

FACTORS ASSOCIATED with TOBACCO USE & MENTAL ILLNESS

WHY do INDIVIDUALS with MENTAL ILLNESS SMOKE?

Smoking in adolescence is associated with psychiatric disorders in adulthood, including: panic disorder, GAD and agoraphobia, depression and suicidal behavior, substance use disorders, and schizophrenia (Breslau et al., 2004; Weiser et al., 2004; Goodman, 2000; Johnson et al., 2000)

SMOKING ↔ MENTAL ILLNESS

Active psychiatric disorders are associated with daily smoking and progression to nicotine dependence (Breslau et al., 2004).

FACTORS ASSOCIATED with TOBACCO USE in INDIVIDUALS with MENTAL ILLNESS

Tobacco Use

- Individual**
 - Sociodemographics
 - Genetic predisposition
 - Coexisting medical conditions
- Pharmacology**
 - Alleviation of withdrawal symptoms
 - Weight control
 - Pleasure, mood modulation
- Environment**
 - Tobacco advertising
 - Conditioned stimuli
 - Social interactions

NEUROCHEMICAL and RELATED EFFECTS of NICOTINE

N	→ Dopamine	→ Pleasure, appetite suppression
I	→ Norepinephrine	→ Arousal, appetite suppression
C	→ Acetylcholine	→ Arousal, cognitive enhancement
O	→ Glutamate	→ Learning, memory enhancement
T	→ Serotonin	→ Mood modulation, appetite suppression
I	→ β-Endorphin	→ Reduction of anxiety and tension
N	→ GABA	→ Reduction of anxiety and tension
E		

Benowitz. (2008). Clin Pharmacol Ther 83:531-541.

BIOLOGY of NICOTINE ADDICTION: ROLE of DOPAMINE

Nicotine stimulates dopamine release

Nicotine addiction is **not** just a bad habit.

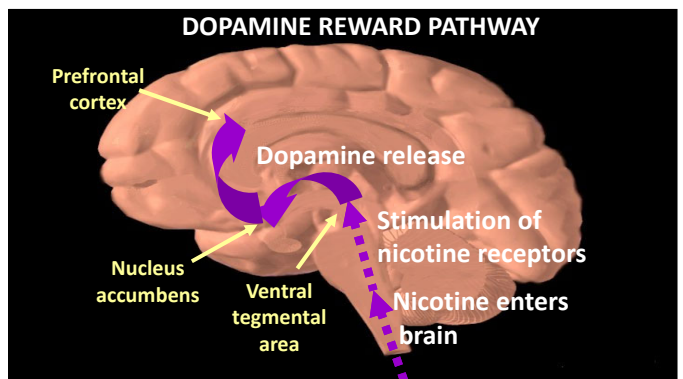
Discontinuation leads to withdrawal symptoms.

