a proximal use cue has been countered.

The smoker's utensils include individual cigarettes (some dropped and hidden from view), packs (some misplaced and forgotten), lighters or matches, ashtrays, cartons, or loose tobacco and rolling-paper.

Aside from the e-cig device, the vaping addict's equipment inventory may include a backup, extra or refillable juice cartridges, flavorings, batteries, chargers, and possibly a carrying case. The smokeless tobacco user's arsenal may include tins, pouches, sleeves, rolls, logs, tubs or bags, and spit containers or locations.

The perceived opportunity to inhale nicotine increases craving and may itself be viewed as a conditioned cue.[3][4]

Proximal means nearest. For those just beginning their journey home, nearness means an increased likelihood of relapse. Researches have found that proximal cues "reliably evoke robust cravings."[2]

Don't play mind or strength games with nicotine. Instead, be smarter. Fully commit to success. Find and destroy, beyond salvage, the instruments of defeat.

Activities

Was your first morning activity trigger climbing out of bed, making it, getting dressed, caring for a pet, turning on the television, making or eating breakfast, making or drinking coffee or tea, finishing the dishes, sitting in your favorite chair, reading the paper, stepping outside or into the garage, brushing your teeth, watering plants, getting out of the shower or using the bathroom?

Imagine having so tied nicotine use to using the bathroom that, once use ends, you're briefly left wondering if you'll ever be able to have a bowel movement again.

Mandatory daily activities such as eating and sleeping compel us to quickly meet, greet and extinguish associated cues.

Do you have young children? If so, cues may be tied to (before, during or after) waking your children, feeding them, making lunch, getting them off to school, or dropping them off. Once home, there's homework, after school activities, chores, boo-boos, tears, illness, worry, tending to their daily needs, fixing dinner, baths, getting their clothes ready, bedtime, reading or singing them to sleep, and the brief period of quiet which follows.

There's housework, daily planning, caring for pets, talking on the phone, laundry, taking a break, paying bills, worry about paying bills, television, using the computer, walking outside, and gardening or yard work.

And don't forget the workplace. There, you may have conditioned yourself to see the need for nicotine replenishment as a reward (a "smoke break") for having accomplished some task.

Other work-related cues may have included traveling to work, arriving, either nicotine-use breaks or use while working, talking on the phone, deadlines, lunch, stress, the end of the workday, and catch-up replenishment while traveling home. Some of us had so tied nicotine-use to work that we can't imagine ever being productive again.

Delay in confronting and extinguishing work associated conditioning can be costly. Work avoidance can add mountains of needless pressure and anxiety to recovery. Why fear quickly silencing all work-related use cues and being rewarded with an urge-free workplace?

Be brave. Take that first step. Just that first brave step and the next one becomes easier.

Then there are possible cues associated with arriving home, reading mail and email, preparing dinner, the evening news, watching movies or Netflix, hobbies or leisurely activities, social time, caring for pets, preparing for bed, or romance.

As reviewed in Chapter 6, the only use-cues we suggest delay in encountering are associated

with using alcohol or other inhibition diminishing chemicals. As there discussed, unless you have co-dependency concerns (also Chapter 6), alcohol use is a non-mandatory activity that can be delayed a few days, at least until you are beyond peak withdrawal.

As also reviewed in Chapter 6, alcohol can be associated with multiple use-cues, including the location, people present, the presence of cigarettes or other users, peer pressures, music, singing, relaxation, dancing, celebration or intoxication.

Locations

Think about the locations you frequented that may have become conditioned use cues: a yard, a park or community bench, entering the house, the bathroom or a work area, your smoking room, garage, backyard, the garden, outdoors, a vehicle, bus stop, train or subway station, a walkway, workplace, bar, pub or restaurant, or entering or leaving a store.

We encounter some use locations far more often than others. How often was use associated with entering or exiting your place of worship, a doctor's office or hospital, or in association with a movie, concert or sporting event? If we established associated use cues, when might they next be encountered?

People

We may have tied use with being around a specific friend, acquaintance, or co-worker, who may have been nicotine users themselves. If so, when will you next see them? And what about being around those who increased our anxieties. Just seeing them could trigger an urge.

And don't forget those who were not slaves to nicotine themselves, who tended to visit and stay longer than our unfed addiction could tolerate. What will happen immediately prior to their next visit, or as soon as they leave?

Times

Our most dependable and core use-cue is likely related to time, the fact that unless replenished, our body's nicotine reserves decline by roughly half every two hours.

My level of tolerance was chain-smoking 3 packs-a-day (60) for the final 5 years If standing

perfectly still, my next urge was never more than 15 or so minutes away.

Other specific time use-conditioning could be related to waking, meal or break-time, or related to the hours or minutes appearing on a clock or watch. Cues could be associated with the time that our workday ends, a television program, or the time when we begin getting ready for bed.

Times of the year may serve as conditioning: a vacation, spring and blooming flowers, arrival of summer heat, fall's cooler temperatures, falling leaves, that first frost, winter or snowfall.

But don't be surprised if by then your crave generator seems to have lost its punch. Instead of full-blow cravings, remote, infrequent or seasonal cues may by then feel more like a few seconds of stiff breeze.

Eventually, the time and distance between remote un-extinguished use cues will become so great that any breeze is barely noticeable or even laughable. They'll become a long-overdue reminder of the amazing journey you once made.

Events

There were some events that served as cues for most of us. Research has found that seeing and smelling a burning cigarette will cause a cue-induced craving during early recovery.[5] Would watching another oral tobacco user put tobacco into their mouth trigger a craving in most oral users? Probably.

Weddings, funerals, the birth of a baby and offer of a cigar, holidays, birthdays, and New Year's reflect infrequent cue possibilities. If so, recovery is about extinguishing each and reclaiming all aspects of life, just one opportunity at a time.

The smell of morning coffee, seeing a smoking friend, hearing laughter, tasting your favorite drink, touching your nicotine delivery device, wouldn't it be fascinating to have a full and accurate awareness of all nicotine use conditioning while navigating recovery?

Although conventional wisdom suggests that we attempt to discover our cues beforehand, frankly, even when we think we've identified the exact cue adopted by our subconscious, we'll often miss the mark. Instead of frustrations associated with being unable to accurately predict subconscious cues, it's probably best to remain calm yet fully prepared to react on a moment's notice.

Emotions

As detailed in Chapter 10, the range of human emotion provides the subconscious with a vast spectrum to pick from. Laughter, sorrow, a sense of accomplishment or defeat, worry or calm, each has the potential to generate a craving if the mind created a use association.

Extended emotions such as financial strain, a serious illness or injury, a bad relationship, or the death of a loved one, were ripe for cue establishment. What would each be like without addiction to a stimulant making the heart pound faster?

Encountering More Than One Cue

As a new ex-user, just four days free, imagine visiting a local pub and taking a seat on an outdoor patio that's filled with smokers. After an extremely stressful workday, you order your first drink, all the while suspecting that tomorrow may be worse. And then it happens, an immediate and larger than life urge to bum a smoke.

How many different use cues could get triggered?

A 2014 study found that (1) drinking alcohol while (2) experiencing a negative mood (feeling irritable, sad, anxious, tense, stressed, angry, frustrated) while (3) being around other smokers,

generated a more intense crave episode than generated by encountering any individual factor or any two paired factors.

I share this, and what follows, not to scare you but to hopefully motivate you to continue reading this chapter. I encourage you to think through and adopt multiple crave coping strategies and to be prepared to immediately call upon as many necessary to keep nicotine from entering your body.

Early Withdrawal

Overlaying operant conditioning atop classical conditioning, atop physical withdrawal, atop emotional recovery, atop loads of junkie thinking fueled by the collective tease of thousands of old replenishment memories, is it any wonder that, for some, the initial 72 hours may feel intense?

Relax. Whether letting go turns out to be a cakewalk or your greatest challenge ever, why fear healing? The good news is that we move beyond peak withdrawal within three days. The good news is that, by then, most have extinguished many of the cues associated with life's most basic and frequent activities: breathing, waking, dressing, walking, talking, eating, working and sleeping.

It's why watching pharmaceutical companies sell expensive products that drag withdrawal out for weeks or months is so disturbing. And how does popping a piece of nicotine gum or a nicotine lozenge into our mouth when a use-cue is encountered extinguish conditioning? Add in products like Chantix/Champix, which come with serious or even life-threatening risks, it makes you wonder whose interests are being protected.

We are each unique when it comes to the number and types of use cues we established. Although natural to want to run and hide from conditioning, extinguishing each and reclaiming life is what freedom is all about. Embrace coming home, don't fear or fight it.

- 1. Small DM, et al, The posterior cingulate and medial prefrontal cortex mediate the anticipatory allocation of spatial attention, NeuroImage, March 2003, Volume 18(3), Pages 633-641.
- 2. Conklin CA et al, Combined smoking cues enhance reactivity and predict immediate subesquent smoking, Nicotine & Tobacco Research, 2019, Pages 241-248
- 3. Wertz JM and Sayette MA, A Review of the Effects of Perceived Drug Use Opportunity of Self-Reported Urge Experimental and Clinical Psychopharmacology, Feb 2001, Volume 9(1), Pages 3-13.
- 4. Cortese BM et al, Olfactory Cue Reactivity in Nicotine-Dependent Adult Smokers, Psychology of Addictive Behavior, March 2015, Volume 29(1), Pages 91-96.
- 5. Niaura R, et al, Individual differences in cue reactivity among smokers trying to quit: effects of gender and cue type, Addictive Behavior. Addictive Behaviors, March-April 1998, Volume 23(2), Pages 209-224.
- 6. Lam CY, et al, Individual and combined effects of multiple high-risk triggers on postcessation smoking urge and lapse, Nicotine and Tobacco Research, May 2014, Volume 16(5), Pages 569-575. https://pubmed.ncbi.nlm.nih.gov/24323569/

Crave Episode Duration

Do Crave Episodes Really Peak Within Minutes?

Yes, generally, although we don't yet know why. After ending nicotine use, rarely does the challenge posed by a cue triggered crave episode last longer than the time that it took to smoke a cigarette.

While possible that multiple un-extinguished use cues may be may encountered within minutes of each other, decades of online support group discussions suggest that it isn't as common as we might think.

What is common is to see periods of conscious thought fixation being confused with a subconsciously triggered crave episode. It's easy to do.

A 2021 study exposed 64 smokers to a participant drinking water (a neutral stimulus), followed by watching them vape from a tank-type e-cigarette for up to 5 minutes. Thereafter, roughly half who watched were sensitive enough that they opted to smoke.[1]

But not being e-cigarette addicts themselves, did they smoke due to subconscious conditioning or because of conscious awareness of what was being inhaled? There's also the possibility that seeing exhaled vapor reminded them of cigarette smoke, which, for some, may have become a conditioned use cue.

