

Nicotine Dependency Recovery

A Clinician's Guide



Nicotine Recovery –The Brain

- Nicotine activates, saturates and desensitizes dopamine pathway receptors, which is followed by the growth or activation of millions of extra receptors (up-regulation).
- Nicotine dependency recovery is a journey of readjustment where the user allows their brain the time needed to physically down-regulate the number of nicotine receptors and restore natural sensitivities. Down-regulation may take up to 21 days.



Subconscious and Conscious Recovery

- When impulse control is damaged by addiction, patience is needed to allow the subconscious mind time to extinguish subconsciously conditioned nicotine feeding cues.
- On a conscious level, it's allowing the time and honesty needed to move beyond years of nicotine use rationalizations that attempted to justify the next mandatory feeding.
- Their priorities hijacked, smokers must end the emotional dependency that makes them believe that smoking defines who they are and that life would be unbearable without cigarettes.

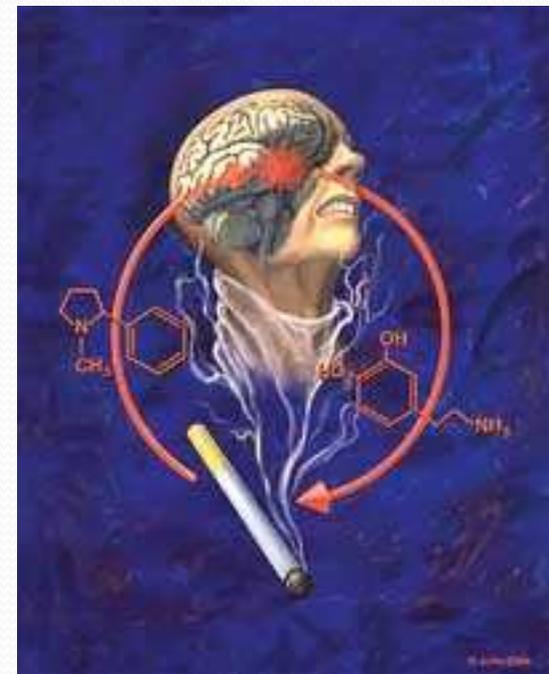


Hurdles to Overcome

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

Acknowledging Addiction

- Our brains have a tremendous capacity for recovery BUT, the addicted person HAS to take responsibility that they have a disease.
- On a conscious level, roughly 70% of daily smokers want to stop. But few understand how and even fewer appreciate that they're dealing with a permanent priorities disorder and disease of the mind.
- The catalyst and foundation for both conscious rationalizations and subconscious conditioning is their underlying chemical dependency.



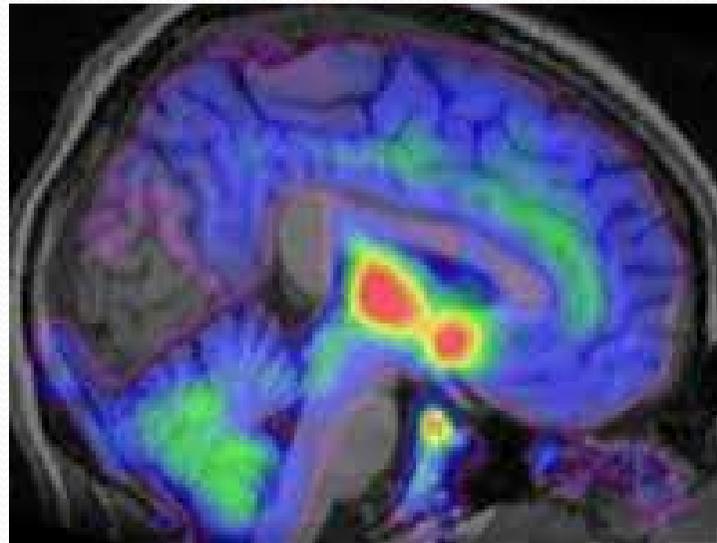
Breaking Up is Hard To Do



- Chemical dependency on nicotine is one of the most intense, repetitive and dependable relationships a smoker has known. It has infected almost every aspect of their life. The addiction is like a parasite that wants to reattach itself to the smoker trying to quit and continue living off of them.

Mu-Opioid Receptors

- New research also indicates that some smokers have a much harder time kicking the habit due to an increased number of “mu-opioid receptors” in their brains.



- Smokers with genetically greater numbers of these receptors seem to derive more pleasure from nicotine and as a result, may have a harder time quitting.

Variations in Recovery Time

- People with this particular genetic variation may need extended treatments. They may have a certain kind of sensitivity to nicotine, which could explain why they easily became addicted in the first place, and why they may need to use nicotine replacement or nicotine receptor blockers for a longer time than others.



Reorganizing the Brain

- Growing evidence in the field of neuroplasticity indicates that if an established pathway or “mental track” is blocked and replaced by a new behavior, it is not only the behavior that changes. The brain also can reorganize and rewire itself in as little as “just a few days.”
- However, “quick learning” (daily, weekly) doesn’t necessarily become permanent, whereas sustained practice of new behaviors (over 6 months) “solidifies the learning” by building “new connections” in the brain.

Recovery Symptoms

- When the addictive substance – nicotine – has been withdrawn, a traumatic jolt to the whole body is caused. The result can be a huge assortment of changes in eating, sleeping, breathing, digestion, elimination, thinking, etc.
- When nicotine administration stops, the body rebounds in many ways: heart rate slows, brain waves that were suppressed become more active, calm is replaced by nervousness and so on. For most people, these and other withdrawal symptoms are worst for the first few days and taper off over about a month or so.