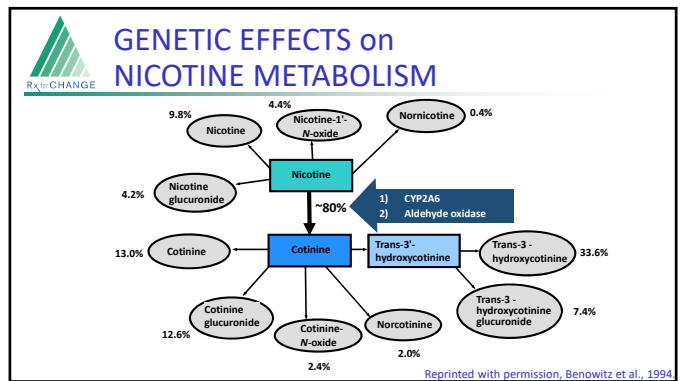
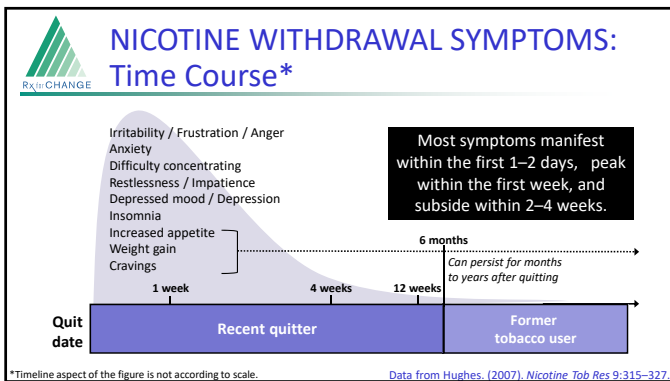
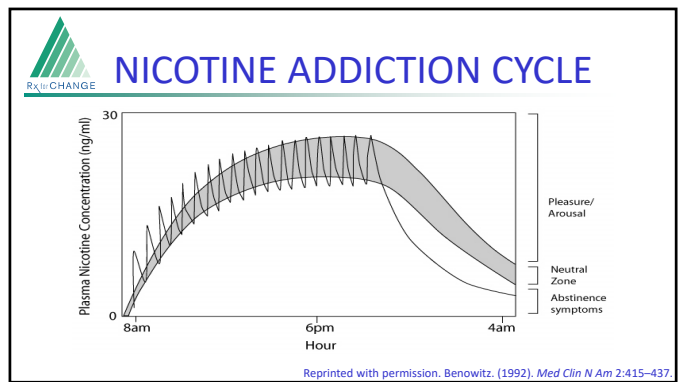
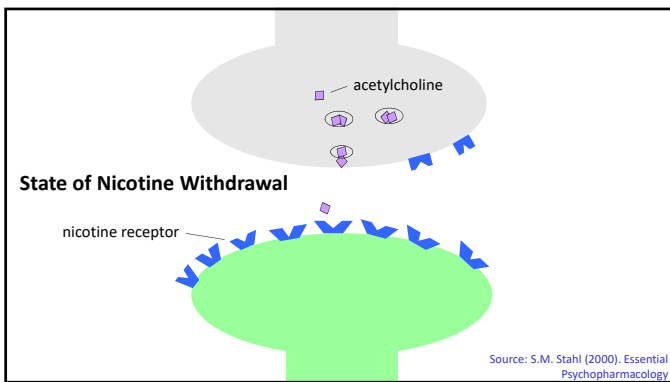
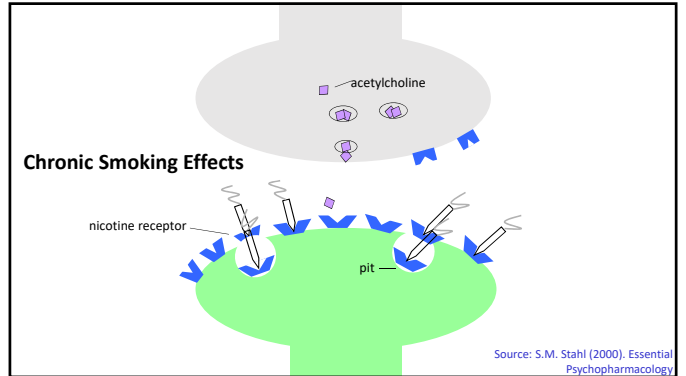
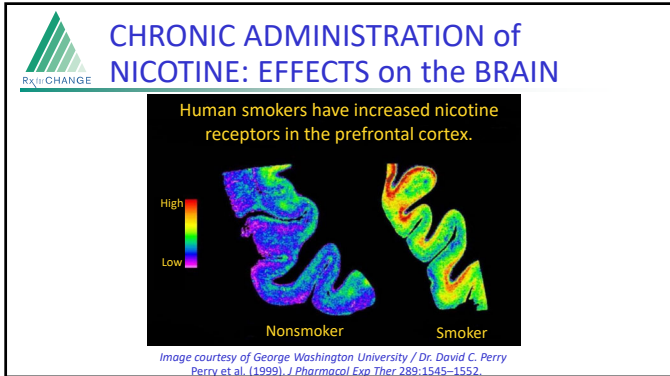
Pleasurable feelings

Repeat administration

Tolerance develops

Benowitz. (2008). Clin Pharmacol Ther 83:531-541.







