
Smoking Cessation
Leadership Center



University of California
San Francisco

One Hour Power Break Webinar:
**Non-daily Smokers:
Smoking patterns and implications
for helping them quit**

Saul Shiffman, PhD

12/11/18

Moderator

Catherine Saucedo

Deputy Director

Smoking Cessation Leadership Center
University of California, San Francisco

catherine.saucedo@ucsf.edu



Disclosures

This UCSF CME activity was planned and developed to uphold academic standards to ensure balance, independence, objectivity, and scientific rigor; adhere to requirements to protect health information under the Health Insurance Portability and Accountability Act of 1996 (HIPAA); and include a mechanism to inform learners when unapproved or unlabeled uses of therapeutic products or agents are discussed or referenced.

The following faculty speakers, moderators, and planning committee members have disclosed they have no financial interest/arrangement or affiliation with any commercial companies who have provided products or services relating to their presentation(s) or commercial support for this continuing medical education activity:

Jon Jovi Bodestyne, Christine Cheng, Brian Clark, Jennifer Matekuare, Jessica Safier, Catherine Saucedo, and Steven A. Schroeder, MD

The following faculty speaker has disclosed a financial interest/arrangement or affiliation with a commercial company who has provided products or services relating to their presentation(s) or commercial support for this continuing medical education activity. All conflicts of interest have been resolved in accordance with the ACCME Standards for Commercial Support:

Saul Shiffman -

Reynolds American – Consultant on harm reduction issues and products (no combustible products)

Thank you to our funders



Robert Wood Johnson Foundation



CME/CEU Statement

Accreditation:

The University of California, San Francisco (UCSF) School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

UCSF designates this live activity for a maximum of *1.0 AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the webinar activity.

Advance Practice Registered Nurses and Registered Nurses: For the purpose of recertification, the American Nurses Credentialing Center accepts *AMA PRA Category 1 Credit™* issued by organizations accredited by the ACCME.

Physician Assistants: The National Commission on Certification of Physician Assistants (NCCPA) states that the *AMA PRA Category 1 Credit™* are acceptable for continuing medical education requirements for recertification.

California Pharmacists: The California Board of Pharmacy accepts as continuing professional education those courses that meet the standard of relevance to pharmacy practice and have been approved for *AMA PRA category 1 Credit™*. If you are a pharmacist in another state, you should check with your state board for approval of this credit.

California Marriage & Family Therapists: University of California, San Francisco School of Medicine (UCSF) is approved by the California Association of Marriage and Family Therapists to sponsor continuing education for behavioral health providers. UCSF maintains responsibility for this program/course and its content.

Course meets the qualifications for 1.0 hour of continuing education credit for **LMFTs, LCSWs, LPCCs, and/or LEPs** as required by the California Board of Behavioral Sciences.

Respiratory Therapists: This program has been approved for a maximum of 1.0 contact hour Continuing Respiratory Care Education (CRCE) credit by the American Association for Respiratory Care, 9425 N. MacArthur Blvd. Suite 100 Irving TX 75063, Course # 180420000.

Housekeeping

- All participants will be in **listen only mode**.
- Please **make sure your speakers are on** and adjust the volume accordingly.
- If you do not have speakers, please request the dial-in via the chat box.
- **This webinar is being recorded** and will be available on SCLC's website, along with the slides.
- **Use the chat box to send questions** at any time for the presenters.

American Association for Respiratory Care (AARC)



- Free Continuing Respiratory Care Education credits (CRCEs) are available to Respiratory Therapists who attend this live webinar
- Instructions on how to claim credit will be included in our post-webinar email

New Behavioral Health Accreditation

California Association of Marriage and Family Therapists (CAMFT)

This webinar is accredited through the CAMFT for up to **1.0 CEUs** for the following eligible California providers:

- Licensed Marriage and Family Therapists (LMFTs)
- Licensed Clinical Social Workers (LCSWs)
- Licensed Professional Clinical Counselors (LPCCs)
- Licensed Educational Psychologists (LEPs)

Instructions to claim credit for these CEU opportunities will be included in the post-webinar email and posted to our website.

California Behavioral Health & Wellness Initiative

For our CA residents, we are starting a new venture in CA helping behavioral health organizations go tobacco free and integrating cessation services into existing services thanks to the support of the CTCP.

Free CME/CEUs will be available for all eligible California providers, who joined this live activity. You will receive a separate post-webinar email with instructions to claim credit.

Visit CABHWI.ucsf.edu for more information.

Presenter

Saul Shiffman, PhD

Professor of Psychology
University of Pittsburgh



Who are light smokers and what do they tell us about dependence and treatment?

Saul Shiffman, Ph.D.

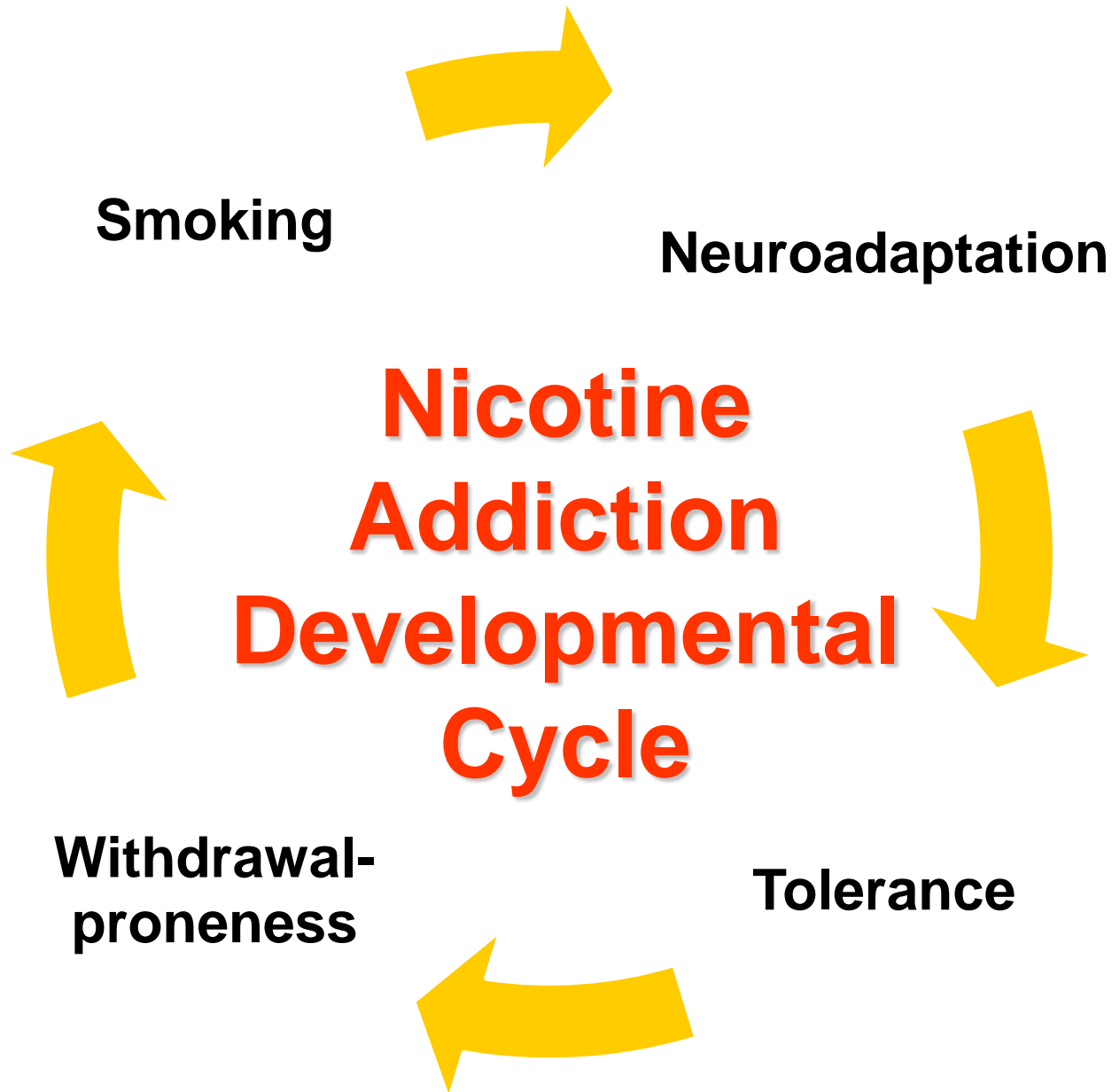
Research Professor of Psychology,
Psychiatry, Pharmaceutical Sciences, and
Clinical Translational Research
University of Pittsburgh