Why is the distinction between conditioning and simple thoughts or thinking important?

Think about your favorite food. How long can you continue to stay focused and fixated upon it? Can you do so for 10, 20, or even 30 minutes? What about while trying to diet? The only limit upon the duration of conscious fixation is our ability to maintain concentration and focus.

It's one of many problems significantly infecting crave duration research. Most glaringly, the pharmaceutical industry is heavily invested in getting smokers to purchase nicotine gum. The shorter crave episodes, the less need for gum.

Unfortunately, many crave duration studies involve researchers who were directly or indirectly receiving money from those making and selling nicotine gum.

Researchers are studying smokers who continue smoking or who have not smoked since awaking,[2], or who were asked to not smoke for 3 days,[3] or smokers who were given replacement nicotine,[4, 5]. The common thread is that none are in recovery, that all fully expect to smoke again soon.

Nicotine use expectations effectively unchanged, operant conditioning still operating, and participants likely in the throws of early withdrawal, how could they not engage in extended fixation?

Obviously, seeing someone else smoke can be both a source of conscious thought fixation and an, as yet, unextinguished use cue. The primary distinction between conscious fixation and a subconsciously triggered crave episode is control.

While we have substantial direct control over the duration of fixation, and significant control over how the conscious mind responds when a subconscious cue is encountered, our subconscious controls the timing and duration of cue-triggered episodes.

The importance of the distinction is the recovery confidence flowing from knowing that we can control thoughts and thinking, while subconscious challenge is short lived.

How do you tell the difference? It's simple. Determine who's driving.

Once you've stopped using, the next time you find yourself thinking about inhaling nicotine, try replacing those thoughts with thoughts about your favorite person, place, or food. Visualize giving them a giant hug, being super relaxed at your special place, or this bite of your favorite food being the best ever. Can you feel your focus shifting?

But if cue triggered crave episodes peak and begin to subside within minutes, why do the minutes sometimes feel like hours?

Time Distortion

A 2003 study found that distortion of time perception is one of the most common nicotine dependency recovery symptoms.[6]

Smokers were asked to estimate the passing of 45 seconds both while still smoking nicotine and during a second session after which they had not smoked any nicotine for 24 hours. Their time estimates were also compared to a control group of non-smokers.

While at a loss to explain why, researchers found that time estimation accuracy was significantly impaired (300%) in smokers who had not smoked or used nicotine for 24 hours, as compared to estimates made while smoking.

The ability of smokers who had not smoked for 24 hours to estimate the passing of 45 seconds was also impaired when compared to estimates made by non-smokers. But timing estimates were found to be similar between non-smokers and smokers while smokers were allowed to continue smoking.

Keep a watch or clock handy

What the study didn't assess was the estimation of time during the occurrence of a crave episode.

Whether cessation time distortion is ultimately found to be physiological, psychological or some combination, knowing that it exists suggests the value of looking at a clock or watch during an

episode, in order to bring honest perspective to time.

When a craving arrives, immediately look at your watch or a clock and note the time. The episode's false message - that the only way to make the craving end is to bring more nicotine into your body - will soon peak and then pass.

Not only will your recovery remain alive and well, you are highly likely to receive a reward, the silencing of a use-cue, and the return of yet another aspect of nicotine-free life.

It's important to note that for the 1.7% of adults diagnosed with panic disorder under diagnostic standards such as the American Psychiatric Association's DSM-IV manual, that DSM-IV criteria indicate that panic attacks may not peak for up to 10 minutes.[7]

Focus your panic attack coping skills training on handling nicotine cessation panic attacks. Already highly skilled, hopefully, you'll find this aspect of nicotine dependency recovery the least challenging of all.

We're each fully capable of handling a few minutes of anxiety. We all can. Accurately measuring the episode's duration will prevent time distortion from making it appear 300 percent longer than reality.

Don't let time distortion deprive you of your dream of again comfortably engaging life as "you."

- 1. Vena A et al, Cue Salience of the Use of an Electronic Nicotine Delivery System (ENDS) Device Marketed to Women, Addict Behaviors, Jan. 2020, Volume 100.
- 2. Heishman SJ et al, Prolonged Duration of Craving, Mood, and Autonomic Responses Elicited by Cues and Imagery in Smokers: Effects of Tobacco Deprivation and Sex, Experimental and Clinical Psychopharmacology, June 2010, Volume 18(3), Pages 245–256.
- 3. Heishman SJ et al, Imagery-induced Tobacco Craving: Duration and Lack of Assessment Reactivity Bias, Psychology of Addictive Behaviors Sept. 2004, Volume 18(3), Pages 284-288.
- 4. Niaura R et al, Comparative Efficacy of Rapid-Release Nicotine Gum Versus Nicotine Polacrilex Gum in Relieving Smoking Cue-Provoked Craving, Addiction, Nov. 2005, Volume 100(11), Pages 1720-1730
- 5. Shiffman S et al, Efficacy of Acute Administration of Nicotine Gum in Relief of Cue-Provoked Cigarette Craving, Clinical Trial Psychopharmacology, April 2003, Volume 166(4), Pages 343-50.
- 6. Klein LC, Smoking Abstinence Impairs Time Estimation Accuracy in Cigarette Smokers, Psychopharmacology Bulletin, May 2003, Volume 37(1), Pages 90-95.
- 7. American Psychiatric Association, Panic Disorder, Diagnostic and statistical manual of mental disorders, fourth edition, 1994.

Crave Episode Frequency

How often do crave episodes occur after ending nicotine use? The best we can do in answering this question is to share study averages.

The obvious problem with averages is that we may not be average, which ranges from the 4 to 5

pack-a-day smoker to the habituated-only user, who may go days without using, who only experiences craving in the seconds prior to inhaling but not before.[1]

And let's not forget the new addict who, as yet, may have established few conditioned use cues.

A 1998 real-time crave coping study followed 36 participants who used tape recorders and palm computers to record details of 389 coping episodes during their first 10 days of smoking cessation.[2]

It found that the day on which the most crave episodes occurred was the third day of recovery, with an average of 6.1 craves. Day four's average dropped to 3.5, with day five generating just 3 craves per day. By day ten the average fell to just 1.4 episodes per day.

If each crave episode peaks in less than 5 minutes, and the average number on the most challenging day is 6.1, that's a total of 30 minutes of crave anxiety on your most challenging day of recovery.

Can you handle 30 minutes of significant challenge in order to reclaim your mind and take back your life? Absolutely! We all can.

But what if you're not average? What if you conditioned your subconscious to have twice as many cues as the average user? That would mean that you could experience a maximum of 60 minutes of total crave episode anxiety on your most challenging day.

Is there any doubt whatsoever that you handle 60 minutes of challenge in order to permanently reclaim the driver's seat of your mind? And you won't be asked to do it all at once. Just a few minutes and then take a break.

Prepare for the possibility of a small spike on day seven. While the average study participant was down to just over 2 episodes per day by day six, day seven brought an average of 4 cravings, before returning to 2 on day eight. Why? We can only guess.

And there are lots of theories. One is that life is measured in weeks and a full week of freedom provided the first significant reason for celebration. Did your subconscious associate use with celebration? If so, what about the celebration that turns sour, like when everyone but mom forgets our birthday? Could that generate a second episode?

Again, we're just guessing. What we do know is that every new ex-user is fully capable of handling a few minutes of challenge.

Looking at the study's chart, reflect on how the average newbie both moves beyond peak physical withdrawal within 72 hours and navigates the peak number of use cues. Coincidence?

While we have zero control over nicotine's elimination half-life, the recovery day on which we decide to fully engage life and confront the bulk of our normal daily use cues is very much

within our control.

Joel always started his clinics on a Tuesday night. Historically, many programs encouraged users to start on the weekend, thinking that it will help avoid work pressures. If so, Monday brings day three, work, and the first full engagement of life.

- 1. Shiffman S et al, Non-daily Smokers' Experience of Craving on Days They Do Not Smoke, Journal of Abnormal Psychology, Aug 2015, Volume 124(3), Pages 648–659.
- 2. O'Connell KA, et al, Coping in real time: using Ecological Momentary Assessment techniques to assess coping with the urge to smoke, Research in Nursing and Health, December 1998, Volume 21(6), Pages 487-497.

Crave Episode Intensity

As we navigated our day, our senses and emotions would alert our subconscious that a use-cue had been encountered. Although usually unnoticed, a gentle urge was generated reminding us that it was time for replenishment.

If use conditioning was ignored or replenishment overdue, like blowing up a balloon, the urge's anxiety energy could explode into a full-blown crave episode. If in recovery, a wave of escalating tension could begin squeezing our resolve to the point of bursting, with surrender, relapse, and defeat just seconds away.

It's believed that our right insula (just above our ear and an inch or so in) acts as a control center for urge and crave anxiety routing and intensity control, including recognition of conditioned nicotine use cues.[1]

According to brain scan studies, the more intense a crave, the greater the blood-flow in brain regions known to control attention, motivation, and expectancy (the prefrontal cortex and posterior cingulate).[2]

The intensity of a particular crave episode appears to be influenced by a number of factors. A 2007 study found that the two most significant were: (1) how recently we had used, and (2) our level of impulsiveness.[3] The more available cigarettes are, the more intense the craving.[4]

You'd think that once we end all use and become 100 percent nicotine-free that our subconscious would notice that we were still alive, well, and functioning, and immediately abandon demands for more.

While getting clean forces re-sensitization to commence and begins diminishing underlying withdrawal anxieties, urge and crave anxieties flowing from subconscious use cue conditioning are independent.

Still, once beyond peak withdrawal, all levels of the mind are hit with escalating awareness that we've been living a lie, that once all nicotine is out of our system that things start slowly getting better, not worse. It's here that fear of failure butts heads with fear of success.

As for impulsiveness, it's the trait that played a key role in many of us experimenting with using nicotine in the first place. It's a trait that years of quickly silencing urges and craves made worse. Now, the same trait that helped keep is using, hopefully, begins questioning relapse as a solution.

Patience in standing up to impulsivity can, itself, foster confrontation anxieties. Our hopes and dreams of a lasting dependency solution are pitted against thousands of old "aaah" memories promising instant yet temporary relief from wanting.

Truth is, only one choice provides a way out. Truth is, the only path home is to choose the bigger and better yet delayed reward. Truth is, every activity that triggered use can be done as well as or better without it.

Neurofeedback studies suggest that what you're doing here and now - generating dependency recovery mindfulness - may aid in significantly diminishing crave intensity both short and long-term. [5]

Be honest with yourself. What is the only solution to permanently ending replenishment urges and craves?

