

Why, When, and How to Help Substance Abusers Stop Smoking

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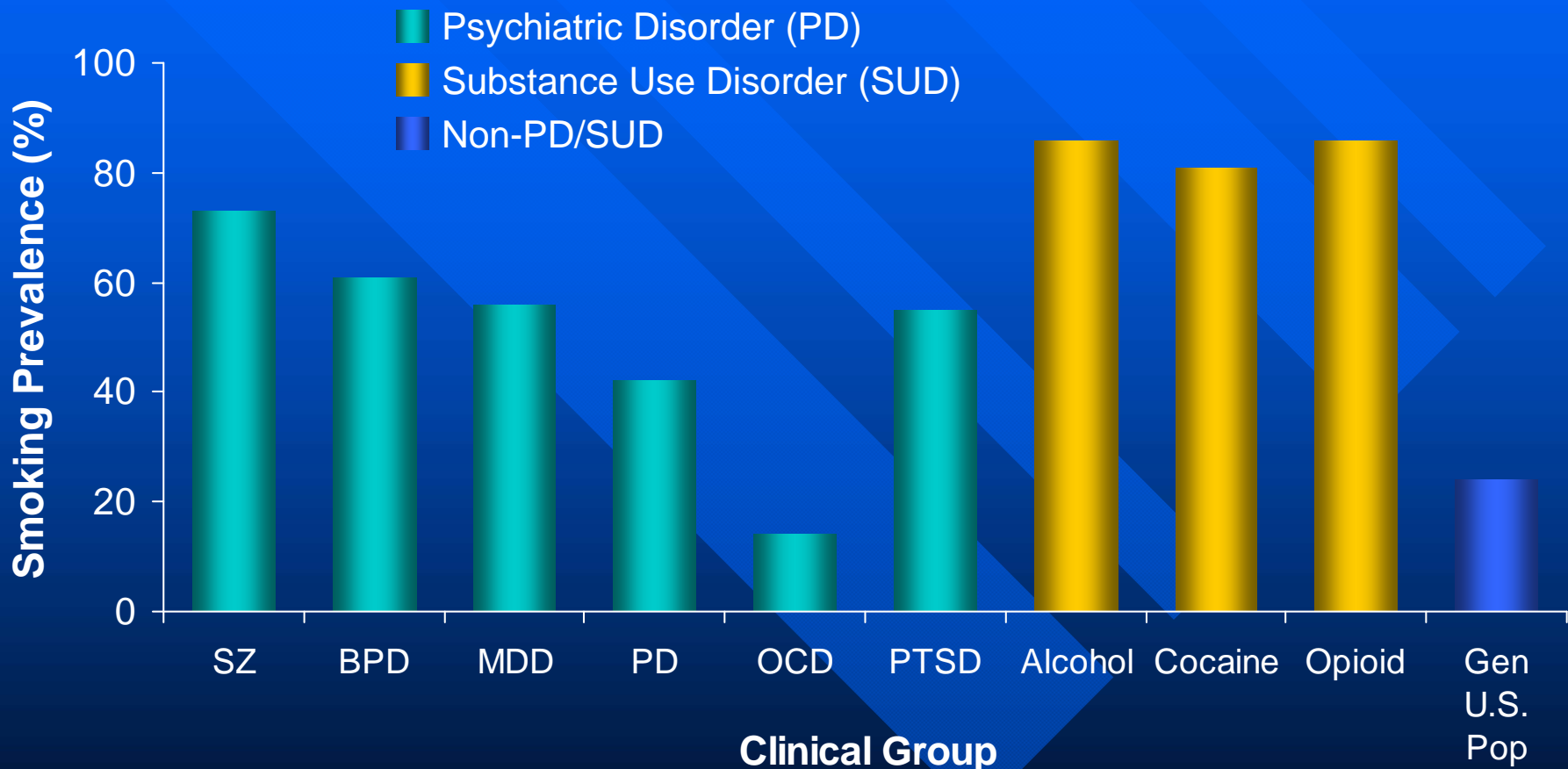
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Smokers with Psychiatric Comorbidity Including Substance Use Disorders (SUD)