Disclosures

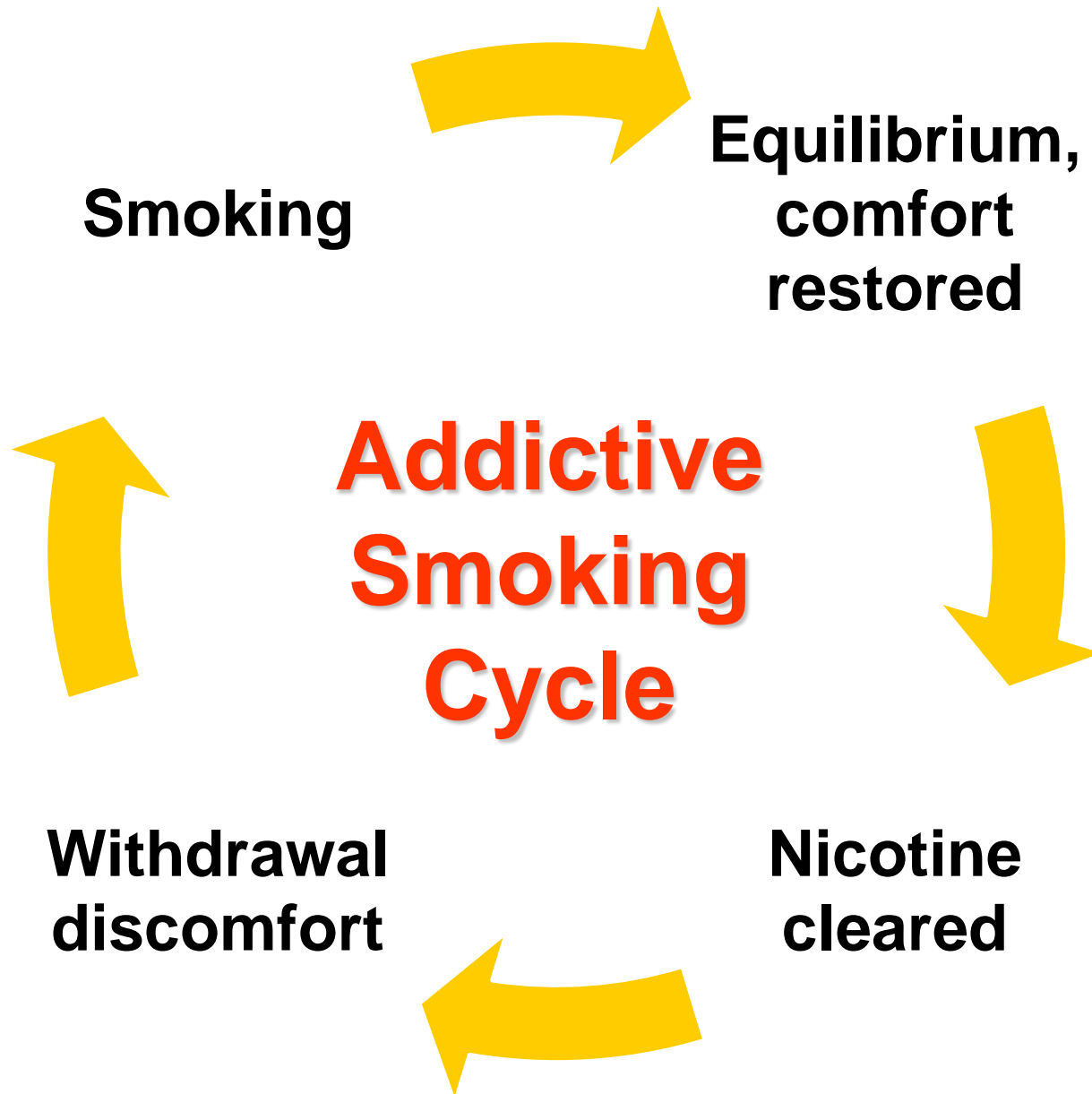
- Funding: NIDA R01DA034629, NCI/FDA P30CA047904
- The content is solely SS's responsibility, not necessarily the official views of the NIH, NCI, or FDA.
- Through Pinney Associates, SS consults on tobacco cessation and harm reduction (including nicotine replacement therapy and digital vapor products; by contract, combusted cigarettes are excluded) to Nicinovum USA, RJ Reynolds Vapor Company, and RAI Services Company, all subsidiaries of Reynolds American, Inc. and British American Tobacco.
- SS holds a patent on a novel nicotine replacement medication not currently marketed