Then, why not invite your subconscious to switch teams, to join in your quest to stay free and clean, instead of generating urges and craves for more.

Invite your impulsiveness to get impulsive about guarding against a natural insecticide entering your bloodstream and controlling your brain.

Talk to your subconscious. Encourage it to serve as a vigilant ally in protecting today's freedom, healing, risk-reversal, pride, and growing self-esteem.

Picture the creation of healthy, positive impulses that instantly respond to protect you from challenge. Imagine all levels of awareness forming a skilled firefighting team that immediately arrives on scene and is in full control within seconds of the initial spark.

Although one study noted that the level of depression among women, but not men, was capable of impacting crave episode intensity,[6] study after study finds little or no difference between male and female success rates.[7]

It's simply more evidence that, in numerous ways, women are stronger then men.

Although the thought of a depressed woman having to endure a slightly more intense crave episode is disheartening, keep in mind that all episodes are extremely short-lived, and within a week the majority are silenced.

But as reviewed in Chapter 9, whether male or female, never ignore or make light of ongoing

depression. Get seen ASAP if you or loved ones become concerned about any new or worsening symptom.

A food craving study found that vividness of imagery associated with food influenced food craving intensity.[8] Let's give it a try.

Picture your favorite food. Now make the mental image as vivid and detailed as possible. Feel the urge? Now picture your particular brand of nicotine delivery device. What color is it? Hold it in your hand. Smell it. Do you sense an urge?

If so, why not use recovery imagery as a subconscious re-training tool? Why not flash our own subliminal messages?

One at a time, picture yourself engaging in every activity during which you used nicotine, but now comfortably doing so without it. Acknowledge the simple truth that life is easier without it.

And it isn't just "doing" or "existing." Don't forget the rewards.

Allow healing taste buds to sample the rich flavors of a mouth reclaimed. Imagine the solitude upon arrival of that first full day where the thought of "wanting" never once enters your mind.

Picture such days soon becoming more and more common, until becoming your new sense of normal. Listen as the diminishing noise of addiction's daily chatter gradually fades into rarity. Feel the serenity of a brain reclaimed.

- 1. Naqvi, NH, et al, Damage to Insula Disrupts Addiction to Cigarette Smoking, Science, January 2007, Vol. 315 (5811), Pages 531-534.
- 2. Small DM, et al, The posterior cingulate and medial prefrontal cortex mediate the anticipatory allocation of spatial attention, NeuroImage, March 2003, Volume 18(3), Pages 633-641.
- 3. Zilberman ML, et al, The impact of gender, depression, and personality on craving, The Journal of Addictive Diseases, 2007, Volume 26(1), Pages 79-84.
- 4. Hayashi T et al, Dorsolateral prefrontal and orbitofrontal cortex interactions during self-control of cigarette craving, PNAS, March 2013, Volume 110(11), Pages 4422–4427.
- 5. Bu J et al, Effect of Deactivation of Activity Patterns Related to Smoking Cue Reactivity on Nicotine Addiction, Brain, June 2019, Volume 142(6), Pages 1827-1841.
- 6. Zilberman ML, et al, The impact of gender, depression, and personality on craving, The Journal of Addictive Diseases, 2007, Volume 26(1), Pages 79-84.
- 7. Etter JF, et al, Gender differences in the psychological determinants of cigarette smoking, Addiction, June 2002, Volume 97(6), Pages 733-743.
- 8. Tiggemann M, et al, The phenomenology of food cravings: the role of mental imagery, Appetite, December 2005, Volume 45(3), Pages 305-313.

The Bigger the Better

Although this crave chart reflects averages of data from a specific study of a unique population,

it shows two factors common to every recovery.

It evidences that the number of daily crave episodes quickly peaks and that the number of episodes then begins to gradually decline.

Let's focus upon what happens once the number of daily crave episodes experienced, if any, begins to decline. I say "if any" because both informed dreams and higher callings have the potential to make recovery significantly less challenging.

Unless hiding in a closet in order to avoid temptation, locked up in prison, laid up in the hospital, or self-isolating due to a virus, we have no choice but to meet, greet and extinguish the bulk of our daily subconscious feeding cues within the first week.

It's then that the number and frequency of early challenges keep us alert, on our toes, prepared and ready to deploy our crave coping defenses on a moment's notice.

As shown by the chart, by day 10 the average study participant was experiencing just 1.4 crave episodes per day. As just reviewed, that translates into less than 7 minutes of significant challenge. But what about the days that follow?

What are the natural and expected consequences of beginning to go entire days without a crave episode? What will happen to your battle plans, defenses, to your preparedness, and anticipation once you experience a day or two without encountering a cue driven crave?

For purposes of discussion only, let's pretend that during recovery days 14, 15 and 16, although you remained occupied in dealing with conscious thinking about wanting to use, that you did not once encounter any un-extinguished subconscious feeding cue or experience any full-blown crave episode.

Although unlikely you would have noticed, wouldn't it be normal to begin to relax a bit and slowly lower your defenses and guard?

And then it happens. On day 17 you encounter a still active use cue.

Surprised, it catches you totally off-guard and unprepared. You scramble to muster your defenses but it's as if you can't find them. It's as if they too are being swept away by a tidal wave of anxieties.

You feel as if you've been sucker-punched hard by the most intense craving ever. It feels endless. Your conscious thinking mind begins suggesting that things are getting worse, not better. The thought of throwing in the towel and giving-up suddenly begins sloshing about inside a horrified mind.

It's then, when things seem worst, that you need to briefly pause and reflect upon what you're really seeing. Things are getting better, not worse. Say, what?

Think about how long it had been since your last significant challenge and how relaxed you'd allowed yourself to become. It's likely that this episode is no more intense than prior ones. It's just that you'd taken off your life jacket and you couldn't quickly locate and put it on. You panicked.

If such an event should ever happen, I encourage you to stop, reflect, and then celebrate! You've reclaimed so many once conditioned aspects of a nicotine-dependent life that serious challenge is no longer frequent.

While infrequent, holiday or even seasonal triggers likely lie ahead, thousands of old wanting satisfaction memories are being written over by a nicotine-free life and gradually losing their punch.

With each passing day, the distance between significant challenges will continue to grow, and they'll be shorter in duration, and generally less intense. Again, remember to keep a clock handy so as to defend against time distortion.

None of us will ever be stronger than nicotine but then we don't need to be. Nicotine is simply a chemical with an IQ of zero. Trust your dreams to your vastly superior intelligence, your greatest weapon of all.

No matter how far we travel or how comfortable we become, there's still only one guiding principle allowing us to remain here on the free side of the bars while keeping our dependency fully arrested on the other ... no nicotine today.

Rewards

And also consider reversing your mind-set. Recovery isn't about punishment but rewards.

Our chemically enslaved survival instincts teacher was fooled and compromised by an external chemical. Its job was to make dopamine pathway activating events nearly impossible in the short term (the time needed for recovery) to forget or ignore.

Except for responding to the wrong input, it functioned as designed. It did its job and did it well. But now it's time for a mind schooled in nicotine dependency recovery to arrive and save the day.

Extinguishing each conditioned use cue rewards us with the return of another aspect of a nicotine-free life. Why fear being able to finish work, a meal, exit a store, drive or have a drink with friends without an urge or crave commanding replenishment?

When a craving arrives, think about the prize at the end. Think about another step in silencing all of them. Think about wanting for more nicotine being permanently evicted from the yard, bathroom, porch, car, work or play, with use no longer chained to relationships, activities, or emotions.

Crave episodes reflect evidence of where we've been, and what we were forced to do once there.

But not anymore! The moments in front of you, all of them, are again becoming yours.

Moments of subconscious healing are good, not bad. Soon, you will have reclaimed so many pieces of life that, like putting together your puzzle, it will reflect a life reclaimed.

Extinguishing Use Cues

Extinction

Extinction is the elimination of conditioned learning over time. With operant conditioning, it begins once reinforcement ends, and with classical conditioning upon presentation of the use stimuli (a use-cue) in the absence of use.

The brain regions most involved in extinction are the medial prefrontal cortex (mPFC), which is located immediately above and between your eyes, and the amygdala, two almond-shaped structures located an inch or so behind each eye.[1]

In humans, how long or how many encounters does it take to extinguish a specific conditioned response? Frankly, we don't yet know.

What we do know is that within a week of ending nicotine use that old memory traces linking the bulk of our regular daily cues (each a conditioned stimulus or CS) to nicotine (an unconditioned stimulus or US), are no longer producing crave episodes (a conditioned response or CR).

While we learn through our senses, memory is the maintenance of learning over time.

The biggest scientific debate has been whether cue extinction occurs due to unlearning or new learning. Is extinction the result of old CS-US memory pairing traces between neurons being overwritten, or new CS-noUS memory traces being created?

A growing number of researchers believe that the answer is both.

Studies have found that while extinction does not erase the original CS-US memory trace, extinction somehow inhibits it, while at the same time new memories are generated documenting encounters with a former use-cue, where use did not occur.[2]

Thank goodness that we don't need to be molecular biologists with an understanding of how phosphatases and kinases form and extinguish long-term memories in order to break free.[2]

What's important is appreciation that extinction begins almost immediately upon ending use, and that reinstatment of operant conditioning and at least one conditioned use-cue is always just a puff away.

But how do we resist in standing firm in saying "no" to years of use reinforcement and an unknown number of subconscious use pairings?

Once triggered, how do we control the impulse to use? How do we muster what researchers call inhibitory control?

Just one extinction opportunity at a time.

Getting it done

An obvious problem in studying use-cue extinguishment is that scientists are left guessing as to subconscious use associations. Most studies resort to showing pictures or images of suspected use-cues.[3]

Real-world empirical evidence suggests that, like the traveling hypnotist telling subjects to ignore a prior behavioral suggestion upon waking, that when combined with dreams, desires, and higher priorities, that a single use-cue encounter with a "no more, never again" mindset can immediately disable a cue.

This doesn't mean that encountering the exact same nicotine use cue the day after extinction won't cause the conscious mind to briefly focus or even fixate upon "thoughts" of wanting.

It means that the first encounter where our consciousness shouts to our subconscious that use has ended for good, may be sufficient to prevent a subsequent encounter from generating a subconsciously triggered crave episode.

Recovery is about re-learning to engage in every activity we did as users but without nicotine.

Ending use almost immediately compels us to confront and extinguish all use conditioning related to survival activities such as breathing, eating, sleeping, and using the bathroom.[4]

While essential to feed the kids and get them off to school, early fears of encountering crave triggers can motivate postponement, at least briefly, of non-essential activities such as housework or proper personal hygiene.