- Smokers with psychiatric disorders consume 44% of the cigarettes sold in the U.S. (Lasser et al., 2000)
- Smokers 10 x more likely to develop alcoholism than nonsmokers
- Historically, there has been some resistance to smoking cessation efforts in this population

Prevalence of Smoking in Patients with Psychiatric and Substance Use Disorders



SZ=schizophrenia, BPD=bipolar disorder, MDD=major depressive disorder, PD=panic disorder, OCD=obsessive-compulsive disorder, PTSD=post-traumatic stress disorder.

Adapted from Kalman D et al. *Am J Addict.* 2005;14:106-123.



Smokers with SUDs

- Among individuals with SUDs, smoking prevalence rates estimated between 75% to 90%
- Among those in SUD treatment, prevalence rates as high as 95%
- Only about 20% of treatment programs for SUD address nicotine dependence

Health Consequences of Smoking in Patients with SUDs

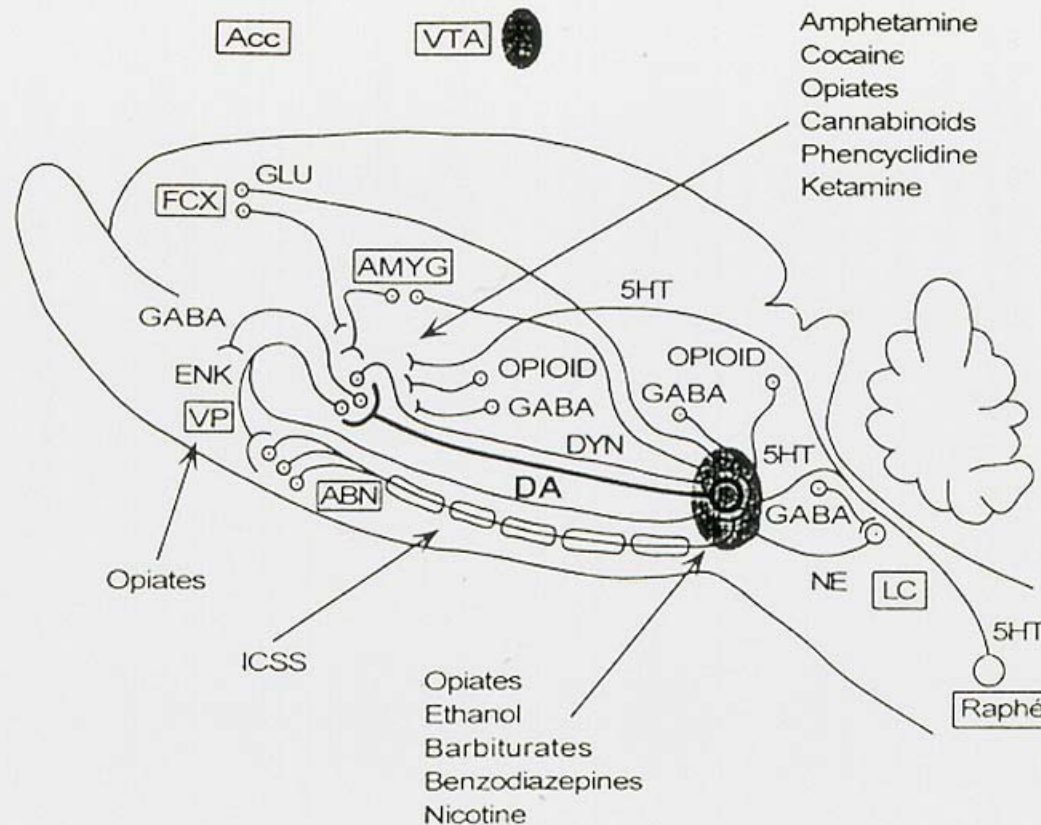
- At a minimum, same as for general population
 - #1 preventable cause of death and disease
- Good evidence for synergistic negative health effects:
 - Relative risk of mortality increased 26-fold in smoking alcoholics compared with nonsmoking, nonalcoholics (Hurt R.D. et al. JAMA 1996; 275: 1097-1103)
 - Smoking + drinking and/or drug use increases risk for some cancers (e.g., liver, esophagus, oropharynx)
- Smokers in recovery from other substances may be at higher risk for relapse