THE STANDARD MODEL

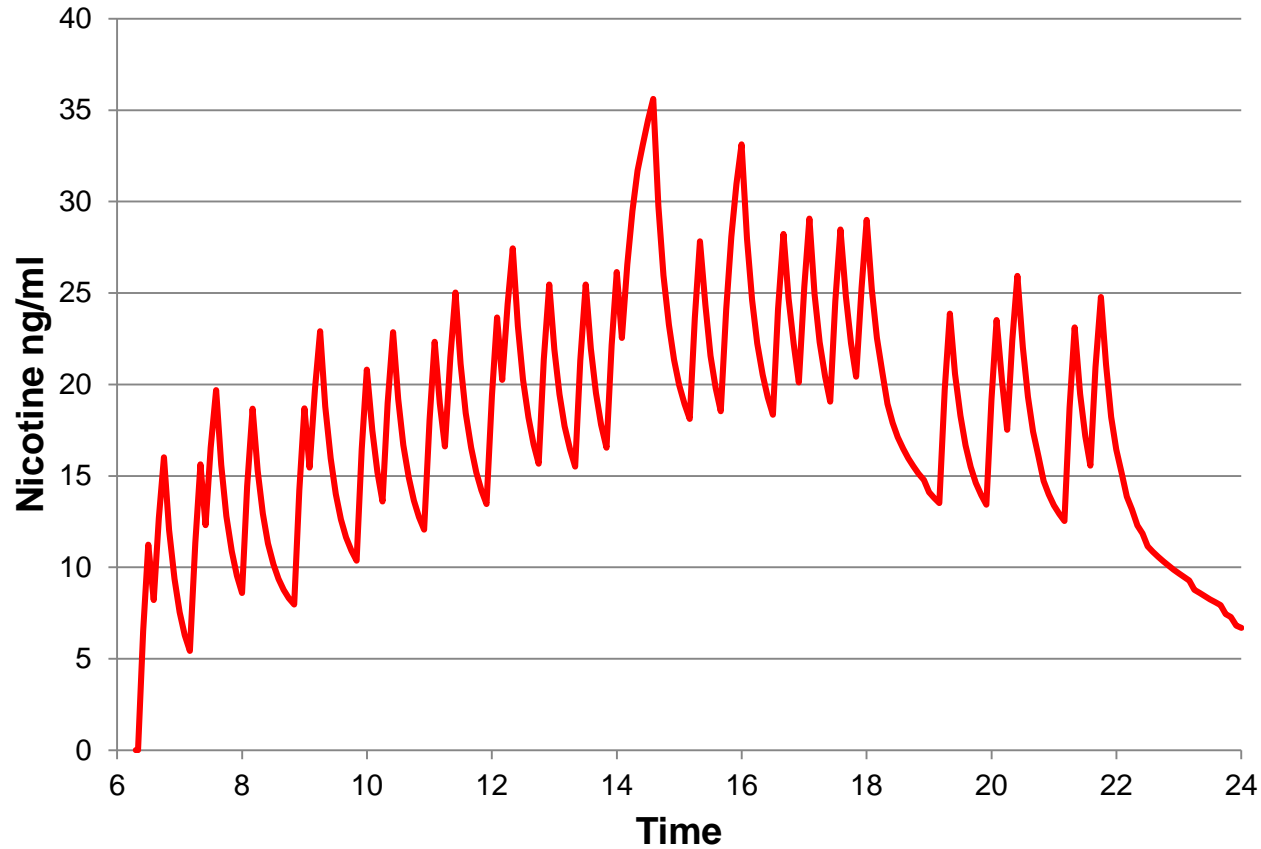


The nicotine regulation model

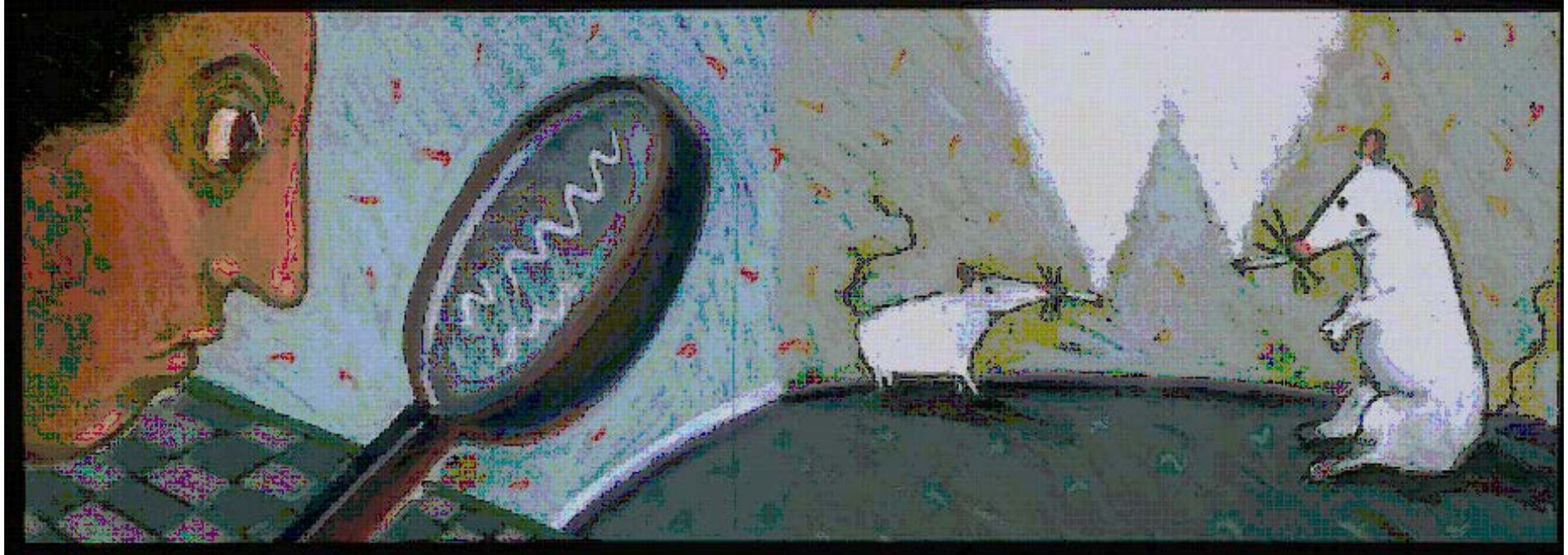


Smokers

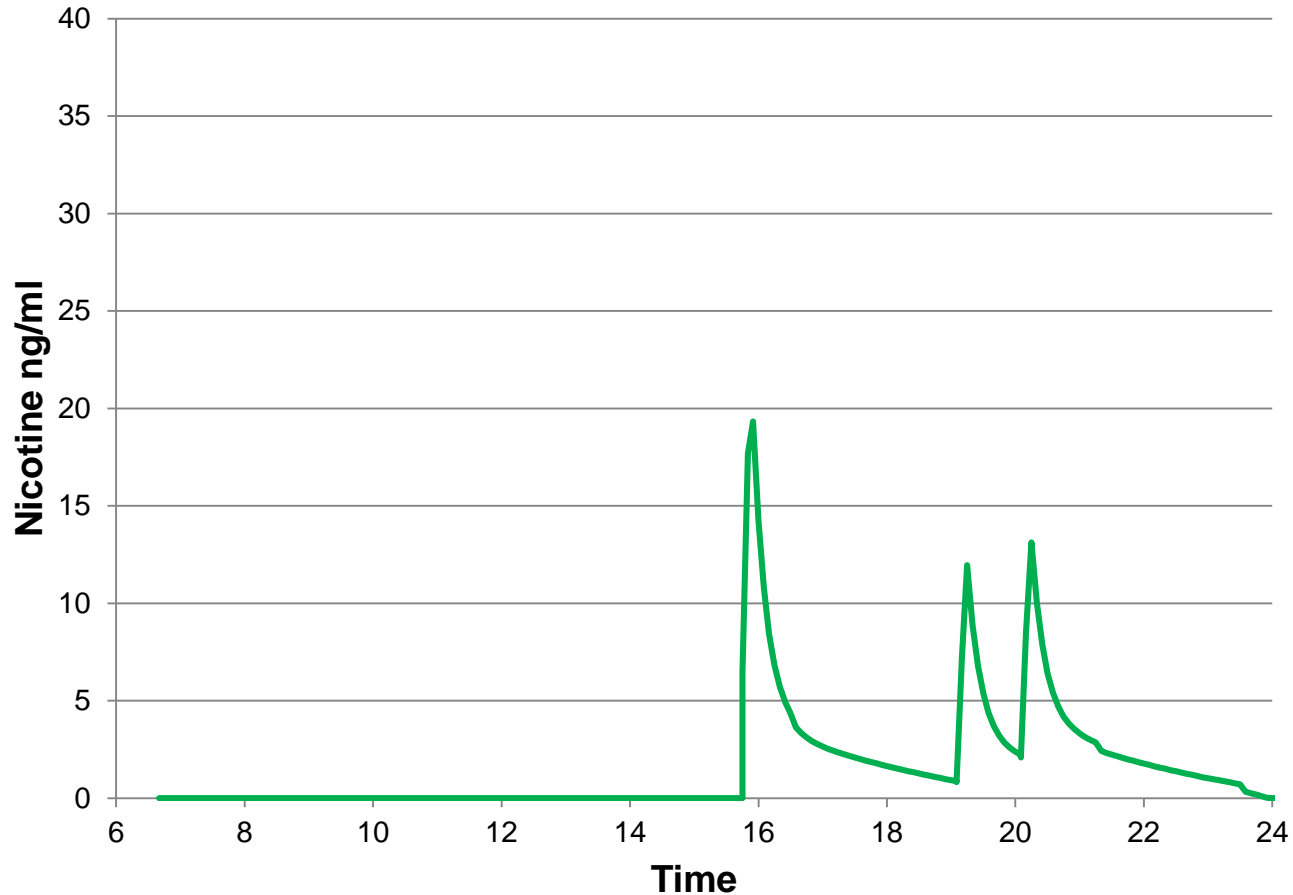
Maintain Nicotine Levels



Does All Smokers' Behavior Match the Model?



Some Smokers Do Not Maintain Nicotine Levels



'Peak-seeking'



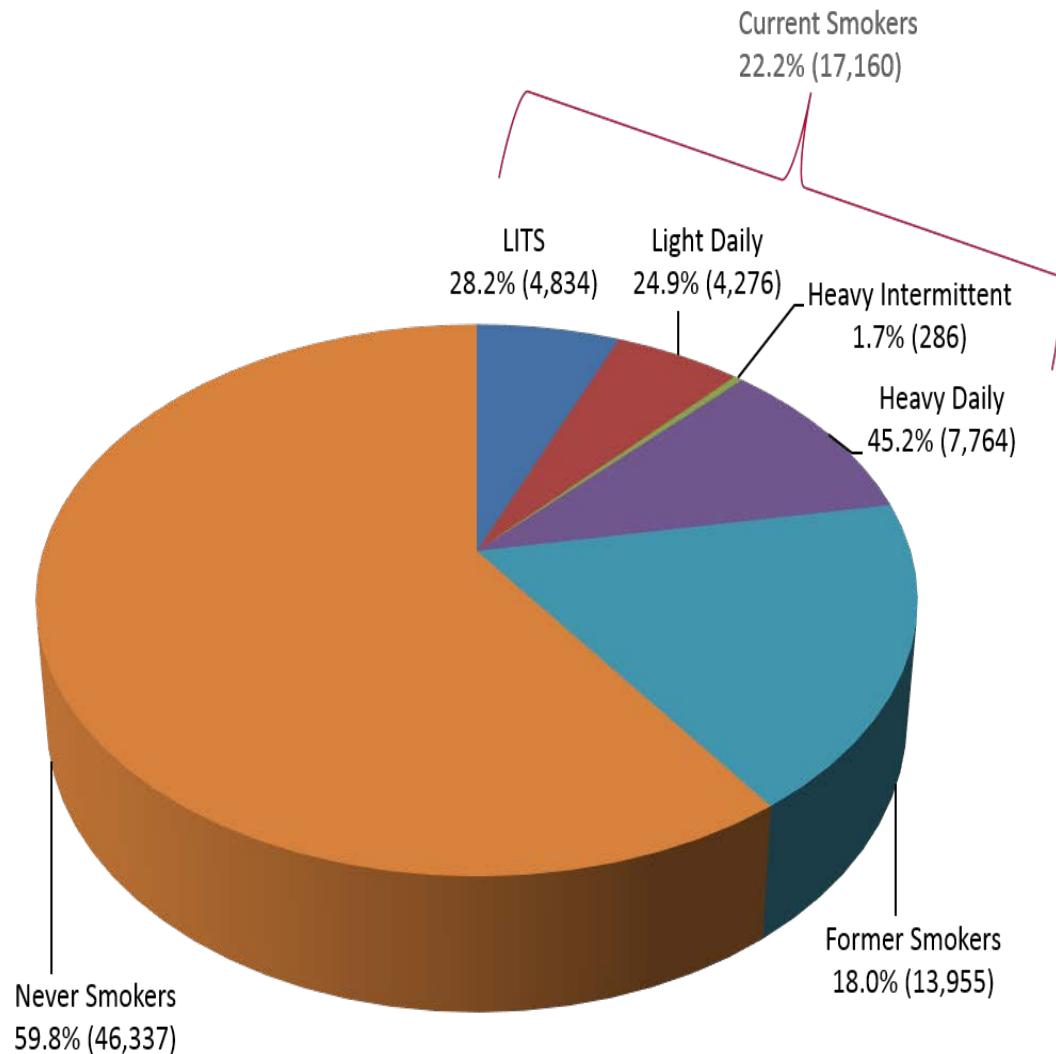
ITS Intermittent Smokers

38%
of US adult
smokers
34% at age >25

(NSDUH, 2012
in SGR 2014)

LITS are a Large Proportion of US Smokers

NHIS,
CPS/TUS,
& NSDUH,
combined



ITS Suffer Significant Harms from Smoking

- All-cause mortality: Adjusted hazard ratio ≈ 1.6
 - Compared to daily smokers HR=2.4
 - Lost years of life roughly half of daily smokers'
 - Primarily heart disease and respiratory disease
 - Risk increases with increased smoking