Some try to hide from life. But, not without a price. Ignoring a dirty house or tall grass may breed escalating internal anxieties or cause needless family frictions.

Joel cautions that aside from threatening our livelihood and making us look like a slob, if we attempt to hide and avoid confronting use cues associated with non-survival activities for too long, we may become so intimidated that we begin believing that we'll never be able to engage in the activity again.

Then, there are non-mandatory activities such as partying, dating, nurturing relationships, television, the Internet, sports, hobbies, and games. The only way to extinguish cues associated with any activity is to engage in the activity, confront the cue, and reclaim that aspect of life.

And reclaiming life isn't going to happen by me, Joel, or this book talking about it. It'll happen by you going out into and experiencing and living your day.

Admit it. Recovery anxieties generated by delay in reclaiming any aspect of life are totally within our ability to eliminate.

Still proud, years after breaking free I walked into a convenience store to pay for gas while wearing my "Hug me I stopped smoking" tee-shirt. The clerk behind the counter asked if it were true.

While literally surrounded by cigarette packs, cartons, oral tobacco products, and cigars he asked, "Did you really quit?" "Yes," I said. "After thirty years and being up to three packs-aday!"

"I haven't had a cigarette for a week," the clerk replied. You could feel and see his smiling pride. While heading for the door I heard the lady who had been behind me say, "Two packs of Marlboro Lights, please."

Think about the clerk's first day on the job after his last nicotine fix. Imagine your livelihood requiring you to repeatedly reach for and handle cigarettes, a proximate and conditioned use cue for nearly all.

Yes, his first time may have triggered a cue-induced mini anxiety attack. If so, what are the chances he was so busy that it peaked and passed before he had an opportunity to take a break and quiet it by relapse?

While subsequent sales may have caused urges associated with conscious thoughts of wanting, the difference was the absence of an uncontrollable anxiety episode. This time, the intensity and duration of the experience was substantially within his ability to control.

But be careful here. Some conditioned use cues are so similar to others that we fail to grasp their distinction. For example, the Monday through Saturday newspaper may have only been associated with inhaling nicotine once, while Sunday's paper is much thicker and may have required replenishment two or more times to read.

Reward Deficiency Syndrome

Need another reason for seeing the extinction of use conditioning as good and wonderful? There are two theories as to the consequences of nicotine hijacking dopamine pathway-related learning: the incentive sensitization theory and reward deficiency syndrome theory. [5]

As its name suggests, incentive sensitization is the sensitivity consequences upon natural dopamine pathway learning due to the frequency of compliance with nicotine use cues. Research suggests that while heightened incentive is given to nicotine use, it results in diminished sensitivity to life's non-use cues.

The reward deficiency syndrome theory is even worse. Here, research supports the prospect that use-conditioning compliance causes chronic brain reward pathway deficits, with diminished activation in response to both nicotine use-cues and life's non-use cues.

Unfortunately, the lastest research supports the reward deficiency syndrome theory. It's consistent with needing a bit more nicotine over time (increased tolerance), in order to more frequently experience diminished sensitivity.

"[A]ddicts have a general deficit in the recruitment of brain reward pathways, resulting in chronic hypoactivation of these circuits in response to both drug- and nondrug-related rewards," with the degree of dopamine pathway sensitivity disruption mirroring the severity of dependence. [5]

Has addiction to nicotine caused you to favor your favorite food less? [6] Just one more reason for fully reclaiming our brain as quickly as possible.

- 1. Oliva V et al, Interplay of prefrontal cortex and amygdala during extinction of drug seeking, Brain Structure & Function, Apr 2018, Volume 223(3), Pages 1071-1089.
- 2. Todd TP, Vurbic D, Bouton ME, Behavioral and neurobiological mechanisms of extinction in Pavlovian and instrumental learning, Review, Neurobiology of Learning and Memory, Feb 2014, Volume 108, Pages 52-64.
- 3. Unrod M. et al, Decline in cue-provoked craving during cue exposure therapy for smoking cessation, Nicotine & Tobacco Research, March 2014, Volume 16(3), Pages 306–315.
- 4. Spitzer J, Alcohol and quitting smoking, June 9, 2001, https://whyquit.com/joels-videos/alcohol-and-quitting-smoking/
- 5. Lin X, et al, Neural substrates of smoking and reward cue reactivity in smokers: a meta-analysis of fMRI studies, Translational Psychiatry, 2020, Volume 10:97
- 6. Jastreboff, A. M. et al. Blunted striatal responses to favorite-food cues in smokers, Drug and Alcohol Dependence, Jan. 2015, Volume 146, Pages 103–106.

Cue Exposure Therapy

What is Cue Exposure Therapy?

Cue exposure therapy or CET is intentional exposure to drug-related use cues in order to more quickly extinguish and silence conditioned responses.[1]

A tool of modern drug treatment programs, should it be our tool too? Should we wait for time and life to bring nicotine use cues to us, or seek out and extinguish them?

For example, it's likely that conditioned use cues are associated with your daily work schedule or chores. We can fear and delay getting back to work or intentionally confront and target them for extinction.

Our problems are the same as those confronting researchers and drug treatment programs. What use-stimulus pairings have our subconscious established, and how do we create safe exposure opportunities that don't significantly elevate the risk of relapse?

Some potential use cues may be beyond our ability to reproduce, such as those associated with changing seasons, holidays, birthdays, weddings, or funerals. Others, such as early alcohol use are extremely risky and, if insistent upon confronting them, CET should be done in the safest environment possible.

In real-world use, CET is, at best, a partial tool. Although we have the ability to boldly and quickly reclaim most aspects of life, we need to accept that some use-conditioning will survive and occur when presented by time or circumstances.

Still, intentionally confronting and silencing as many as possible can foster intense confidence in our ability to eventually extinguish all use-conditioning.

Developing super recovery confidence demands the ability to distinguish between subconscious classical conditioning (an uncontrollable response) and conscious thought fixation (a controllable situation).

It isn't always easy. Even after nearly all of our subconscious use cues have been extinguished, it's normal and natural for our senses to notice old use situations. The difference is that with fixation we have substantial control of our mind's response.

Give it a try. Imagine and create a high-quality image of your favorite food, the most tempting you've ever seen. Picture it oozing and dripping with flavor. Can you smell it? Imagine that first bite. Savor the flavor and sense the "aaah" sensation that follows.

While I controlled the imagery, you controlled the intensity and duration of any desire felt. Unlike a cue triggered crave episode, you were totally free to stop at any time.

CET Effectiveness Effectively Unknown

How effective is CET in increasing success rates? Frankly, we don't yet know. While some studies find benefit,[2] others don't.[3] But don't let that discourage real-world consideration.

There are huge and obvious challenges in producing quality evidence of the brain's reaction when attempting to accelerate extinction of the new ex-user's unique set of crave triggers.

First, researchers need to begin by evaluating CET in studies populated by addicts dreaming of permanently arresting their dependency, not smokers briefly deprived of nicotine while being shown images of suspected cues, all of whom fully expect to smoke or vape again within hours or a few days.

Nor should CET studies involve participants whose appetite for nicotine is being satisfied by free

replacement nicotine.[2] Researchers also need a control group that, at least initially (for the first round), mirrors and allows fair comparison to real-world cessation.

Billions at stake, pharmaceutical industry muscle has no choice but to resist meaningful research. What would be the financial consequences of news headlines from CET studies detailing how CET demonstrated efficacy for those going cold turkey but not for those vaping or using NRT, or a finding that chewing nicotine gum when experiencing a crave actually prevents cue extinction? [4]

Still, some findings make sense. Researchers discovered that younger smokers respond to CET better than long-term smokers.[5] Even there, maybe extinction is simply more noticeable. Younger users often have fewer nicotine use associations, with far fewer use associated memories.

Interestingly, CET, and intentionally trying to rapidly meet, greet and extinguish use conditioning is contrary to historic cessation lessons, the remnants of which are visible across the internet.

For example, the U.S. government's leading cessation booklet is 37 pages and called "Clearing the Air."[6] Page 9 tells readers to stay away from places smoking is allowed and stay away from people who smoke. The title of page 24 reads, "Stay away from what tempts you."

Readers are then told to "Stay away from things that you connect with smoking," like not sitting in your favorite chair or watching your favorite TV show. They're told to drive a different route to work or not drive at all and take the train or bus for a while.

How can we reclaim driving or our favorite TV program if taught to fear and avoid it?

Unfortunately, my government's primary cessation booklet is loaded with serious conflicts. For example, the title of page 9 reads, "Meet those triggers head-on." Sounds great, right! But then the first two sentences on page 9 state, "Knowing your triggers is very important. It can help you stay away from things that tempt you to smoke."

Well, which is it? "Meet those triggers head-on" or "stay away" from them? Clearly, it's wise to stay away from nonsense booklets such as "Clearing the Air," as they cloud it further.

Let me share one more glaring "Clearing the Air" conflict. Page 17 is entitled, "Medicines that help with withdrawal."

The page tells readers, "You may feel dull, tense, and not yourself. These are signs that your body is getting used to life without nicotine. It usually only lasts a few weeks." There are medicines that can help with feelings of withdrawal: ... "nicotine gum, nicotine inhaler, nicotine lozenge, nicotine nasal spray, nicotine patch."

The obvious question becomes, how does the body get "used to life without nicotine" by feeding it "nicotine?" Obviously, it can't. It's as if health officials allowed Big Pharma to author the booklet.

Back to extinguishing use cues. What if you could extinguish some of your conditioned cues without experiencing any cravings? Actually, it's far more common than the neo-nicotine industry wants you to believe.

Research suggests that conscious thought and its subconscious influence have the ability to create new expectations conditioning capable of overpowering old use conditioning. Imagine your biggest recovery fear not triggering a craving.[7]

Again, think about how the single-session traveling hypnotist is able to briefly interrupt use urges and craves. It isn't magic. They relax our consciousness and then create new expectations.

And reflect on the subconscious impact of the title to Allen Carr's book "The Easy Way to Stop Smoking," and Joel Spitzer ending more than 100 articles and 500 video lessons exactly the same, by inviting us to "Never Take Another Puff."

The Opposite of CET: Delaying Extinction

Our conditioning patterns mirrored how we lived life. And we can't reclaim life by avoiding it.

A 2002 study found that 97% of inmates forced to stop smoking while in prison had relapsed within 6 months of release.[8]

When arrested, nearly all were actively feeding nicotine addicts. Once released, imagine their first time driving a car, walking into a bar, running into an old smoking buddy, or the moments following romance.

They were hit head-on by conditioned nicotine use cues associated with a host of situations that their arrest and imprisonment had prevented them from extinguishing.