WHAT IS ADDICTION?

“Compulsive drug use, without medical purpose, in the face of negative consequences”

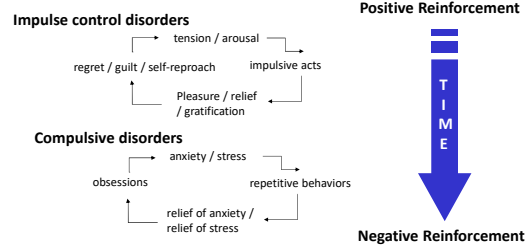
Alan I. Leshner, Ph.D.

Former Director, National Institute on Drug Abuse
National Institutes of Health

Nicotine addiction is a chronic condition with a biological basis.



MODEL of ADDICTION



Source: GF Koob et al. (2004) *Neuroscience and Biobehavioral Reviews*



DSM-V TOBACCO-RELATED DISORDERS

Tobacco Use Disorder

A problematic pattern of tobacco use leading to clinically significant impairment or distress, as manifested by 2 of the following within a 12-month period:

1. Tolerance
2. Persistent desire to use
3. Withdrawal
4. ↑ Use
5. Unsuccessful efforts to stop
6. Time investment
7. Loss of important activities
8. Continued use despite knowledge of physical or psychological problems
9. Recurrent use in hazardous situations
10. Tobacco use continued even though physical or psychological problems occurring from tobacco use

Nicotine Withdrawal

- A. Daily use of nicotine
- B. Abrupt cessation/reduction followed within 24 hrs by 4+:
 1. Depressed mood
 2. Insomnia
 3. Irritability
 4. Anxiety
 5. Difficulty concentrating
 6. Increased appetite
 7. Restlessness
- C. Clinically significant impairment
- D. Not due to other mental disorders or medical conditions



SYSTEMIC and TREATMENT FACTORS

A PRIMER FOR PSYCHOTHERAPISTS

BEHAVIOR DURING THE INTERVIEW 39

Should the therapist smoke during the interview? Why not? It will help drain the small amount of undischarged tension which is always present during an interview, and it contributes to the naturalness of his behavior.

ADJUNCT IN PSYCHIATRY, MOUNT ZION HOSPITAL, SAN FRANCISCO; CLINICAL ASSOCIATE, SAN FRANCISCO INSTITUTE OF PSYCHOANALYSIS; FORMERLY LECTURER IN PSYCHIATRY, DEPARTMENT OF SOCIAL WELFARE, UNIVERSITY OF CALIFORNIA

Pub. 1951



PSYCHIATRISTS in PRACTICE (Himelhoch & Daumit, 2003)

- 1992-96 Nat'l Ambulatory Medical Care Survey
- 23% of psychiatric visits dropped from analysis because patient smoking status unknown
- For patients identified as smokers (N=1610)
 - Cessation counseling offered at 12% of visits
 - Nicotine Dependence not diagnosed at any visit
 - Nicotine replacement therapy never prescribed

**2005 AAMC PRACTICE SURVEY:
801 PSYCHIATRISTS**

- 62% Ask about tobacco
- 44% Assess readiness to quit
- 62% Advise cessation
- Assist:
 - NRT (23%), other Rx (20%)
 - Cessation materials (13%)
- 14% Arrange follow up
- 11% Refer to others

PSYCHIATRISTS THE LEAST LIKELY TO ADDRESS TOBACCO USE WITH THEIR PATIENTS RELATIVE TO OTHER SPECIALTIES (FAMILY MEDICINE, INTERNAL MEDICINE, OB/GYN)