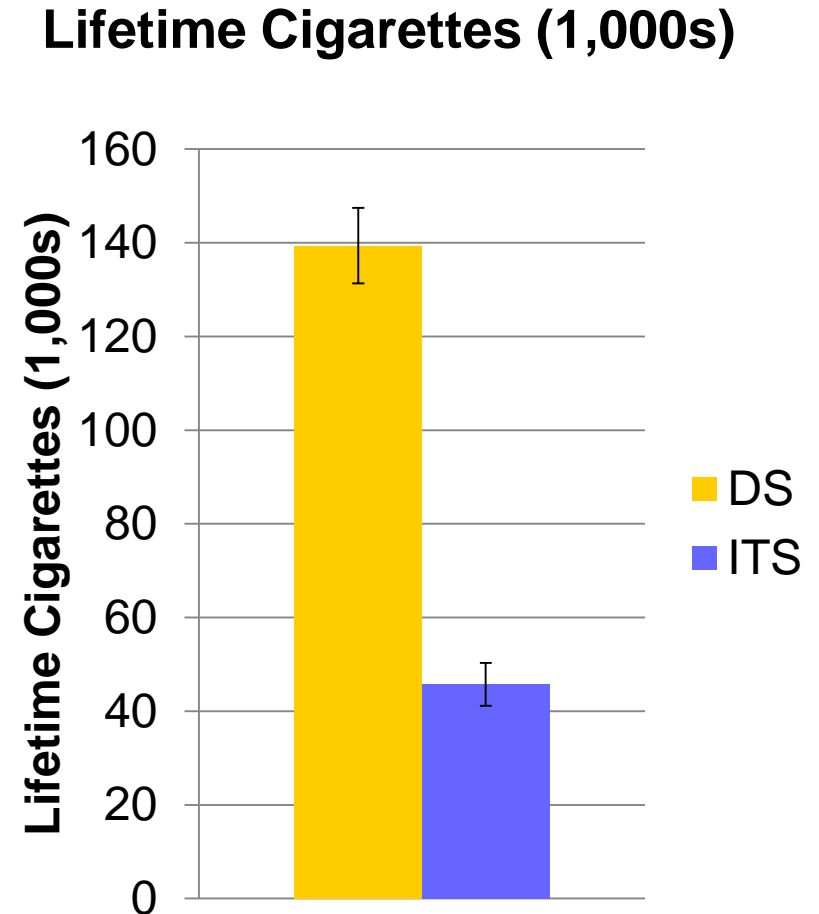
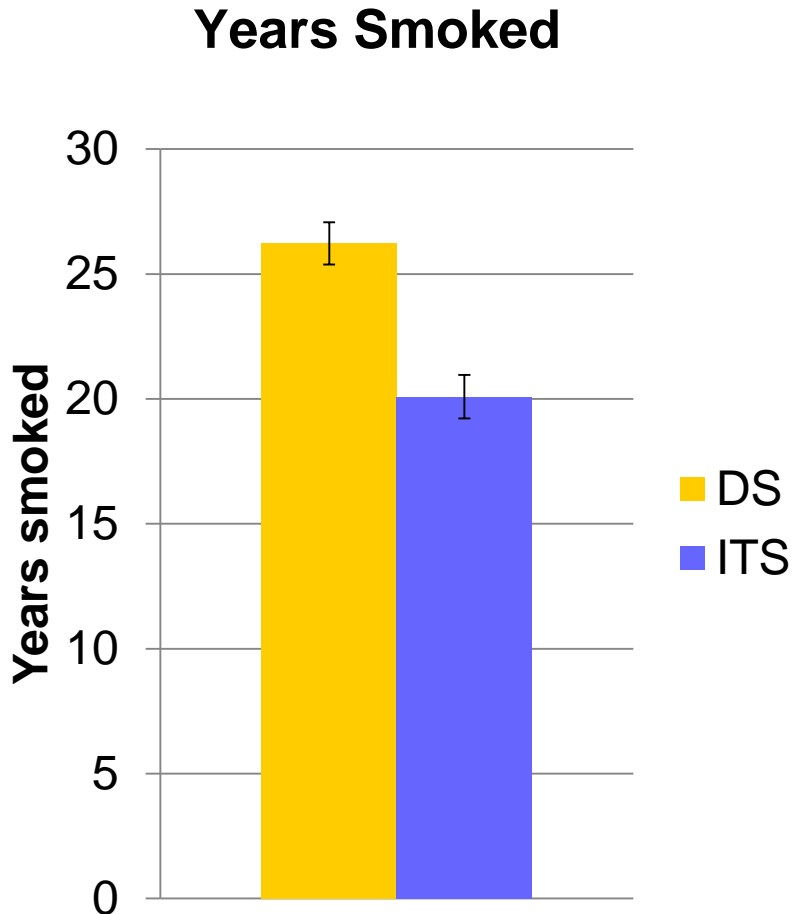
ITS & DS

Smoking Profile

	ITS N=284 Mean (SD)	DS N=233 Mean (SD)
Mean Cigs/day (all days)	3.13 (2.62)	15.16 (5.95)
Mean Cigs/day (days smoked)	4.51 (2.92)	15.18 (5.94)
% Days smoked	64.04 (23.22)	99.75 (1.42)
Longest run of abstinence (days)	5.0 (4.39)	0.1 (0.60)
FTND	1.18 (1.55)	5.15 (2.03)
% FTND=0	51%	1%

ITS & DS

Smoking History



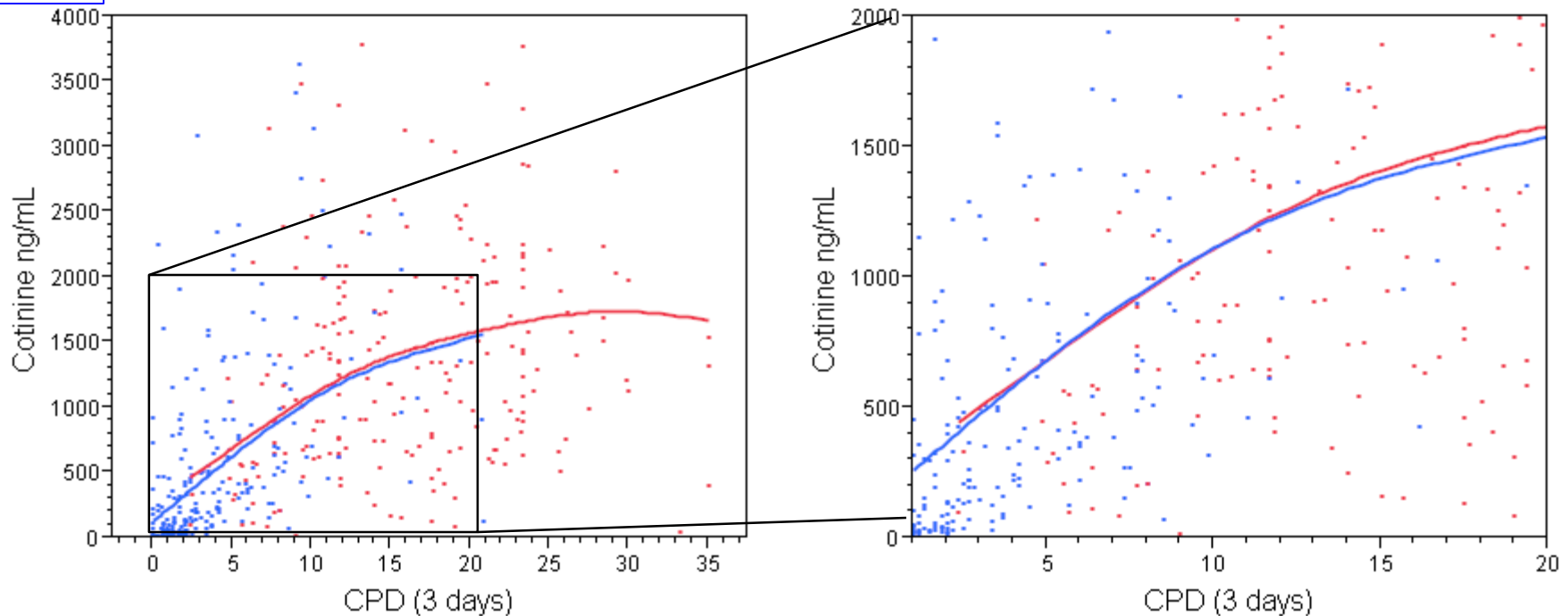
ITS & DS

Urinary Cotinine by Cigarettes/day

ITS
DS

All Subjects

Overlapping Range

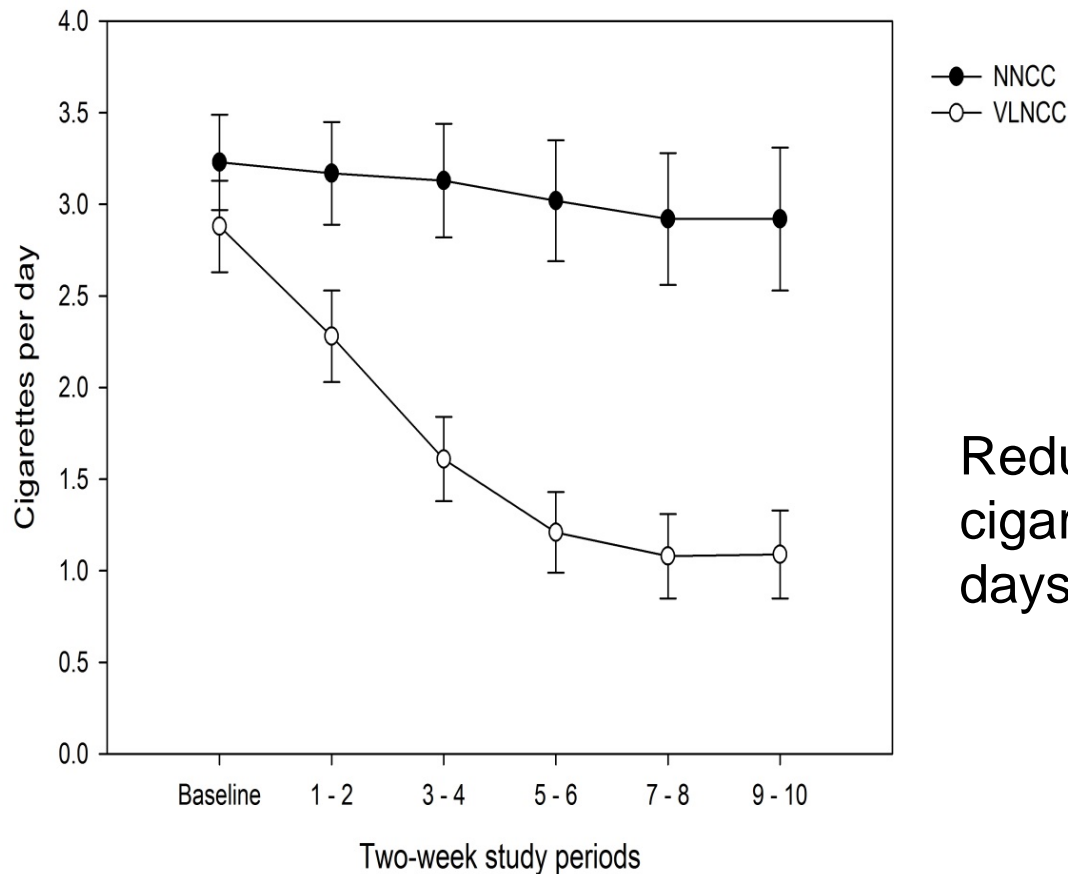


Nicotine metabolism (3-OH Cot:Cot) is similar too

Do ITS Smoke for Nicotine?