As the correct portion of "Clearing the Air" states, "meet those triggers head-on." They mark the path home. Yes, you may find that there are some aspects of life that you no longer desire, but that will be your choice.

But do so safely. Consider breaking bigger challenges down into smaller tasks. Have multiple crave coping strategies ready, and don't hesitate to deploy another if your first choice isn't working.

And remember, if any situation begins feeling too threatening, simply walk away, and live to fight another day.

^{1.} Lee J, Nicotine craving and cue exposure therapy by using virtual environments, Cyberpsychology & Behavior, December 2004, Volume 7(6), Pages 705-13.

^{2.} Unrod M. et al, Decline in Cue-Provoked Craving During Cue Exposure Therapy for Smoking Cessation, Nicotine & Tobacco Research, March 2014, Volume 16(3), Pages 306–315.

^{3.} Pericot-Valverde I, et al, A Randomized Clinical Trial of Cue Exposure Treatment Through Virtual Reality for Smoking Cessation, Journal of Substance Abuse Treatment, Jan. 2019, Volume 96, Pages 26-32.

^{4.} Powell GL, et al, Nicotine Reduction Does Not Alter Essential Value of Nicotine or Reduce Cue-Induced

Reinstatement of Nicotine Seeking, Drug and Alcohol Dependence, April 25, 2020, 5;108020, online ahead of print.

- 5. Traylor AC, et al, Assessing craving in young adult smokers using virtual reality, The American Journal on Addictions, Sep-Oct 2008, Volume 17(5), Pages 436-440.
- 6. National Institutes of Health, Clearing the Air, April 2003, NIH Publication No. 03-1647.
- 7. Dols M, et al, Smokers can learn to influence their urge to smoke, Addictive Behavior, Jan-Feb 2000, Volume 25(1), Pages 103-108.
- 8. Tuthill RW et al, "Does involuntary cigarette smoking abstinence among inmates during correctional incarceration result in continued abstinence post release?" (poster). 26th National Conference on Correctional Health Care, Nashville, Tennessee, October 21, 2002.

Controlling Crave Episode Expectations

A 2001 study conditioned smokers to expect to be able to smoke during specific situations while encouraging participants to try to identify when a nicotine use cue had been encountered.[1]

Researchers found that encountering and noticing use cues would generate cravings, evidenced by increased salivation and skin conduction. They found that the more aware participants became of their use cues, the more profound use expectations became.

Far more importantly, they found that once study participants were told that they would no longer be able to smoke once a previously identified use cue occurred, that craving was thereafter absent and extinguished.

Can conscious expectations control both subconscious expectations and the presence or absence of craving? Absolutely. It means that what we think and believe is critical, that what we expect can occur.[2]

My most dreaded use cue was walking into the pub after work and having a couple of beers with the guys, as we debated and solved the world's newest problems. Why? Because I'd lost my longest recovery ever by combining alcohol with a false belief that I was now cured and could handle "just one."

This time, online peer support taught me about use cues triggering craves and I expected a massive one. I feared it so much that I delayed the after-work gang for three weeks. I kept thinking about how I missed my friends, our discussions, and a cold beer, and I wanted it all back.

Finally, heading into my fourth week, I mustered the courage.

Upon opening the door, my healed sense of smell was immediately struck by an overpowering stink. Had it always been this bad?

Indirect sunlight highlighted a thin indoor cloud that swirled as the door closed behind me. There

they were, thirty or so after-work buddies tackling the day's events.

Scanning the room, I was shocked to discover that all of them, without exception, were either smoking a cigarette or had a pack and ashtray within reach. Why hadn't I noticed this before?

Although less than one-quarter of Americans then smoked, I was now discovering that almost all of my pub friends were nicotine addicts. How could this be? Was it coincidence?

I was prepared to turn and run if needed but it didn't happen. A crave didn't come. After a couple of minutes, I grew brave and ordered a beer. It still didn't happen. What was going on? This was my most feared situation of all and yet no craves - zero, none.

How could I be standing here, beside smokers puffing away and yet no urge? I'm sure I could have stayed and drunk another but I'd been in there for nearly a half-hour.

I found myself thinking about my still healing lungs every time sunlight pierced the smoke-filled room. Increasingly, I felt a slight burning sensation. My lungs didn't deserve this. It was time to leave.

Looking back, it's likely that I'd given so much thought to my biggest fear, while harboring dreams of reclaiming that aspect of life, that dreams and desire somehow overwhelmed and silenced all nicotine use associations.

Again, think about the traveling smoking cessation hypnotist using their conscious mind to relax our conscious mind, so as to allow them to plant subconscious expectations seeds.

The problem with single-session hypnosis isn't that it doesn't work, at least briefly. It's that it only addresses a single layer of recovery, the subconscious, while ignoring the ongoing negative influence of conscious stimulation, and use related thoughts.

Again, think about the repeated subconscious impact of the title of Allen Carr's book "The Easy Way to Stop Smoking." Each time the book is opened, the subconscious is hit with the message that stopping is easy. It's called "autosuggestion."

Inside, Allen does the same thing that Joel Spitzer does in the first two chapters of his free ebook "Never Take Another Puff." It's the same thing I do in Chapter 3 ("Quitting You"), Chapter 4 (Rationalizations), and Chapter 12 (Conscious Recovery).

We invite the enslaved mind - both conscious and subconscious - to see through the long list of use lies our addiction compelled us to invent, in an attempt to try and justify or explain that next mandatory feeding.

If willing to engage in open and honest analysis, once done, there may be little or no sense of loss. You might skip emotional recovery altogether. If nothing to lose, there's nothing to fear. If no fear, there may be little or no anxiety.

Could letting go entirely generate an "easy" or even cakewalk recovery? Absolutely! But even if

seriously challenged -- as I was -- recovery is entirely do-able.

Although huge, subconscious recovery is only one layer. While Allen Carr's "Easy Way" stop smoking clinic has generated 1, 3, 6 and 12 months success rates of 38%, 27%, 23%, 22% respectively,[3] it's why we devote time to all four layers of recovery.

We don't need to be trained hypnotists to use our conscious mind to calm, reassure, soothe, or create subconscious expectations. Draw near and use truth to reassure your subconscious. It's always listening.

Start by listening to your auto or self suggestions as you talk out loud. Remember, you're talking to a real person so don't bore yourself to death or get super emotional, which may set off alarms. Seek teamwork. Strive to remain calm, caring, and inviting.

Now, try engaging in slow deep breathing while progressively relaxing your body. Quiet all chatter inside your mind by focusing, to the exclusion of all other thoughts, upon an image of your favorite place.[4] Once there and totally relaxed, share your dreams, and rewrite expectations.

Reassure your subconscious. Let it know that there is absolutely nothing to fear in coming home to entire days where you never once want for nicotine. Teach it that, contrary to the lies, you need not lose a single friend or give-up any activity, that life will be better, not worse.

Encourage your subconscious to join forces in embracing recovery, to ignore the tease, lure, and false message of that pile of old replenishment memories, each created by an addict in need.

Ask it to fear relapse instead of freedom, toxins instead of oxygen, your self-destruction and slow suicide instead of healing, health, and lots of extra life.

Make it aware that your mind and body are experiencing the most intense period of healing they'll hopefully ever know, and that you could use a little help. Invite your subconscious to defend and bask in freedom's glory, to feel the delight of your ongoing victory and growing sense of pride.

Deep relaxation may be challenging during the first 72 hours. If so, think about how relaxed the conscious mind and body become immediately before slumbering off into sleep.

Seize upon and use these precious seconds before sleep, when our conscious and subconscious draw near. Calm subconscious fears as you slumber into sleep. Cast out the lies!

Celebrate today's victory and picture tomorrow being your most fruitful day of recovery yet. Slide off into sleep feeling proud and free.

^{1.} Field M, et al, Smoking expectancy mediates the conditioned responses to arbitrary smoking cues, Behavioural Pharmacology, June 2001, Volume 12(3), Pages 183-194.

- 2. Dols M, et al, Smokers can learn to influence their urge to smoke, Addictive Behavior, Jan-Feb 2000, Volume 25(1), Pages 103-108.
- 3. Keogan S, Li S, Clancy L. Allen Carr's Easyway to Stop Smoking A randomised clinical trial. Tobacco Control, 2019, Volume 28(4), Pages 414-419. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6589447/
- 4. Anbar RD, Subconscious guided therapy with hypnosis, American Journal of Clinical Hypnosis, April 2006, Volume 50(4), Pages 323-334.

Crave Coping Techniques

How do you successfully navigate the sudden onset of a brief yet possibly intense crave episode? We've already reviewed a few ways, including reaching for your list of reasons for commencing recovery. Let's take a look at additional coping techniques.

But before doing so, research has found that coping techniques involving changes in thinking or doing (behavior) are highly protective against relapse. Maximum protection occurs when skilled in calling upon more than one coping strategy when needed. [1]

On June 25, 2020, Keith McDonald emailed me. Having broken free 11 years earlier Kieth wrote:

"Your site gave me some great info. I think the best is to be glad you are having a craving as it lets you know you are addicted. So every time I had one I let it come and go. I no longer have them but I always have people ask me how to quit. I tell them how and point them to your site for more info."

Keith's right. Coping research finds methods focusing on how we react to and engage crave stressors the most promising. [2] In the spirit of letting them "come and go," this was my go-to technique.

Embracing Crave Episodes

Upon sensing danger, our survival instincts tell us to either prepare to stand and fight or get ready to run. What approach will you use? Upon encountering a crave episode will you duck and run, or turn and fight?

While the objective is clear - to not use nicotine - our natural instincts on how best to achieve that objective may not be the easiest path to travel.

Can we hide from cravings or will they find us? Can we runaway or will they catch us? It's the same with going toe to toe in battle, isn't it? Can we beat-up craves and make them surrender or cry uncle? Can we scare them away?

Encountering and extinguishing use cues is how we mend, heal, repair and reclaim a nicotine-dependent subconscious mind. It's how we destroy use expectations and take back life.

While nicotine is a natural poison, what about craves? Can a crave that lasts 3 to 5 minutes destroy tissues, clog arteries and cause a heart attack or stroke, promote cancer, or contribute to early dementia?

Will a crave cut us, make us bleed, or send us to the emergency room? Can it physically harm us? If not, then why fear it, why run, why hide?

How much of the anxiety associated with recovery is self-induced? Nearly all.

So, why agonize over the anticipated arrival of that next crave? Once it does arrive, why immediately begin feeding our mind additional anxieties that only fuel the fire?

Let's not kid ourselves. The anxiety associated with a craving for nicotine is as real as the eyes reading these words. And fear of anxiety hides solutions.