Psychological/Emotional Recovery

- Nicotine withdrawal can be a psychologically tumultuous time which is why it is so important to be prepared for the experience.
- Symptoms can include depressed mood, insomnia, irritability, frustration or anger, anxiety, difficulty concentrating and restlessness. Smokers may feel emotionally raw and even feel like they are going through a mild to severe depression. Some smokers report not feeling comfortable in their own skins. Underlying personal problems and feelings may surface without the comforting distraction of smoking.
- Perhaps the biggest behavioral and emotional challenge facing former smokers is learning to find pleasure, and things to look forward to, to restore the functioning of the brain's reward centers, hijacked in their youth by smoking.

The 6 Stages of Recovery

The recovering smoker can expect to travel through and experience six different emotional phases:

- 1) denial
- 2) anger
- 3) bargaining
- 4) depression (smokers accustomed to an increase in certain brain receptors which alters energy use in the cerebrum - as well as EEGs - can and do feel depressed when they quit)
- 5) acceptance
- 6) complacency



Recovery and The Body

- If they have just quit, their body is still caught up in the nicotine addiction cycle (*Drug Induced Stress ...I feel nervous and tense because my body needs a cigarette Drug Induced Relief ...I feel relaxed now that I have had a cigarette and have temporality satisfied my addiction Drug Induced Stress... I feel nervous and tense because my body needs a cigarette again.*)



Regaining Normal Body Function

- It is important to remember that the smoker's body was not functioning normally when they were smoking many cigarettes a day.
- It seemed normal to them but in fact, they were continuously “under the influence” of nicotine.
- Now that the nicotine is gone, their body is working to relearn what is normal.



Relapse Prevention

- Quitting is an extended process of gradual release, not a single act. The smoker still needs help learning to become a permanent non-smoker.
- Most smokers have had a quit attempt or two end in relapse because they thought they could smoke just one cigarette.
- **N.O.P.E. (Not One Puff Ever)** is a useful acronym to remind new ex-smokers that just one puff will reawaken the nicotine receptors in their brains and can easily return them to the smoking lifestyle.

The Clinician's Role in Nicotine Recovery



Old vs New Models

Biomedical

- Practitioner-centered
- Information giving
- “Save” the patient
- Dictate behavior
- Compliance
- Authoritarian
- Motivate the patient
- Persuade, manipulate
- Resistance is bad
- Argue
- Respect expected

Behavioral

- Patient-centered
- Information exchange
- Patient “saves” self
- Negotiate behavior
- Adherence
- Servant
- Assess motivation
- Understand, accept
- Resistance is information
- Confront
- Respect earned

Motivational interviewing (**REDS**):

- **R**oll with resistance (avoid arguing for change and opposing resistance, invite new perspectives; don't impose them.)
- **E**xpress empathy (accept patient as is; skillful, reflective listening; understand that ambivalence is normal.)
- **D**evelop discrepancy (patients should be ones to present arguments for health behavior change.)
- **S**how patients the discrepancy between their current behavior and their important goals or values.

What You Say and How You Say It

- Use positive, non-scare tactics approach to help smokers engage with and retain smoking cessation messages.
- Focus on the benefits of quitting rather than the negative effects of continued smoking.
- Understand a smoker's ambivalence about quitting: explore what they actual want and what are their true motivators . Express empathy.
- Support self-efficacy. (A patient's belief in possibility of change is an important motivator; patients are responsible for choosing/carrying out change but a Provider's belief in their ability to change can have a powerful effect on outcome.)

Assessing Readiness To Change

- The focus is not to convince the patient to change behavior, but to assess current readiness to change.
- If ready, help the patient move along the 5 stages of change:
 1. Pre-contemplation-don't want to quit
 2. Contemplation-want to quit sometime
 3. Preparation-want to quit in next 30 days
 4. Action-want to quit now
 5. Maintenance-continues support

“Ask and Act”

- **ASK** patients about tobacco use.
- Document: type of tobacco use (cigarettes or smokeless tobacco), amount of use, length of use, consequences of use: smoking- related morbidities.
- **ASK** about quitting: How many times has pt tried to quit? What methods have they tried? How is pt feeling about quitting tobacco use right now? (present as an open-ended question, wait for a full reply).
- **ACT** to help them quit if they are ready to do so through a combination of:
 - counseling
 - NRTS and RXs
 - group support
 - quit lines
 - self-help guides or web sites
 - Patient education materials
 - family/friends support
- Prepare them to deal w/nicotine withdrawal symptoms and situations that trigger the urge to smoke.

Pharmacotherapy + Counseling

- Even with treatment, smoking cessation presents difficult physical and behavioral challenges.

Physical challenges

When they smoke: Smokers experience reward/satisfaction due to increased dopamine release; this encourages them to keep smoking.^{1,2}

When they stop smoking: Smokers experience craving and withdrawal symptoms that drive them to smoke again.^{1,2}

Behavioral challenges

Daily activities—such as having a morning cup of coffee or taking a break at work—may trigger the desire to smoke.³

Pharmacotherapy

+

Counseling

According to the US Public Health Service clinical practice guideline:

The combination of counseling and medication is more effective for smoking cessation than either alone.⁴

CPT Codes/Insurance

- **CPT 99406** (intermediate s/tc counseling visit (more than 3 mins, less than 10 mins))
- **CPT 99407** (intensive s/tc counseling, more than 10 mins)
- **ICD-9 305.1** (tobacco-use disorder).
- For **Group Counseling**:
 - **CPT 99453** – smoking cessation classes, non-physician provider-per session
 - **CPT 99078** - Physician educational services in a group setting; submit all claims w/the appropriate diagnosis code
- **Medicare Part D** will cover 2 quit attempts per year, with a maximum of either three intermediate (3 to 10 minutes) or four intensive (more than 10 minutes) counseling sessions per year .