Insights Into the Alcohol and Smoking Interaction

MULTIPLE PERSPECTIVES

1. Genetic/Environmental
2. Psychopharmacologic
3. Treatment

Nicotine and Other Drugs of Abuse Hijack the Brain's Reward Circuit



Mammalian Brain Reward Circuit

Challenges to Smoking Cessation in Patients with SUDs

- Smokers with SUD are more likely to:
 - Have started earlier, smoke more and have higher level of dependence
 - » 70% of alcoholics are heavy smokers (> 1 pack/day)
 - Have friends and family members who smoke
- Challenges occur at both the individual level and at the provider level, with some degree of overlap

Patient-Level Challenges

- Challenge #1: Belief that smoking cessation will negatively impact ability to abstain from other substance use.
 - Research does not support the idea that smoking cessation has a negative impact on sobriety.
 - In fact, some research shows that smoking cessation has a positive impact of sobriety.

Patient-Level Challenges

- Challenge #2: High dependence/fear of withdrawal
 - Encourage use of pharmacotherapy to reduce withdrawal symptoms
 - Smokers with high baseline plasma cotinine concentrations may require higher than the standard NRT dose (e.g., patch/gum combination)

Patient-Level Challenges

- Challenge #3: Poor social support
 - Provide treatment to family, other members of household
 - Encourage attendance Nicotine Anonymous meetings
 - Help patient identify other sources of support

Provider-Level Challenges

- Challenge #1: Beliefs about smoking cessation that are not supported by the evidence
 - It's too hard to give up all addictions at once
 - » Research demonstrates that it can be done, and nicotine is often the only addiction not addressed
 - Smokers with AOD disorders do not want to quit
 - » 44-80% of pts. w/ an AOD disorder say they want to quit
 - Smoking cessation tx will not work w/ AOD smokers
 - » Success rates are lower among substance abusers in tx (but not those in recovery), but abstinence can be achieved
 - » Without intervention, smoking will most likely continue following AOD treatment

Provider-Level Challenges

- Challenge #1: Beliefs about smoking cessation that are not empirically supported (cont.)
 - Belief that smoking cessation will negatively impact sobriety
 - Wealth of research suggests that cessation is not harmful to sobriety
 - Cessation may, in fact, decrease likelihood of relapse by:
 - » Enhancing self-efficacy
 - » Contributing to a healthier lifestyle
 - » Reducing craving for cocaine

Provider-Level Challenges

- Challenge #2: Staff smoking
 - Staff members who smoke are less likely to encourage patients to quit. One study showed that non-smoking staff were 6 times more likely to encourage smoking cessation than staff members who smoked.
 - Staff members who smoke are also more likely to believe that smoking cessation is harmful to sobriety

Provider-Level Challenges

- Challenge #3: Organizational structure, policies, and practices
 - Greater acceptability of nicotine dependence as opposed to other forms of substance dependence
 - » Attitude tends to be held by patients, staff, and society in general

Provider-Level Challenges

- Challenge #3: Organizational structure, policies, and practices (cont).
 - Treatment environment
 - » High concentration of smokers in a treatment facility can make quitting more difficult (e.g., negative attitudes about quitting, lots of smoking cues)
 - » Smoking is reinforced through its use as a reward/punishment; social activity; relief from boredom or stress
 - » AA/NA meetings

Overcoming Provider-Level Challenges

- Staff beliefs/behavior
 - Acknowledge critical importance of smoking-related attitudes and behavior of staff
 - Make staff education and smoking cessation a priority and provide resources

Overcoming Provider-Level Challenges

- Organizational structure, policies, and practices
 - Identify aspects of the treatment environment that may foster continued smoking or lead to smoking initiation
 - » Places/times where smoking is allowed
 - » Function of smoking -- socialization? Stress relief? Relief from boredom? Problem-solve and generate alternative activities to achieve the same function and reward abstinence.