While fully capable of mentally embracing a crave episode's anxiety energy, few have ever done so. Instead, what we feel is a tremendously inflated experience fueled by anticipation, driven by fear, and possibly tense due to a history of prior relapse.

Try this, just once. It's what researchers refer to as "confrontation."[3]

Instead of inviting your body's fight or flight response to inflame the situation, when the next crave arrives, stop, be brave, drop your guard, take slow deep deliberate breaths, and in your mind imagine reaching out and wrapping your arms around the crave's anxiety energy.

It won't harm or hurt you. It's normal to be afraid but be brave for just one moment.

Continue wrapping yourself around the episode as you fully embracing it. Continue taking slow deep breaths as you clear your mind of all chatter, worries, fears, and thoughts so that you can sense and appreciate the episode's level of raw anxiety.

Touch it, sense it, hug it hard. Doing so will not make it any more intense than it otherwise would have been. You're witnessing a moment of beauty, the most profound subconscious healing you've ever allowed your conscious mind to touch.

Yes, there is anxiety. But possibly for the first time ever, it's not being fed and fueled by you.

Now, feel as the crave episode's energy peaks and then begins to gradually subside. You've won! You've reclaimed another aspect of life. And you did so by way of courage not dread, by a hug, not hiding.

You've seen that the greatest challenge presented by natural recovery cannot hurt you. Only we can do that. Embrace recovery don't fear it. There's a special person waiting down the road. Your birthright, it's a long lost friend you'll come to know, savor, enjoy and love.

- 1. O'Connell KA et al, Thinking and/or Doing as Strategies for Resisting Smoking, Research in Nursing & Health, Dec. 2006, Volume 29(6), Pages 533-542.
- 2. Brodbeck J. et al, Distinct Coping Strategies Differentially Predict Urge Levels and Lapses in a Smoking Cessation Attempt, Addict Behaviors, June 2013, Volume 38(6), Pages 2224-2229.
- 3. Ploderer B, et al, A mobile app offering distractions and tips to cope with cigarette craving: a qualitative study. JMIR Mhealth Uhealth, May 2014, Volume 2(2):e23. doi:10.2196/mhealth.3209

Distraction Crave Coping

Distraction or diversion crave coping is any mental exercise or physical activity that occupies the conscious mind long enough to allow challenge to pass.

While little research on the topic, a 2014 study involving 84 heavy drinkers compared distraction-based coping to mindfulness coping, and no coping training. "Across groups, the initial exposure to alcohol cues" in a simulated bar environment "was associated with significant increases in craving, urge distress, and heart rate."

"Contrary to our prediction," the researchers admitted, distraction crave coping was "significantly more effective at acutely reducing craving and urge distress than the other 2 conditions." [1]

As true for all nicotine dependency recovery crave coping preparation, success is rooted in dreams of becoming and remaining nicotine-free. Coping evidences courage in taking steps toward making dreams come true.

Alphabet or counting association schemes demand focus and concentration. They provide an instant means of occupying the mind. An alphabet association scheme can be as simple as going through the alphabet while trying to associate each letter with a person, place, animal or food.

Take food for example. The letter "A" is for grandma's hot apple pie. "B" is for a nice crispy piece of bacon. "C" is for a rich and super moist chocolate cake. I challenge you to get to the challenging letter "Q" before 3-5 minutes pass and challenge begins subsiding.

Counting exercises can be as simple as counting backward from 350 by 7s. That would involve your mind doing 50 simple math calculations.

Consider playing a hand or two of solitaire or reach for a crossword puzzle. Can you draw? Try drawing your favorite person, pet, place, or thing. Sing your favorite song, reorganize a closet or drawer, look through your photo album, play with your pet, phone a friend, read a book or magazine, check your email, or do the dishes or a load of laundry.

Distraction isn't about avoiding a craving but about temporarily diverting your attention and focus until the intensity and risk of relapse subsides.

Physical distraction possibilities include turning to your favorite non-nicotine activity such as music or dancing, a brief period of physical exercise, going for a short walk or bike ride, taking a shower, or something as simple as brushing your teeth.

Should you ever feel a need to vent, try screaming into a pillow, squeezing a tree, or biting your lip. I promise, the pillow won't scream back, you won't hurt the tree, and your lip will heal.

And don't forget about pulling out and reviewing your list of reasons for commencing recovery. While doing so, reflect on possibly adding to the list those benefits not noticed or appreciated until after your healing was underway.

Relaxation Crave Coping

Below are three relaxation exercises that can be practiced and called upon as nicotine cessation crave coping strategies: (1) slow deep breathing; (2) progressive muscle relaxation; and (3) guided imagery.

Before reviewing them, what if an intense craving begins with an argument, and every heated word exchanged is bringing the likelihood of relapse closer?

In order to save your recovery, step #1 is to abruptly end the argument. Let go. All you need to do is say these four words,"You are exactly right," without adding any ifs, ands or butts. [1]

Okay, now that things have stopped getting worse, let's focus on getting you relaxed. There will be plenty of time later to calmly address the root cause of the argument if necessary.

Slow deep breathing

It is not normal to breathe deeply. Most of us breathe from the chest. It's called shallow breathing. When you breathe deeply, your body takes in more oxygen and you exhale more carbon dioxide. The body "resets" itself to a more relaxed and calm state.[2]

Healthy adults normally breathe at a rate of 12 to 15 breaths per minute. Research shows that slow deep breathing at a rate near 6 breaths per minute - roughly one breath every ten seconds - promotes behavioral relaxation while maximizing heart rate variability and optimizing physiological function.[3]

The problem is that long-term smoking or vaping often damages normal lung function, requiring a greater number of breaths per minute. Thus, for you, the number of breaths per minute may need adjusting.

The use of slow deep breathing as a coping strategy isn't for everyone. Some of us have damaged our lungs more than others. Also, initial attempts at controlled breathing can lead to

hyperventilation with lightheadedness. Multiple practice sessions may be needed before trusting deep breathing as a go-to coping strategy.

Deep Breathing Exercise #1

Allow at least 2 minutes to complete to this relaxation exercise:

- 1. Sit comfortably or lie down. Place one hand on your stomach and the other on your chest.
- 2. Breathe in slowly through your nose. Feel your stomach expand as you inhale. If you are breathing from the stomach, the hand on your chest shouldn't move. Focus on filling up your lower lungs with air.
- 3. Slowly exhale, releasing all the air out through your mouth. Use your hand to feel your stomach fall as you exhale.
- 4. To begin, try breathing at or near six breaths per minute (about one full inhale and exhale every 10 seconds). Return to normal breathing if you begin feeling lightheaded.[2] If lightheadedness occurs, during your next practice session try adding 1-2 additional breaths per minute.
- 5. Repeat the above steps up to 10 times.

Deep Breathing Exercise #2

Allow 13 minutes to listen to this relaxation exercise:

- Short Relaxation Exercise by Sharon Morisis, LICSW, CEAP (https://whyquit.com/ffn/audio/short-relaxation-morisis.mp3). [4]

Deep Breathing Exercise #3

Allow 9 minutes to listen to this relaxation exercise:

- Deep Breathing Session Relaxation by Kathleen Darchuk, Ph.D, ABPP (https://whyquit.com/ffn/audio/track-1-intro-and-relaxed-breathing-09-12.mp3). [5]

Progressive muscle relaxation

Progressive muscle relaxation is the intentional tensing and releasing of successive muscle groups. It's based on the premise that muscle tension is the body's physiological response to anxiety-provoking thoughts and that muscle relaxation blocks anxiety.[6]

A 2015 study found that "progressive muscle relaxation significantly reduces cigarette craving, withdrawal symptoms, and blood pressure in smokers undergoing acute abstinence."[7]

Before attempting the following exercise, stop if any movement causes you pain. Be cautious about stretching or tensing parts of your body that have caused you problems in the past. Consult your doctor first if unsure about safety due to an injury or condition.

Muscle Relaxation Exercise #1

Allow at least 10 minutes to complete this muscle relaxation exercise:

- 1. Take a few slow, deep breaths. Inhale deeply through your nose with your mouth closed to a count of four. Exhale slowly through your mouth also to a count four. On the exhale, imagine tension leaving your body, flowing out with each exhale. Repeat this three to four times. If at any point you feel dizzy or light-headed, return to normal breathing.
- 2. Continue to breathe deeply as you move into the muscle tension and relaxation parts of this exercise. You will begin with your feet and work your way up. As you inhale, tense and hold each muscle for a count of four. Relax that muscle group as you breathe out. Take several breaths before you move to the next part of your body. Allow time to feel the relaxation.
- 3. Tense the muscles of your feet by pointing your toes and tightening your feet as you inhale. Hold this tension briefly, then relax your toes and feet as you breathe out. Imagine the tension flowing out with your breath. Notice the difference between tension and relaxation.
- 4. Press the balls of your feet into the floor and raise your heels, allowing your calf muscles to contract. Feel the tension in your calves for a moment. Then release and notice your muscles relax. Again, have the tension and relaxation match your breath.
- 5. Tighten your knees and allow your legs to straighten. Feel the tightness in the front of your legs. Notice the sense of tension as you inhale. And release on the exhale, allowing your legs to bend and relax back onto the floor.
- 6. Squeeze the muscles of your buttocks. Notice the feeling of tension as you inhale. Hold this for just a moment. And on your exhale, release and allow your muscles to relax, letting the tension melt away.
- 7. Continue up through your body. Concentrate now on your stomach. Contract your stomach and continue to breathe. Hold the tension for a count of four. Inhale deeply. As you exhale, let your stomach relax. Again, notice the difference the tension and relaxation.
- 8. Move your attention now to your hands. Curl your fingers into a tight fist in each hand. Hold your fists tight and notice the sense of tension as you continue to breathe. As you release your fists, let your hands relax back to a natural position. And notice the difference between the feeling of tension and relaxation in your hands.
- 9. Bend both arms now at the elbow (like Popeye). Flex both of your arms by making fists and pulling your fists up tightly to your shoulders. Notice the feeling in the tensed muscles of your

upper arms. Take another inhale and as you exhale and relax your arms down to your sides. Take notice of any change in what you feel as you go from a state of tension to relaxation.