**PSYCHIATRY RESIDENTS' (N=105)
ENGAGEMENT in the 5-As**

Category	Never or Rarely	Sometimes	Often or Always
Ask about smoking	16%	26%	58%
Advise to quit	39%	32%	29%
Assess readiness to quit	49%	35%	17%
Assist with quitting	52%	30%	18%
Arrange follow-up	70%	18%	13%

Source: Prochaska, Fromont et al., 2005 Acad Psychiatry

Legacy Tobacco Documents

- Digital online library
- 15+ million documents (92+ million pages) from the major tobacco companies
- Related to their advertising, manufacturing, marketing, sales, and scientific research activities
- Located at: <http://legacy.library.ucsf.edu>

Department of Health, Education, and Welfare
National Institute of Mental Health
Washington, DC
August 4, 1980

OUR REFERENCE: CDS/APN/237

Mr. G. H. Long
R. J. Reynolds Tobacco Company
Winston Salem, North Carolina 27102

Dear Mr. Long:

I am writing to request a donation of cigarettes for long-term psychiatric patients who have no funds of their own and for whom, because of recent changes in the Department of Health and Human Services regulations, Saint Elizabeth Hospital can no longer purchase cigarettes for them.

The Noyes Division of Saint Elizabeth Hospital has approximately 240 in-patients. Most of them are elderly, long-term patients who have been here many years; e.g. one case to the hospital originally in 1909. Over the years the Hospital provided tobacco and occasionally cigarettes for these patients. Many became strongly addicted and in fact look upon smoking as their greatest (and often their only) pleasure.

Recent changes in Department of Human Services regulations and their enforcement abruptly terminated the Hospital's practice of providing a modest number of cigarettes to those patients who have no funds with which to purchase their own. Of our 240 patients, approximately 100 are in this category. The result has been nicotine withdrawal (which can be very unpleasant) and the loss of one of the greatest pleasures for patients who have very few, if any, alternatives. Many of the staff have been providing patients with cigarettes out of their own pocket, but this gets expensive if continued indefinitely.

I am therefore requesting a donation of approximately 5,000 cigarettes a week (8 per day for each of the 100 patients without funds). Any help you can give me would be most appreciated.

Sincerely yours,
E. Fuller Torrey, M.D.
Medical Director
A. P. Noyes Division

I am therefore requesting a donation of approximately 5,000 cigarettes a week (8 per day for each of the 100 patients without funds).

TOBACCO INDUSTRY'S INTERESTS

- 1950s-1980s: Beliefs that patients with schizophrenia, who smoke at high rates, immune to cancer

PHILIP MORRIS INCORPORATED INTER-OFFICE CORRESPONDENCE
150 PARK AVENUE, NEW YORK, N.Y. 10022

TO: Mr. James C. Bowling
FROM: J. E. Lincoln
DATE: June 29, 1983
SUBJECT: Schizophrenics

You will probably recall various anecdotal references to heavy smoking but unusually low lung cancer incidence among schizophrenics. At least one of these references could be given: significant negative correlation among a particular sub-classification of schizophrenics.

Do you think it would be practical and sensible to ask the Managers if they would attempt to quantify these relationships?

JEL:ing
cc: A. Moltzman

Prochaska, Hall & Bero (2008). Schizophrenia Bulletin



TOBACCO INDUSTRY'S INTERESTS

- 1960s-1970s: TI funded research on psychosomatic causes of cancer
 - Proposed those who denied or repressed grief were more likely to develop cancer than those who expressed emotion
 - "longterm schizophrenics, outwardly calm, have no capacity for the repression of significant emotional events and no need to contain emotional conflict."
 - Ultimately came under scrutiny for its "scientific integrity"

Finally, Kissen produced a paper in April last year in which his interpretation of his own statistical evidence was so open to criticism that it gave great concern to our statistical advisers. Kissen is of statisticians and some of his statistical work in the past had been unaccounted. We had tried to get him to use a good statistical consultant but failed in this.