Overcoming Provider-Level Challenges

- Send consistent messages regarding the status of nicotine dependence as a form of substance dependence
 - Include nicotine dependence in the treatment plan
 - Include tobacco in educational materials and discussion regarding drugs of abuse
 - Consider revising policies that promote the relative acceptability of nicotine compared with other substances (e.g., requiring that patients be free of all substances except nicotine)
 - Staff smoking -- sends message that tobacco use is not that serious, “just a bad habit”

The Smoking Ban Controversy

- A number of treatment programs have now implemented partial or complete smoking bans
- This transition is often met with resistance from both staff and patients
- Reasons for staff resistance include fears that patients will leave AMA or not enter treatment, reluctance to quit smoking

The Smoking Ban Controversy

- Results of research have been mixed
- Common findings:
 - Fears of increased behavioral problems and/or leaving the program AMA are largely unwarranted; most studies show no change in either following policy change
 - Both staff and patient morale can be negatively impacted, but both tend to express more favorable attitudes toward the ban after it is implemented vs. prior to implementation

The Smoking Ban Controversy

- Common findings (cont.)
 - Resumed smoking after discharge occurs frequently and quickly
 - Some studies show a decrease in motivation to quit as a result of ban; others show increased motivation
 - Implementing mandatory cessation as opposed to voluntary cessation does not appear to improve quit rates

The Smoking Ban Controversy

- Empirical evidence should be interpreted carefully, however:
 - Research to guide development of smoking policies is in its early stages; great deal of variability in how policies are implemented
 - Problems with implementation can have disastrous results

The Smoking Ban Controversy

- Effective implementation can be difficult and involves a number of steps including:
 - Taking a long-term approach
 - Addressing staff concerns and obtaining commitment toward a shared goal
 - Informing patients in advance and addressing their concerns
 - Helping staff members who smoke to quit or develop a plan to change their status as identifiable smokers
 - Development of policies to address smoking during treatment

Retrospective Analysis of the *CVAMC Clean Break*TM Program

- Examine differences in demographic and clinical characteristics of smokers who fell into three diagnostic groups: alcohol abuse/dependence only, cocaine abuse/dependence only, and mixed alcohol and cocaine abuse/dependence
- Determine the degree to which diagnostic grouping predicted short-term abstinence from smoking
- Retrospective chart reviews were conducted using the treatment records of 175 male veterans who participated in *Clean Break*

Demographic & Clinical Characteristics by Alcohol/Cocaine Diagnostic Grouping

	Group 1 Alcohol only (N=65)	Group 2 Cocaine only (N=19)	Group 3 Alcohol + Cocaine (N=91)	P-value
Age	47.6 ± 8.0	44.7 ± 5.6	46.2 ± 6.4	0.22
# Caucasian	47 (72%)	2 (11%)	17 (19%)	< 0.001 (1>2,3)
# of ≤ 20 cig/day smokers	23 (35%)	14 (74%)	72 (79%)	< 0.001 (1<2,3)
Years smoking	28.8 ± 9.3	24.1 ± 7.7	26.5 ± 9.1	0.10
FTND	6.7 ± 2.2	4.7 ± 2.2	4.6 ± 2.4	< 0.001 (1>2,3)
Previous quit attempts	2.2 ± 1.5	1.7 ± 1.5	2.1 ± 1.5	0.40
# using nicotine patch	56 (86%)	18 (95%)	77 (85%)	0.60
Total nicotine withdrawal symptoms	4.2 ± 3.3	1.7 ± 2.2	3.7 ± 2.9	0.007 (1,3>2)

Mean ± SD shown; P-values from ANOVA F-test or Fisher's Exact Test

Demographic & Clinical Characteristics by Alcohol/Cocaine Diagnostic Grouping (Cont.)