- 10. Push your shoulders up to your ears now. Hold this "shrugging" position for just a moment. Feel the tension in your neck and shoulder muscles. Feel the tension melt away as you relax your shoulders back down. Continue to breathe in and out.
- 11. Finish by tensing the muscles in your face. Scrunch your face as if you just bit into something sour. Feel your eyebrows pull together, your eyes pinch tightly shut, and your lips purse together. Notice the sensation of tenseness in your face for just a moment. Then allow your face to relax. Notice the release of tension from your forehead, eyes, cheeks, mouth and jaw.
- 12. Now, conduct a body scan. Try to find any other spot of tension in your body. Notice it and let it go. Let yourself be still for a few moments. Just experience your relaxed muscles. Continue to breathe slowly and deeply. Feel any tension flow out. Feel your relaxation grow deeper with each breath.[8]

Muscle Relaxation Exercise #2

Allow 21 minutes to complete the following progressive muscle relaxation audio exercise:

- Progressive Muscle Relaxation Exercise by Kathleen Darchuk, Ph.D., ABPP (https://whyquit.com/ffn/audio/track-3-progressive-muscle-relaxation-20-39.mp3) [5].

Muscle Relaxation Exercise #3

Allow 17 minutes to complete this passive muscle relaxation exercise:

- Passive Muscle Relaxation Exercise by Kathleen Darchuk, Ph.D., ABPP (https://whyquit.com/ffn/audio/track-2-passive-muscle-relaxation-17-14.mp3) [5].

Muscle Relaxation Exercise #4

Allow 31 minutes to complete this muscle relaxation exercise:

- Progressive Muscle Relaxation Exercise by Dartmouth (https://whyquit.com/ffn/audio/dartmouth-progressive-muscle-relaxation.mp3)[9].

Guided imagery

Guided imagery or visualization is "a mind-body technique involving the deliberate prompting of mental images to induce a relaxed, focused state with the goal of achieving such varied purposes as managing stress or pain, promoting healing, or enhancing performance."[10]

"As guided relaxation imagery is learned and practiced, effectiveness of imagery is increased,

perceived stress is reduced, and smoking abstinence is maintained." [11] How effective?

A 2005 study divided 71 smokers into two groups. While both groups received educational and counseling sessions in their homes, the intervention group was provided with additional instruction in the use of guided imagery and was encouraged to practice guided imagery at least once per day using an audio-taped exercise for reinforcement.

Smoking abstinence rates at 24-months were significantly higher for the guided health imagery intervention group (26%) than in the control group (12%). [12]

While 26% after two years may not sound inspiring, remember, the only difference between the groups was a single new skill. What if armed with hundreds of recovery insights and dozens of skills? It's my hope and dream that you'll read and sleep upon more than a single topic in a single chapter.

Guided Imagery Exercise #1

Allow at least 2 to 3 minutes to complete the following guided imagery exercise:

- 1. Position your body in a way that feels comfortable for you (either sitting in a chair or laying on a comfortable surface) and close your eyes.
- 2. Take a few deep breaths using the deep breathing technique described above.
- 3. Take a moment to imagine yourself in a scene where you feel relaxed. It can be a place you have been to in your past or a relaxing scene you imagine. It can be indoors or out in nature. Choose something that is calming for you.
- 4. Although normal to have doubts this will work, give yourself permission to visualize it. Put yourself in the scene.
- 5. Use your senses to experience the relaxing sights, sounds, smells, textures, and physical sensations in your scene. Fill in as many details as possible.
- 6. Allow yourself to relax into this scene. Focus your attention on the peaceful calm of this place.
- 7. Continue to focus your attention on the details of the scene and the feelings of calm that flow from it. See if you can stay with the image for at least 60 seconds.
- 8. If you find your attention being pulled away by distractions, gently bring your awareness back to the scene. With practice, it will become natural and relaxing. If prone to falling asleep you might want to set a timer to alert you after a few minutes. [13]

Guided Imagery Exercise #2

Allow 8 minutes to listen to this relaxation exercise:

- Mountain Meditation by Peter Morgan, Clinical Psychologist (https://whyquit.com/ffn/audio/mountain-imagery-meditation-peter-morgan.mp3) [14]

Guided Imagery Exercise #3

Allow 14 minutes to listen to this relaxation exercise:

- Visualization Relaxation by Kathleen Darchuk, Ph.D, ABPP (https://whyquit.com/ffn/audio/track-4-guided-imagery-13-55.mp3) [5]

Laughter

Let's close relaxation with laughter. First, try to laugh without smiling. Can you do it? Notice something missing?

Research shows that laughter activates various muscle groups for a few seconds each, which immediately after the laugh leads to general muscle relaxation which may last up to 45 minutes. [15]

Laughter also induces sporadic deep breathing.[16] There's also evidence suggesting that among those with a sense of humor, that laughter and smiling can result in diminished anxiety and stress.[17]

Baby steps. With each passing day, the challenges will grow fewer, shorter in duration, and generally less intense. It won't be long before you look back and feel a warm smile taking shape as you reflect upon the amazing journey you've made.

Still, just one guiding principle - none today!

- 1. Russell D, 4 Words That Can Stop Any Marital Argument, https://www.achievementcenteredtherapy.com/4-words-that-can-stop-any-marital-argument/ Accessed 06/19/20.
- 2. U.S. Department of Veterans Affairs, Relaxation exercise: deep breathing, https://www.va.gov/vetsinworkplace/docs/em_eap_exercise_breathing.asp Accessed 06/29/20.
- 3. Noble DJ and Hochman S, Hypothesis: pulmonary afferent activity patterns during slow, deep breathing contribute to the neural induction of physiological relaxation, Frontiers in Physiology, Sept. 2019, 13;10:1176.
- 4. Morisis S, Short Relaxation, Dartmouth Student Wellness Center, https://students.dartmouth.edu/wellness-center/wellness-mindfulness/mindfulness-meditation/guided-audio-recordings/deep-breathing-guided-relaxation Accessed 07/08/20.
- 5. U.S. Department of Veterans Affairs, Harry S. Truman Memorial Veterans' Hospital, Relaxation Recordings by Kathleen Darchuk, Ph.D, ABPP, https://www.columbiamo.va.gov/services/Relaxation_Recordings.asp Accessed 07/04/20.
- 6. Wikipedia, "progressive muscle relaxation," https://en.wikipedia.org/wiki/Progressive_muscle_relaxation Accessed 06/29/20.
- 7. Limsanon T and Kalayasiri R, Preliminary effects of progressive muscle relaxation on cigarette craving and withdrawal wymptoms in experienced smokers in acute cigarette abstinence: a randomized controlled trial, Behavioral Therapy, March 2015, Volume 46(2), Pages 166-176.

- 8. U.S. Department of Veterans Affairs, Relaxation exercise: progressive muscle relaxation, https://www.va.gov/vetsinworkplace/docs/em eap exercise PMR.asp Accessed 06/29/20.
- 9. Dartmouth, Student Wellness Center, Progressive Muscle Relaxation Exercise, https://students.dartmouth.edu/wellness-center/wellness-mindfulness/mindfulness-meditation/guided-audio-recordings/progressive-muscle-relaxation Accessed 07/08/20.
- 10. American Psychological Association, APA Dictionary of Psychology, "guided imagery," https://dictionary.apa.org/guided-imagery, retrieved 06/29/20.
- 11 Wynd CA, Relaxation imagery used for stress reduction in the prevention of smoking relapse, Journal of Advanced Nursing, March 1992, Volume 17(3), Pages 294-302.
- 12. Wynd CA, Guided health imagery for smoking cessation and long-term abstinence, Journal of Nursing Scholarship, 2005, Volume 37(3), Pages 245-250.
- 13. U.S. Department of Veterans Affairs, Relaxation exercise: visualization,
- https://www.va.gov/VETSINWORKPLACE/docs/em eap exercise visualizing.asp Accessed 06/30/20.
- 14. Morgan P, Mountain Meditation, Free Mindfulness, Adapted from Jon Kabat-Zinn, freemindfulness.org Accessed 07/08/20.
- 15. Paskind J, Effects of laughter on muscle tone, Archives of Neurology & Psychiatry, 1932, Volume 28, Pages 623-628; as cited in Bennett MP, et al, Humor and Laughter May Influence Health: III. Laughter and Health Outcomes, Evidence-Based Complementary and Alternative Medicine, March 2008, Volume 5(1), Pages 37-40.
- 16. Fry W, The respiratory components of mirthful laughter, Journal of Biological Psychology, 1977, Volume 19, Pages 39-50; as cited in Bennett MP, et al, Humor and Laughter May Influence Health: III. Laughter and Health Outcomes, Evidence-Based Complementary and Alternative Medicine, March 2008, Volume 5(1), Pages 37-40.
- 17. Yovetich NA, et al, Benefits of humor in reduction of threat-induced anxiety, Psychological Reports, February 1990, Volume 66(1), Pages 51-58.

Mindfulness Crave Coping

Mindfulness is "the quality or state of being conscious or aware of something, a mental state achieved by focusing one's awareness on the present moment, while calmly acknowledging and accepting one's feelings, thoughts, and bodily sensations."[1]

Simply put, it's the ongoing monitoring of our present-moment experience.

An example? Don't swallow. You'll want to swallow but for now, don't. Like noticing an urge or crave, mindfulness has you focusing on a normal bodily sensation, the urge to swallow.

Can you see the possibilities? Okay, swallow.

A 2011 study found that participants who received 8 mindfulness training sessions over 4 weeks were five times more likely to not be smoking at 4-month follow-up than participants who received no mindfulness training (31% vs. 6%).[2]

An interesting aside in the study, 91% of successful mindfulness participants succeeded by ending nicotine use cold turkey.

Practicing mindfulness in a cravings context involves:

- (1) Awareness: continuously monitoring one's craving experiences in an impartial way so as to refrain from battling or trying to avoid them;
- (2) Acceptance: letting feelings, tensions, thoughts and sensations associated with cravings come and go on their own without judging them; and
- (3) Dis-identification: by seeing and distinguishing one's self as being separate from cravings.[3]

While crave awareness is clearly a prerequisite to accepting or dis-identifying from it, awareness alone is insufficient to effectively manage it. For example, researchers found that awareness alone doesn't alter crave intensity.[4]

The mindfulness factor believed to have the greatest impact on success is dis-identification, the ability to put and see ourselves above the fray; the awareness that cravings reflect healing and where we've been, not who we are, or where we're going.

To quote American psychologist Ken Wilber, "I have a body, but I am not my body. I can see and feel my body, and what can be seen and felt is not the true Seer. My body may be tired or excited, sick or healthy, heavy or light, but that has nothing to do with my inward I. I have a body, but I am not my body."

"I have desires, but I am not my desires. I can know my desires, and what can be known is not the true Knower. Desires come and go, floating through my awareness, but they do not affect my inward I. I have desires but I am not desires."

"I have emotions, but I am not my emotions. I can feel and sense my emotions, and what can be felt and sensed is not the true Feeler. Emotions pass through me, but they do not affect my inward I. I have emotions but I am not emotions."