- ITS receive 'normal' amount of nicotine from smoking
- But... nicotine exposure might be incidental to non-pharmacological motives
- Test how ITS respond when nicotine is radically reduced in their cigarettes

Switching to VLNCCs Causes ITS to Smoke Less



Reduction both in cigarettes/day & days smoking

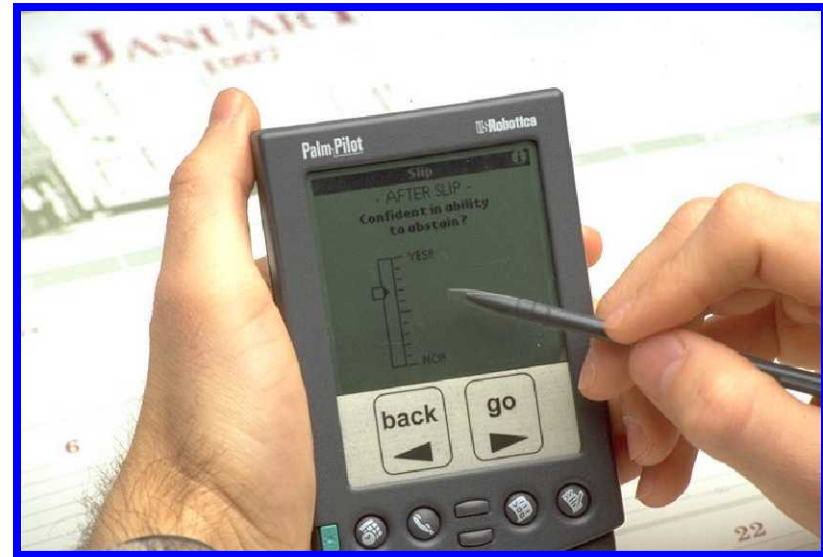
	Baseline	1-2	3-4	5-6	7-8	9-10
NNCC (N)	120	118	109	105	100	99
VLNCC (N)	118	114	105	99	94	91

Do ITS Suffer from Deprivation When They Abstain?

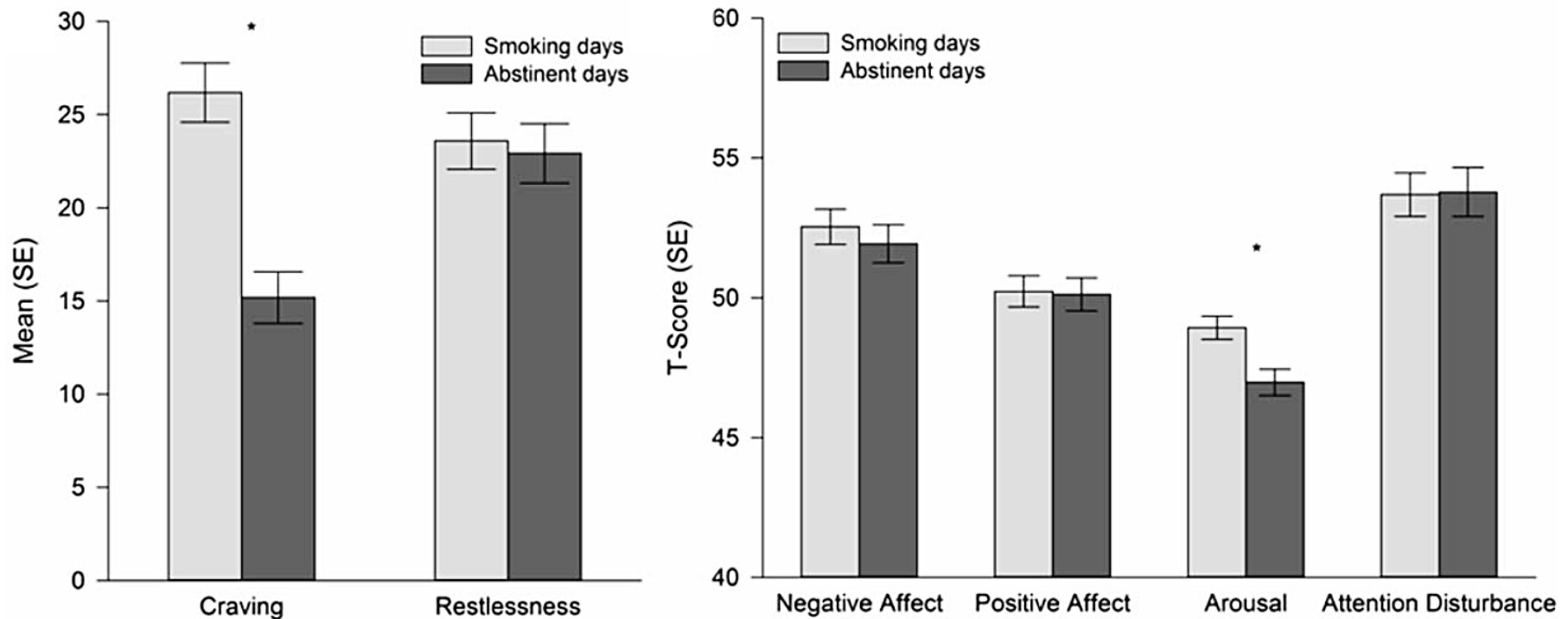


Ecological Momentary Assessment Study of ITS

- Collected real-time data in real-world settings
- Assessed craving & mood (withdrawal) at random times throughout the day
- Observe, compare days when smoked vs days when completely abstinent



No Increase in Craving & Withdrawal on Abstinent Days





ITS
and
quitting

Can ITS Easily Quit Smoking?

- Quitting should be easy and success common
 - Smoking in limited situations
 - Do not seem to regulate nicotine levels
 - Do not suffer craving and withdrawal when abstaining
 - Already 'quit' every week

Quitting Outcome in DS & ITS

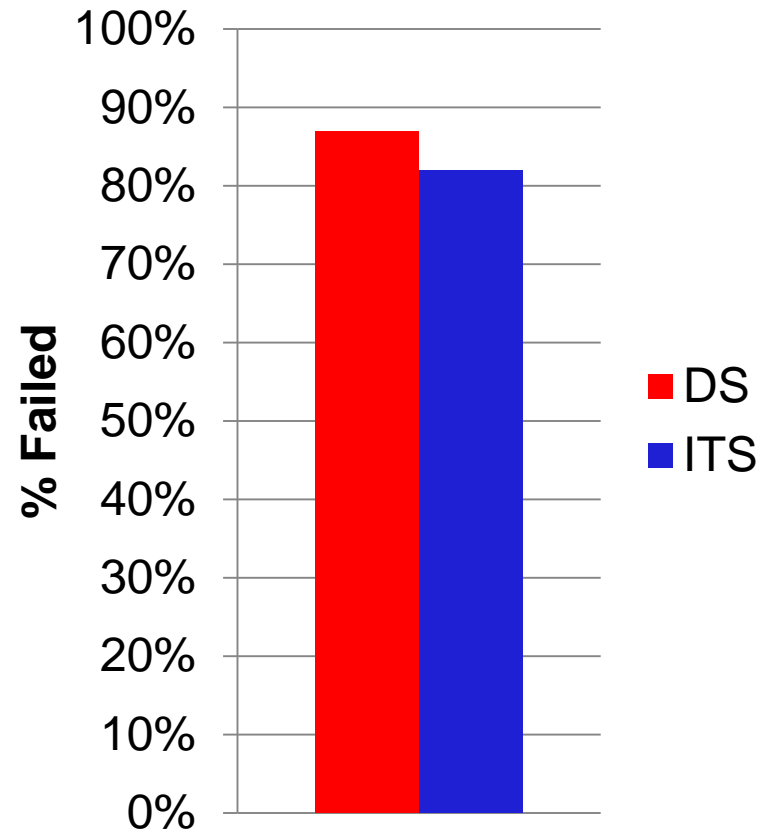
Who Attempted Quitting

- Current Population Survey, Tobacco Use Supplement, 2003
 - 25,344 past-year DS, 3,848 past-year ITS
 - Past-year quit attempts, 90-day abstinence
 - ITS make more quit attempts than DS