The position therefore was most unsatisfactory. There was in particular a grave danger that, if Dean's criticism about long cancer patients' suspicions was right - and others had also made the same criticism privately to us - the whole foundation of Kissen's work might be knocked away at any time by someone who decided to investigate this particular point. This might then appear to have been financing and giving publicity to an immense smoke-screen.

Prochaska, Hall & Bero (2008). Schizophrenia Bulletin



TOBACCO INDUSTRY'S INTERESTS

- 1964 & 1997: TI denied funding of 2 proposals to examine high rates of cancer in smokers with mental illness
 - 1964 proposal "denied in principle but referred to the study group on the psychophysiological aspects of smoking," "for working over."
 - Questioned "whether some other kind of use could profitably be made of his data collection methods."

Prochaska, Hall & Bero (2008). Schizophrenia Bulletin

Handwritten initials

Re: Research Proposal for July/83 - June/84
 "Tobacco Smoking As a Coping Mechanism in Psychiatric Patients: Psychological, Behavioral and Physiological Investigations"
 Phase I

These 3 studies, plus the remaining 3 planned for next year **promise to bear** fruitful findings. It is particularly interesting that the psychiatrists, who are medical professionals, are very aware of the role of tobacco use in patients and are very interested in these studies. If tobacco can be shown to be an efficient form of "self-medication" for these patients then this would be **significant bonus for the tobacco industry.**

MACDONALD INC., Research and Development

Dr. Knott has been sponsored by CTRC for some years. Up to last year his own salary was paid by us - so he was **totally dependent on CTRC funding.** He became, however, a permanent member of the Royal Ottawa Hospital in 1984, and since then we only support the cost of his assistants.

The latest request is addressing the problems that restriction on smoking in the workplace or elsewhere may have on inducing stress on the smoker. Once again he seems to be **looking at this from our point of view.**

Nicotine: helping those who help themselves?

Chemistry & Industry 6 July 1998

JOHN A ROSBICRANS

It's no secret that smokers are addicted to their habit, but what might be surprising are the reasons behind the addiction — could it be self-medication?

Many people who use tobacco, including smokers, do so because of some potential therapeutic benefit they receive, such as to relieve depression, schizophrenia or pain. While this

Nicotine may have beneficial effects that are "therapeutic" rather than addictive

Tobacco industry documents indicate the author received funding from CTR and PM from at least 1977-1994 and contributed to papers conceived by PM

Addiction or self-help?



HOSPITAL SMOKING BANS

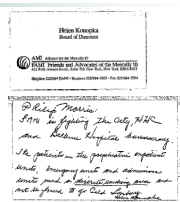
THE WALL STREET JOURNAL, TUESDAY, OCTOBER 11, 1994

Mental Patients Fight to Smoke When They Are in the Hospital

"It's one of the very very few pleasures that schizophrenics and people with major depression have," says Helen Konopka, a 71-year-old retired New York teacher who organized a tidal wave of letters and petitions to the Joint Commission. She says

Ms. Konopka's crusade is backed by the National Alliance for the Mentally Ill, an influential advocacy group of patients and their families. The group says it hasn't had any contact with the tobacco industry.

The New York Times
 SUNDAY, FEBRUARY 19, 1995



JCAHO ultimately "yielded to massive pressure from mental patients and their families, relaxing a policy that called on hospitals to ban smoking."

Law Offices of
 DOYLE & NELSON
 1000 ...
 March 31, 1992

Bookers Rights of Mine
 P.O. Box 2165
 Lexington, MA 02421-2165

Gentlemen:

This letter is to inform you that the smoking in restaurants bill (LD 463) is now set for hearing on Wednesday, April 1, 1992, at 11:00 a.m. At the same time it appears, in fact, the following smoking bills also have been set for hearing on that day:

- LD 463 - An Act to Exempt Substance Abuse and Reproductive Patients from the Prohibition against Smoking in Hospitals
- LD 542 - An Act to Ban Smoking in Restaurants
- LD 462 - An Act to Amend the Law Concerning Smoking in Restaurants
- LD 1138 - An Act to Protect Citizens from the Effects of Environmental Tobacco Smoke

With the above bills all scheduled on one day, it is difficult to know exactly when most of them will be heard. It is vital that you, as a representative, attend the hearing on each of the legislation and we would appreciate it if you would either give me a call or my paralegal, Susan Mitchell.