"I have thoughts, but I am not my thoughts. I can know and intuit my thoughts, and what can be known is not the true Knower. Thoughts come to me and thoughts leave me, but they do not affect my inward I. I have thoughts but I am not my thoughts."[5]

What if moments of crave episode challenge were devoted to focusing upon the feelings, tensions, thoughts, judgments, and sensations associated with it? Not distraction or attraction but heightened awareness of here and now.

Mindfulness Exercises and Training

Most mindfulness training begins by using meditation, breathing and focus as a means to foster inner peace and tranquility. Research confirms the ability of mindfulness to calm anxieties.[5]

Mindfulness Exercise #1

Allow yourself at least 10 minutes to complete this mindfulness meditation exercise:

- 1. Find a comfortable stable position, either seated, lying down, or even standing (because cravings come to us in all postures) and observe the next several breaths.
- 2. Focus on an aspect of your breathing, such as the sensations of air flowing into your nostrils and out of your mouth, the cool air entering your nostrils and its warmth as you slowly exhale, or your belly rising and falling as you inhale and exhale.
- 3. Allow your breathing to slow and deepen. Calm and settle your mind by focusing exclusively upon the feelings and sensations of breathing.
- 4. Once you've narrowed your concentration in this way, begin to widen your focus. Become aware of thoughts, ideas, and sensations.
- 5. Acknowledge to yourself, "I'm having the thought that [insert desirous thought]." This will help you step back and watch the craving. Imagine the craving as the voice of your addiction as it tells you that a use-cue has been encountered. Remember, you're the boss and you never have to go in that direction. Simply note what your addiction is saying as you sit back and watch. This is very different than arguing with the craving, fearing it, or trying to force it away.
- 6. Can you see what cue might have triggered the craving? If so, reflect on the time, place, activity, person, or emotion you'll be rewarded once the use cue is extinguished.
- 7. Take another breath and mentally try to picture and see your craving. Vividly imagine the shape, color, size, movement, and sounds of your craving. For a single, full, deep breath, just watch and listen to your craving. No need to debate it. It's just there. . . . information being delivered to you, but only a portion of your full reality.
- 8. Be totally honest about your craving. You are the boss, not this craving. I am having a craving but it's not who I am. I have thoughts about this craving but I am not those thoughts. I have feelings about this craving but I am not those feelings. This craving is creating sensations but I am not those sensations. While this craving has fostered desire, that desire is not who I am. The inner me is infinitely greater than the thoughts, feelings, and sensations associated with this craving.
- 9. Cravings begin and cravings end. A quest for the full truth, reflect on each thought, emotion, or sensation associated with it, without judging it good or bad. If your mind starts to race, return your focus to your breathing and breathe it away. Then expand your awareness again.
- 10. Continue until challenge, if any, subsides. Then allow yourself to become increasingly aware of your surroundings as this mindfulness meditation exercise ends.[7],

Mindfulness Exercise #2

Give yourself 19 minutes to complete this mindfulness audio exercise:

- Mindfulness and Meditation by Kathleen Darchuk, Ph.D., ABPP (https://whyquit.com/ffn/audio/track-5-mindfulness-and-meditation-18-16.mp3) [8].

Mindfulness Exercise #3

An excellent 8 minute YouTube video by Dr. Jennifer May describing mindfulness urge surfing. As you'll see, the swallowing exercise above was Dr. May's idea:

- Mindfulness Urge Surfing (https://youtu.be/RIA2ewXayTc) [9].

Mindfulness Exercise #4

Allow 19 minutes to complete this mindfulness audio exercise:

- Breath, sounds, body, thoughts, emotions (https://whyquit.com/ffn/audio/uclamindfulness.mp3)[10].

- 1. Lexico, mindfulness, https://www.lexico.com/en/definition/mindfulness, accessed June 2, 2020.
- 2. Brewer JA et al, Mindfulness training for smoking cessation: results from a randomized controlled trial, Drug and Alcohol Dependence, Dec. 2011, Volume 119(1-2), Pages 72-80.
- 3. Lacaille J et al, The effects of three mindfulness skills on chocolate cravings Appetite, May 2014, Volume 76, Pages 101-112.
- 4. May J et al, Less food for thought. Impact of attentional instructions on intrusive thoughts about snack foods. Appetite, 2010, Volume 55(2), Pages 279–287.
- 5. Ken Wilber, No Boundary: Eastern and Western Approaches to Personal Growth, 1979.
- 6. Agency for Healthcare Research and Quality, Meditation Practices for Health: State of the Research, Evidence Report/Technology Assessment Number 155, AHRQ Publication No. 07-E010, June 2007.
- 7. Four sources were relied upon in creating this mindfulness exercise. I combined my personal crave coping insights with (1) Harvard Medical School, Two mindfulness meditation exercises to try, https://www.health.harvard.edu/alternative-and-complementary-medicine/two-mindfulness-meditation-exercises-to-try Accessed 07/04/20, mixed with (2) an article by Mitch Abblett entitled, How to Be Mindful With Your Cravings, https://www.mindful.org/how-to-be-mindful-with-your-cravings/ Accessed 07/09/20, with (3) the quotes from Ken Wilber (footnoted above).
- 8. U.S. Department of Veterans Affairs, Harry S. Truman Memorial Veterans' Hospital, Relaxation Recordings by Kathleen Darchuk, Ph.D., ABPP, https://www.columbiamo.va.gov/services/Relaxation_Recordings.asp Accessed 07/04/20
- 9. May J, DBT Mindfulness Urge Surfing, May 31 2020, https://youtu.be/RIA2ewXayTc Accessed 07/09/20
- 10. Mindful Awareness Research Centre, UCLA, Breath, sounds, body, thoughts, emotions, http://www.freemindfulness.org/download Accessed 07/09/20

Oral Crave Coping

Oral coping is a form of crutch substitution. Imagine the possibility of oral substitution fostering conditioning which survives weeks, months, or years after nicotine use ends and challenge

subsides.

While water provides a subtle and healthy "aaah" wanting relief sensation, what would happen if water had become your mind's primary crave coping response and it was suddenly unavailable when a crave arrived?

While water is healthy and calorie-free, be careful that it doesn't become your go-to crave defense.

Any oral coping strategy that imitates nicotine use, or the handling of any object that imitates your nicotine delivery device, should be avoided.

Imitating any addiction-related behavior helps maintain that behavior, may delay suppression of old use memories, invites use fixation, prolongs recovery, and thus elevates risk of relapse.

Research has found that using food or drinks for crave coping results in marginally higher post-coping urge levels.[1]

Reaching for food as an oral crutch can obviously add extra demoralizing pounds. If you find yourself headed for the kitchen, take aim at healthier foods. Can you eat an entire apple in 3 minutes? If so, that's 80 calories and 4 grams of fiber.

As for other healthy oral "aaah" substitutes, 5 asparagus spears are 20 calories, one medium-sized stalk of broccoli is 50, a seven-inch carrot is 40 calories, one-sixth of a medium head of cauliflower or two medium stalks of celery total 25 calories, a medium cucumber is 45 calories, a medium orange 80, one medium peach is 40 calories, seven radishes total 20, eight medium strawberries are 70, and one medium tomato is 35 calories.

More than half of all relapses associated with alcohol or use of "recreational 'drugs (52 percent), [2] the only oral crave coping technique worse is reaching for nicotine gum, nicotine lozenges, or any other substitute form of nicotine delivery.

Ask yourself this if feeling tempted by the "relief" lies peddled in the next Nicorette commercial you see. Where are they? The cornerstone of "science-based" smoking cessation since 1984, where are all the successful nicotine gum quitters?

While a 2013 Gallup Poll found that 1 percent of successful quitters credited nicotine gum for their success, what portion of that 1 percent had simply transferred their dependency and become permanent slaves to it?[3]

If you find yourself reaching for something more substantial than a toothpick or toothbrush, make sure it isn't fattening, that will always be available within seconds, and something you'd be able to do anywhere and anytime for years to come. As Joel suggests, about the only thing that meets that definition is slow deep breathing, which passes air through the mouth.[4]

- 1. O'Connell KA, et al, How Does Coping Help People Resist Lapses During Smoking Cessation? Health Psychology, Jan. 2007, Volume 26(1), Pages 77-84.
- 2. Brandon, TH, et al, Postcessation cigarette use: the process of relapse, Addictive Behaviors, 1990, Volume 15(2), Pages 105-114.
- 3. Gallup, Most U.S. Smokers Want to Quit, Have Tried Multiple Times, July 31, 2013, https://news.gallup.com/poll/163763/smokers-quit-tried-multiple-times.aspx
- 4. Spitzer J, Using deep breathing as a safe and effective quitting aid, March 20, 2018, https://youtu.be/BTm9LDFrvow

Seasonal, Holiday and Infrequent Use Cues

Expect to arrive home with a few seasonal, holiday, and infrequent use cues not yet encountered and extinguished.

Infrequent cues may be associated with a vacation, a wedding, death, funeral, meeting an old friend, or an illness. Infrequent cues have their own histories.

For example, when a cold or flu struck while still using, it likely diminished use, thus possibly adding early withdrawal to the illness. When your cold or flu symptoms started to improve you may have gone on a nicotine-use binge, inhaling as much, as quickly as you could in an effort to catch up.

Thus, you may have trained your subconscious to expect a sudden increase in use following an illness.

The good news is that any remaining subconscious use associations after arriving on Easy Street were likely weak, to begin with, as death and serious illness were hopefully rarely experienced.

Also, like any relationship, the mind's crave anxiety generator depends heavily upon vibrant and reinforced new use memories for its punch. No new use memories are serving as memory bank infusion reminders for thousands of old use memories. Thus, your crave generator may become so weak over time that future episodes become laughable reminders of your journey home, and an aid to fending off complacency.

During your second nicotine-free lap around the sun, with few exceptions, nearly all nicotine use cues will have been extinguished. Oh, you'll still have conscious use thoughts now and then (Chapter 12). But if you have let go of your junkie use thinking, they too will grow rare, harmless, and laughable.

Now that you know more about subconscious recovery than most physicians (as few medical schools devote any class time to studying cessation), what if it were possible to minimize or eliminate crave episodes altogether? What if use cue extinction could occur without crisis?

The next chapter, Chapter 12, reviews the primary source of crave episode anxieties, our

thousands of old nicotine replenishment memories documenting use having satisfied wanting, and the scores of explanations we invented to explain why we would soon use again.

There's still just one rule. It's that one equals all, that lapse equals relapse, that just one puff and nicotine will activate the same brain dopamine circuitry that makes going without eating seem nearly impossible. Why pretend or expect a different result? Still only one rule ... none today!

Freedom from Nicotine - The Journey Home

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Only one rule. No nicotine today!

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