Quitting Outcome in DS & ITS

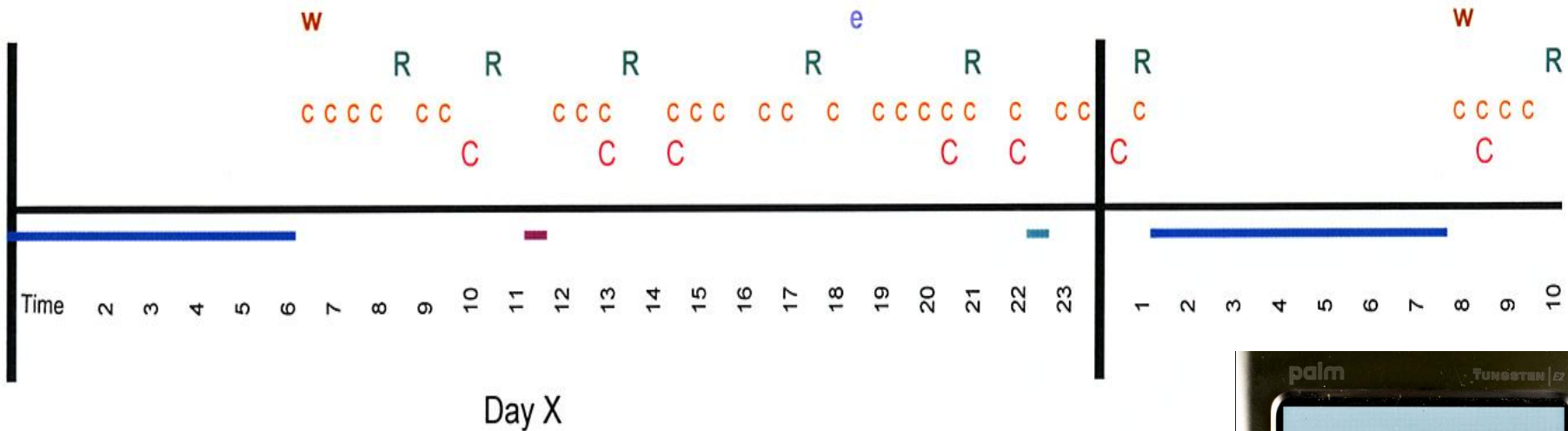
Who Attempted Quitting

- Current Population Survey, Tobacco Use Supplement, 2003
 - 25,344 past-year DS, 3,848 past-year ITS
 - Past-year quit attempts, 90-day abstinence
 - ITS make more quit attempts than DS



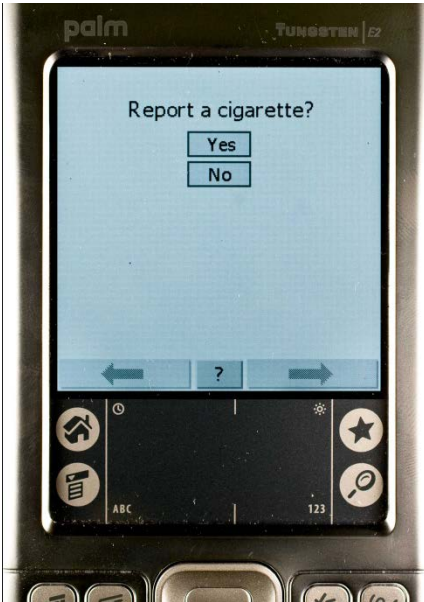


SCHEMA FOR EMA ASSESSMENT OF SMOKING OVER THE DAY



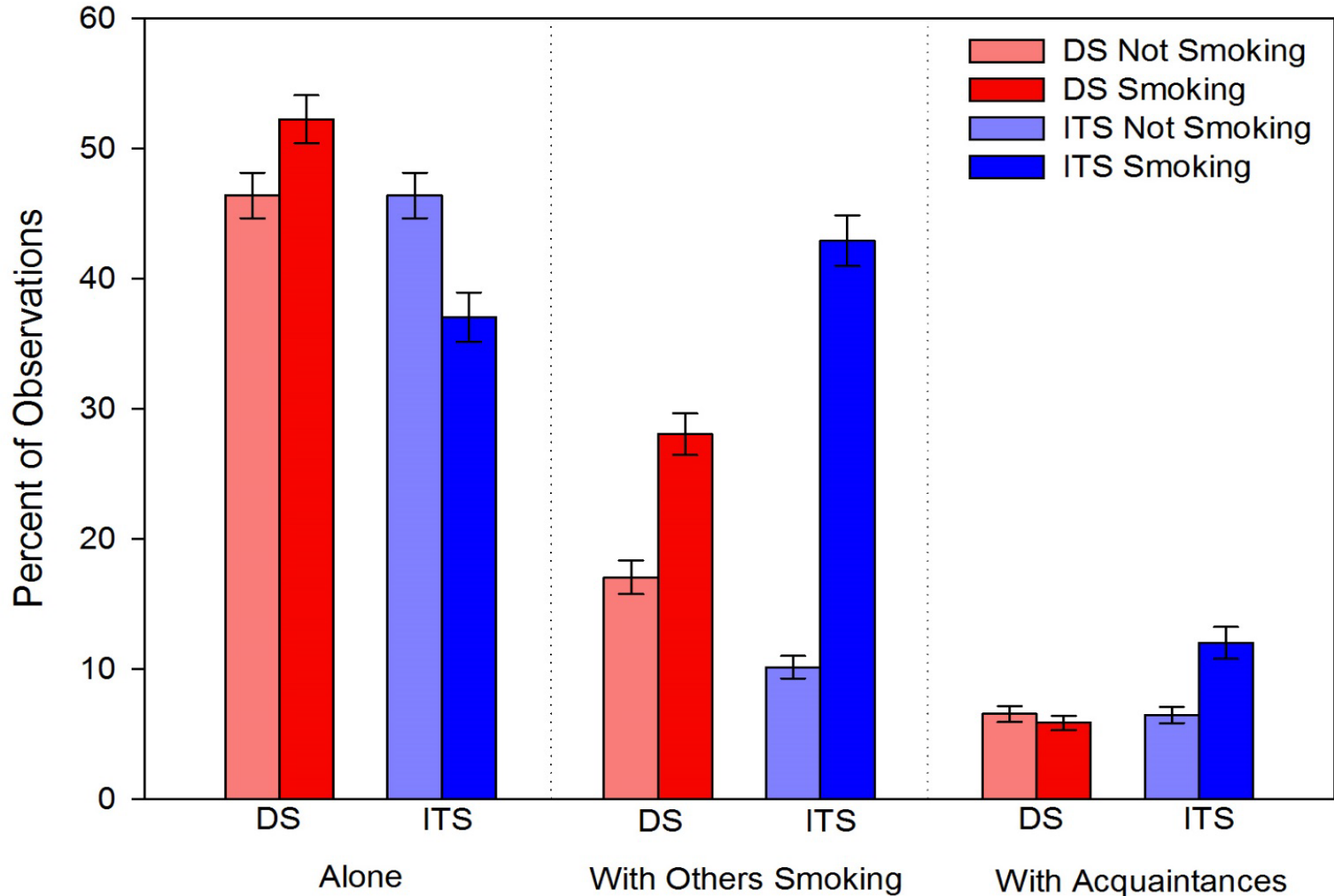
LEGEND

R	Randomly scheduled non-smoking assessment	Intervals free from random 'beeps'
C	Cigarette with assessment	Suspended prompting
c	Cigarette with no assessment	Nap
w	Wake-up assessment	Sleep
e	Evening assessment	



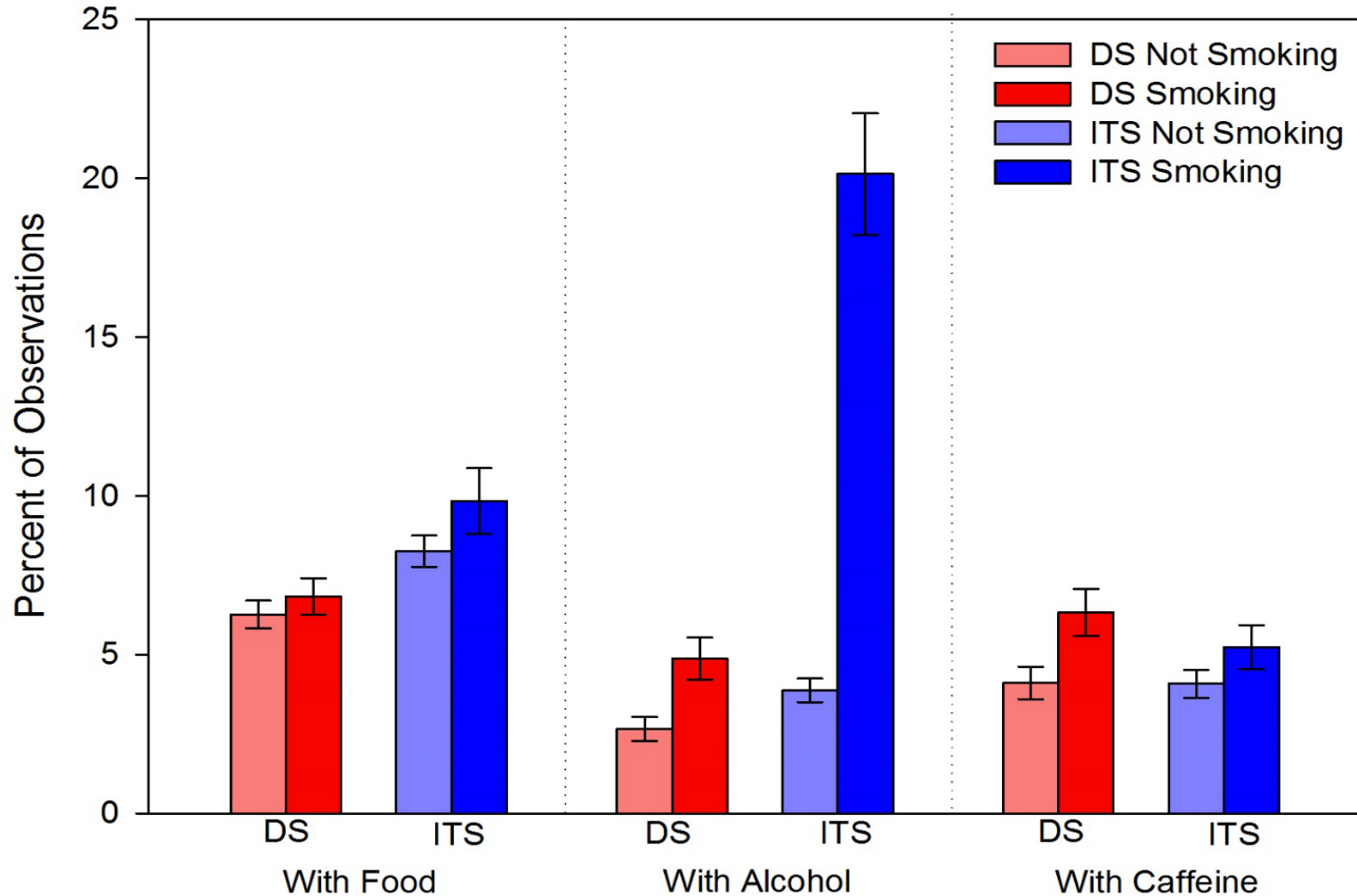
Smoking Associations

Social Setting



Smoking Associations

Food & Drink



Stimulus Control

- Behavior comes under the control of triggering stimuli
- Conditioning and instrumental learning
 - Stimuli acquire incentive salience
 - Stimuli become discriminative stimuli for reinforcement