	Group 1 Alcohol only (N=65)	Group 2 Cocaine only (N=19)	Group 3 Alcohol + Cocaine (N=91)	P-value
# of abstainers	25 (38%)	11 (58%)	52 (57%)	0.05 (1<3)
# w/cannabis abuse or dependence	7 (11%)	3 (16%)	23 (25%)	0.07
# w/any other drug ^c abuse or dependence	9 (14%)	1 (5%)	14 (15%)	0.60
Zung depression (converted)	0.58 ± 0.10	0.50 ± 0.10	0.54 ± 0.11	0.004 (1>2,3)
Length of stay in Clean Break	13.6 ± 6.9	16.1 ± 4.8	15.6 ± 5.5	0.07
ASI Alcohol composite	0.53 ± 0.25	0.15 ± 0.21	0.37 ± 0.25	< 0.001 (1>3>2)
ASI Drug composite	0.06 ± 0.09	0.16 ± 0.08	0.22 ± 0.09	< 0.001 (1<2<3)
ASI Psychiatric composite	0.37 ± 0.23	0.21 ± 0.21	0.33 ± 0.25	0.03 (1>2)

Mean ± SD shown; P-values from ANOVA F-test or Fisher's Exact Test

Results of Univariate Logistic Regressions to Predict Smoking Abstinence

	β	<i>P</i> -value	Odds Ratio [95% CI]
Race (Non-Caucasian vs. Caucasian)	-0.40	0.011	2.25 [1.20-4.20]
Diagnostic group (COC \pm ALC vs. ALC) ^a	-0.38	0.017	2.15 [1.15-4.01]
Cigarettes/day (≤ 20 vs. > 20)	0.35	0.026	2.03 [1.09-3.78]

^aALC=Alcohol abuse/dependence only; COC \pm ALC=cocaine abuse/dependence w/ or w/o alcohol abuse/dependence

Additional variables were considered and were not significant in predicting smoking abstinence.

These variables (p-value) are: ASI Drug composite (0.076), ASI Alcohol composite (0.083), FTND (0.111), ASI Psychiatric composite (0.201), ASI Family composite (0.221), Total # of withdrawal symptoms (0.243), ASI Legal composite (0.335), ASI Medical composite (0.657), Zung depression (0.668), Age (0.748), ASI Employment composite (0.864), # of quit attempts (0.923) and Nicotine patch (0.976)

Results of *Clean Break* Analysis

- The alcohol only group smoked more heavily, had higher levels of nicotine dependence, and reported more emotional problems than the other two groups
- Short-term abstinence rates were high across the three groups (38%, 58%, and 57% for the ALC, COC, and ALC + COC groups, respectively)
- Lighter smoking at treatment entry, non-Caucasian race, and a diagnosis of cocaine abuse/dependence (with or without alcohol abuse/dependence) predicted short-term abstinence in the program



Fellowships in Addiction Psychiatry / Addiction Medicine

- One-year ACGME accredited addiction psychiatry fellowship
- Two-year VA clinical research addiction medicine fellowship
- Clinical rotations within a nationally-recognized Clinical Program of Excellence in Substance Use Disorders
- NIDA-, NIAAA- and VA-sponsored research centers in illicit drug use, alcohol and tobacco addiction

For more information: visit <http://www.psychiatry.uc.edu> or contact Kathleen Peak, kathleen.peak@va.gov, 513-861-3100, ext. 6676

Read More About It

- Heffner JL et al. *J Addict Med*
2007; 1:191-197
- Heffner JL et al. *Alcohol & Alcoholism*
2007; 42:186-195