Thank you.

Kind regards,

LD 463 - An Act to Exempt Substance Abuse and Reproductive Patients from the Prohibition against Smoking in Hospitals

RECEIVED
APR 24 1985
JOHN ALAR

Mr. Williams
WELLSPRING HOUSE
A Psychiatric Rehabilitation Center
1302 South Third Street
Lexington, Kentucky 40502
(502) 477-0201

April 19, 1985

Brown & Williamson Corp.
P.O. Box 1000
Louisville, Ky. 40232

Dear Mr. Alar:

The Board of Directors of Schizophrenia Population, Inc., and the staff at Wellspring House extend their deep gratitude to you for your participation in our First Annual dinner honoring Kentucky's legislators.

We felt the event was a success financially as well as educationally. Many in our community heard for the first time the well-being of our schizophrenics and our families. We also felt our financial goals, Kentucky's lawmakers, were duly educated and impressed.

We are presently working with Seven Counties Services and the Mental Health Association and within a few weeks will send you a report on the progress of our plans. Without your support we would be making no such plans. For this, again, our thanks.

Sincerely,
Philip P. Ashby
Chairman of the Board

Schizophrenic.

Other low tar are pretty one-dimensional. Dull. But the New Merit is a whole other story: big new taste with lower tar. And that's exciting. In fact, the New Merit has as much taste as cigarettes with up to 57% more tar. Big taste, lower tar all in one. For New Merit, having two sides is just normal behavior.

The New Merit. We've got flavor down to a science.

Source: Legacy Tobacco Documents

Dr. Gandy's Background - Research Dept. - PHASE 1, CC & R 1984
Gandy!!!

PROJECT SCUM

1221 20815

BACKGROUND:
During the introduction of Red Camel, additional opportunities to improve Camel presence became evident in the San Francisco proper.

- Consumer Subcultures**
 - Alternative Life Style (Cocaine Users)
 - International Influence
 - Rebellious; Generation X
 - Street People - More Applicable to Dorado Foundation
- Camel has a higher share than in the general Marketplace. This was consistent in calls where we had the elements of presence/distribution and where we didn't**
 - Haight Ashbury - 22.6% SOM - Not SOC
 - Castro - 10.5%
 - Downtown Metro - 7.90%
 - Northern California Region - 7.70% (AIM 12/30/95-2/28/96)

1221 20815

KNOWNNS

- Opportunity exists for a cigarette manufacturer to dominate, although at this time no one company does.
- Population and tourist flow make area highly visible
- Camel momentum appears to be sustained or growing (on its own)

	Q295	Q495	Diff
Haight	18.70	18.10	-0.60
Castro	13.28	13.56	0.28
S.F. Metro	7.47	5.12	0.65
N. Cal Region	7.20	7.59	0.39

- Increased receptiveness on the part of store owners to Camel marketing/presence due to emergence of "Cheaper" stores and Camel's natural momentum.
- High incidents of smoking and drugs in subcultures
- Haven't penetrated call universe adequately (estimated 600 calls not covered)

1221 20815

Rx CHANGE **CONTRIBUTING FACTORS: SUMMARY**

- Tobacco products are **effective delivery systems** for the **highly addictive drug nicotine**.
- Nicotine activates the **dopamine reward pathway** in the brain, which reinforces continued tobacco use.
- Nicotine dependence and withdrawal are **DSM-V psychiatric disorders**.
- Tobacco dependence involves **biological, psychological, social, systemic and treatment factors** requiring a long-term **multifaceted treatment approach**.