Assessing Stimulus Control

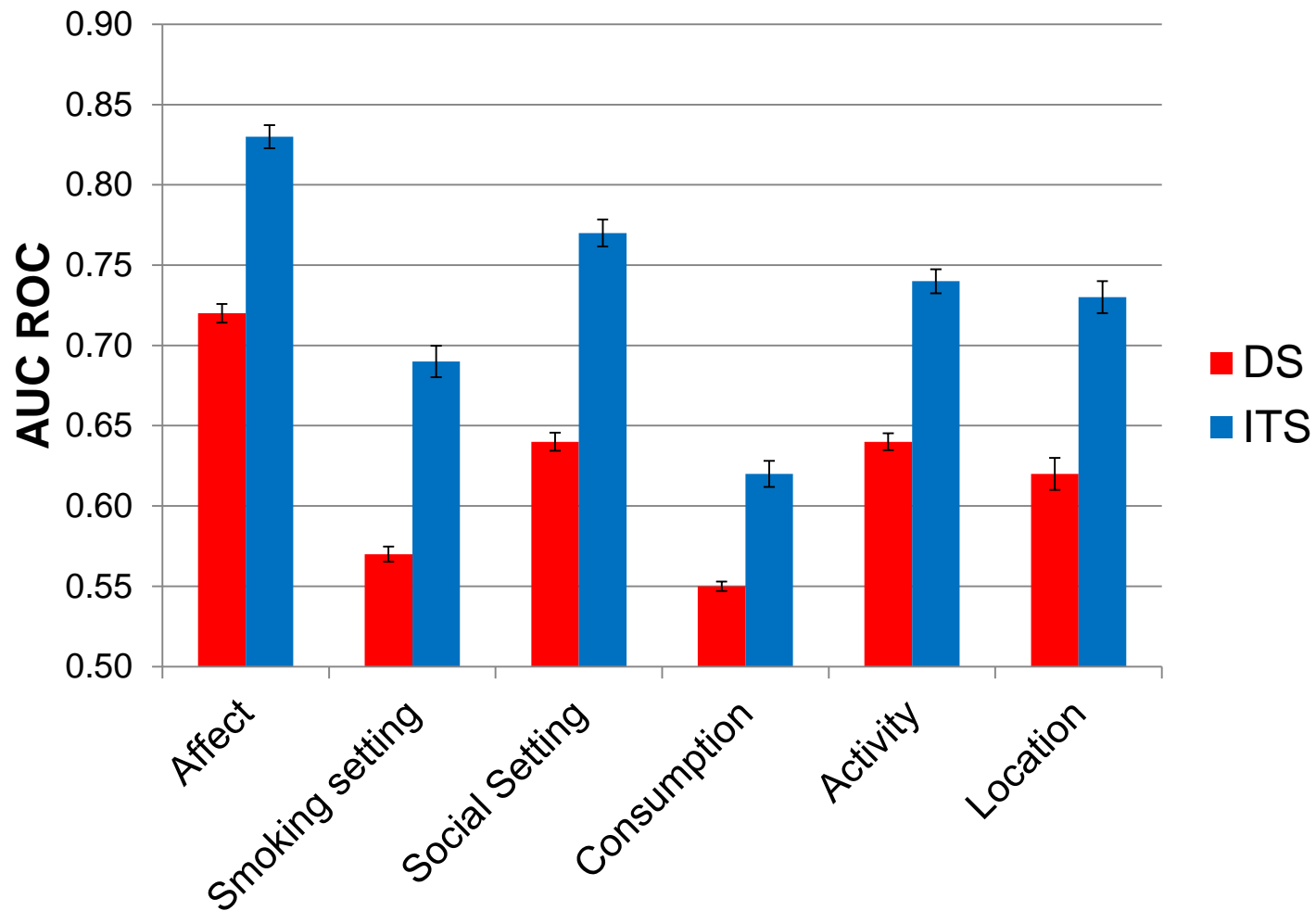
- Analyses by stimulus focus on stimuli common across subjects
- But stimulus control may be idiographic, differing among individuals; e.g., based on learning history



Idiographic Analyses of Effects of Cue Domains

- For each subject: within-subject idiographic analyses predicting smoking from sets of cues (domains)
- Analysis by domains allows idiographic variations in which cues influence smoking
- Domains
 - Affect: NA, PA, Arousal
 - Smoking setting: others smoking? Allowed?
 - Social setting: alone? Who was present?
 - Consumption: food & drink
 - Activity: Work, leisure, social interaction, etc
 - Location

Stimulus Control (AUC-ROC) by Situational Domain



Why Do ITS Have Trouble Quitting?

- Not due to 'deprivation' or withdrawal
- Cues elicit strong cravings and/or habitual smoking behavior (due to conditioning?)
- Stimulus control exerts strong influence on behavior, making behavior change difficult

Stimulus Control, Smoking, & Nicotine

- Not ‘nicotine *or* cues’... ‘nicotine and cues’
- Nicotine ..
 - Enhances reinforcement value of paired stimuli
 - Facilitates development of conditioned rewards
 - Facilitates context learning
- Development of strong stimulus control not just a product of normal accidental pairing, but facilitated by nicotine itself

Smoking & Stimulus Control

Stimulus control ...

- Exercises important influence over smoking
- Triggers craving and use
- Creates a kind of dependence
- Plays a key role in relapse
- Requires attention in cessation treatment

Smoking Cessation Basics

- Nicotine withdrawal motivates smoking, drains motivation
- Smokers typically experience frequent temptations to smoke
- Temptations associated with particular stimulus situations
- Temptations too-often lead to smoking lapses
- If one can prevent lapses, one prevents relapse
- So, smoking cessation treatment aims to:
- Treat/minimize nicotine withdrawal
- Prevent temptations
 - Stimulus control
- Prevent lapses during temptations
 - Coping
- Maintain motivation
 - To power all of the above

Smoking Cessation Basics... for ITS

Strong situational focus

- ~~Nicotine withdrawal motivates smoking, drains motivation~~
- Smokers typically experience frequent temptations to smoke
- Temptations associated with particular stimulus situations
- Temptations too-often lead to smoking lapses
- If one can prevent lapses, one prevents relapse
- So, smoking cessation treatment aims to:
- ~~Treat/minimize nicotine withdrawal~~
- **Prevent temptations**
 - **Stimulus control**
- **Prevent lapses during temptations**
 - **Coping**
- Maintain motivation
 - To power all of the above

Helping ITS Anticipate, Avoid, and Survive Situational Temptations

- Like daily and heavy smokers, but more so
- Anticipation
 - Identify smoking situations/cues – easier for ITS
 - Alcohol and others' smoking almost universal triggers
 - Daily check-in
 - Coping
 - Avoid the situation
 - Bring support
 - Rehearse refusal skills
 - Prepare alternatives
 - Plan coping strategies

Helping ITS Anticipate, Avoid, and Survive Situational Temptations

- Performing coping is key
- Plan, role-play, rehearse... needs to be automatic
- Behavioral
 - Leave! (if only for a while)
 - Eat
 - Don't drink
 - Announce your intentions
 - Get help
- Cognitive
 - Reinforce motivations
 - Craving will pass
 - One *will* hurt
 - Avoid self-punitive thoughts

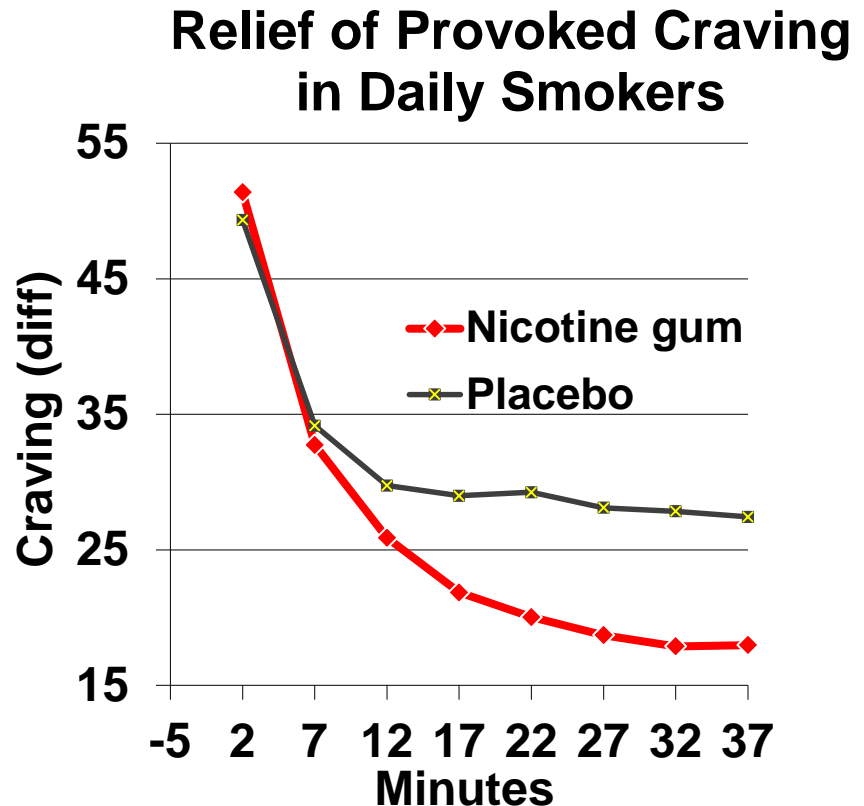
Acute NRT for Situational Use?

- Directions for acute NRT forms (e.g., nicotine gum) emphasize scheduled use to maintain steady-state (gum as patch)
- Scheduled use for steady-state inconsistent with ITS smoking
- Likely result in increased nicotine exposure in treatment
- Can acute use of NRT reduce acute, cue-provoked craving?
- Study*
 - Provoke craving (cue exposure)
 - Chew nicotine gum or placebo (randomized)
 - Track craving reduction

* Sponsored by GlaxoSmithKline, which makes Nicorette nicotine gum

Acute NRT for Situational Use?

- Directions for acute NRT forms (e.g., nicotine gum) emphasize scheduled use to maintain steady-state (gum as patch)
- Scheduled use for steady-state inconsistent with ITS smoking
- Likely result in increased nicotine exposure in treatment
- Can acute use of NRT reduce acute, cue-provoked craving?
- Study*
 - Provoke craving (cue exposure)
 - Chew nicotine gum or placebo (randomized)
 - Track craving reduction



* Sponsored by GlaxoSmithKline, which makes Nicorette nicotine gum

Smoking Cessation Basics... for ITS

Strong situational focus

- ~~Nicotine withdrawal motivates smoking, drains motivation~~
- Smokers typically experience frequent temptations to smoke
- Temptations associated with particular stimulus situations
- Temptations too-often lead to smoking lapses
- If one can prevent lapses, one prevents relapse
- So, smoking cessation treatment aims to:
- ~~Treat/minimize nicotine withdrawal~~
- Prevent temptations
 - Stimulus control.... and strategic situational use of NRT
- Prevent lapses during temptations
 - Coping.... and strategic situational use of NRT
- Maintain motivation
 - To power all of the above

The QuITS Trial

- Randomized, double-blind placebo-controlled trial of the effect of as-needed 2 mg Zonnic* nicotine gum (or placebo) on smoking cessation in ITS
- Use nicotine gum situationally/reactively to prevent/overcome temptations
- Behavioral treatment with a situational focus
 - Anticipate temptations
 - Coping plans to overcome temptations
- Results:

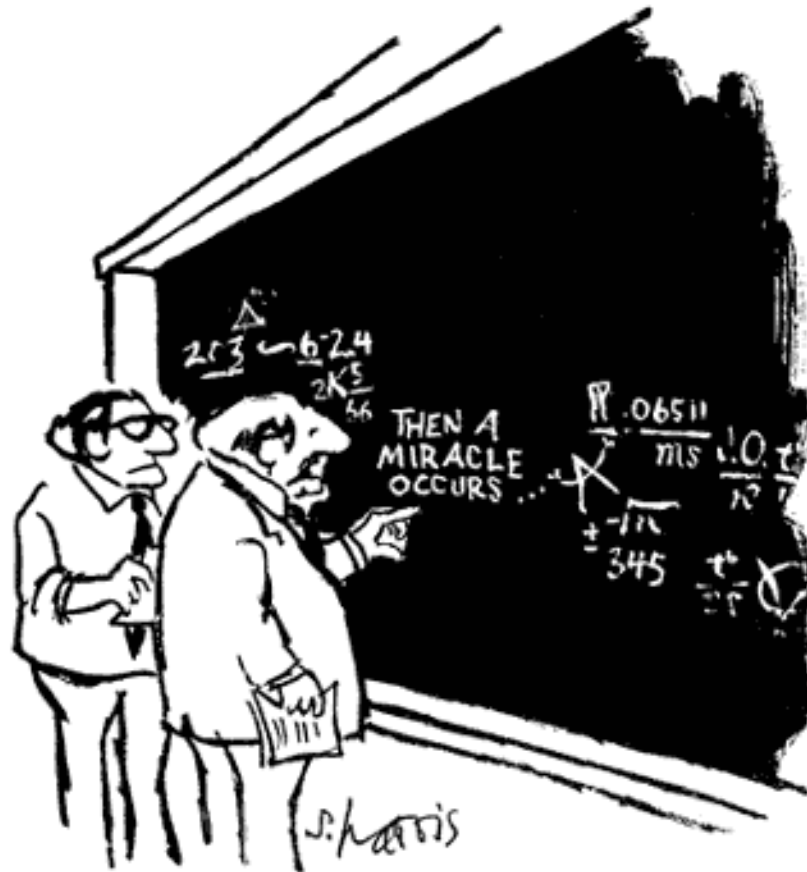
* Donated by Nicovum, which otherwise had no role in the NIH-funded study

The QuITS Trial

- Randomized, double-blind placebo-controlled trial of the effect of as-needed 2 mg Zonnic* nicotine gum (or placebo) on smoking cessation in ITS
- Use nicotine gum situationally/reactively to prevent/overcome temptations
- Behavioral treatment with a situational focus
 - Anticipate temptations
 - Coping plans to overcome temptations
- Results: Stay tuned.....

* Donated by Nicovum, which otherwise had no role in the NIH-funded study

Some Work Left To Do....



"I think you should be more explicit here in step two."

Q&A

- Submit questions via the **chat box**



CME/CEU Statement

Accreditation:

The University of California, San Francisco (UCSF) School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

UCSF designates this live activity for a maximum of *1.0 AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the webinar activity.

Advance Practice Registered Nurses and Registered Nurses: For the purpose of recertification, the American Nurses Credentialing Center accepts *AMA PRA Category 1 Credit™* issued by organizations accredited by the ACCME.

Physician Assistants: The National Commission on Certification of Physician Assistants (NCCPA) states that the *AMA PRA Category 1 Credit™* are acceptable for continuing medical education requirements for recertification.

California Pharmacists: The California Board of Pharmacy accepts as continuing professional education those courses that meet the standard of relevance to pharmacy practice and have been approved for *AMA PRA category 1 Credit™*. If you are a pharmacist in another state, you should check with your state board for approval of this credit.

California Marriage & Family Therapists: University of California, San Francisco School of Medicine (UCSF) is approved by the California Association of Marriage and Family Therapists to sponsor continuing education for behavioral health providers. UCSF maintains responsibility for this program/course and its content.

Course meets the qualifications for 1.0 hour of continuing education credit for **LMFTs, LCSWs, LPCCs, and/or LEPs** as required by the California Board of Behavioral Sciences.

Respiratory Therapists: This program has been approved for a maximum of 1.0 contact hour Continuing Respiratory Care Education (CRCE) credit by the American Association for Respiratory Care, 9425 N. MacArthur Blvd. Suite 100 Irving TX 75063, Course # 180420000.

California Behavioral Health & Wellness Initiative

For our CA residents, we are starting a new venture in CA helping behavioral health organizations go tobacco free and integrating cessation services into existing services thanks to the support of the CTCP.

Free CME/CEUs will be available for all eligible California providers, who joined this live activity. You will receive a separate post-webinar email with instructions to claim credit.

Visit CABHWI.ucsf.edu for more information.

American Association for Respiratory Care (AARC)



- Free Continuing Respiratory Care Education credits (CRCEs) are available to Respiratory Therapists who attend this live webinar
- Instructions on how to claim credit will be included in our post-webinar email

New Behavioral Health Accreditation

California Association of Marriage and Family Therapists (CAMFT)

This webinar is accredited through the CAMFT for up to **1.0 CEUs** for the following eligible California providers:

- Licensed Marriage and Family Therapists (LMFTs)
- Licensed Clinical Social Workers (LCSWs)
- Licensed Professional Clinical Counselors (LPCCs)
- Licensed Educational Psychologists (LEPs)

Instructions to claim credit for these CEU opportunities will be included in the post-webinar email and posted to our website.

Post Webinar Information

- You will receive the webinar recording, presentation slides, information on certificates of attendance, and other resources, in our follow-up email. All of this information will be posted to our website.
- FREE CME/CEUs of up to 1.0 credit are available to all attendees who participate in this live session. Instructions will be emailed after the webinar.

SCLC Recorded Webinar Promotion

SCLC is offering CME/CEUs for our 2016 and 2017 recorded webinar collections for FREE. Each collection includes up to 14 CEUs and up to 10 webinars!

Visit SCLC's website at:

<https://smokingcessationleadership.ucsf.edu/celebrating-15-years>
for more information.

Contact us for technical assistance

- Visit us online at smokingcessationleadership.ucsf.edu
- Call us toll-free at **877-509-3786**
- Please complete the post-webinar survey

UCSF

University of California
San Francisco