



EMERGING ISSUES IN SMOKING CESSATION

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Faculty/Presenter Disclosure

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Disclosure of Commercial Support

- **None**
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Mitigating Potential Bias

Evidence-based, best practice approaches to addressing nicotine addiction will be presented.

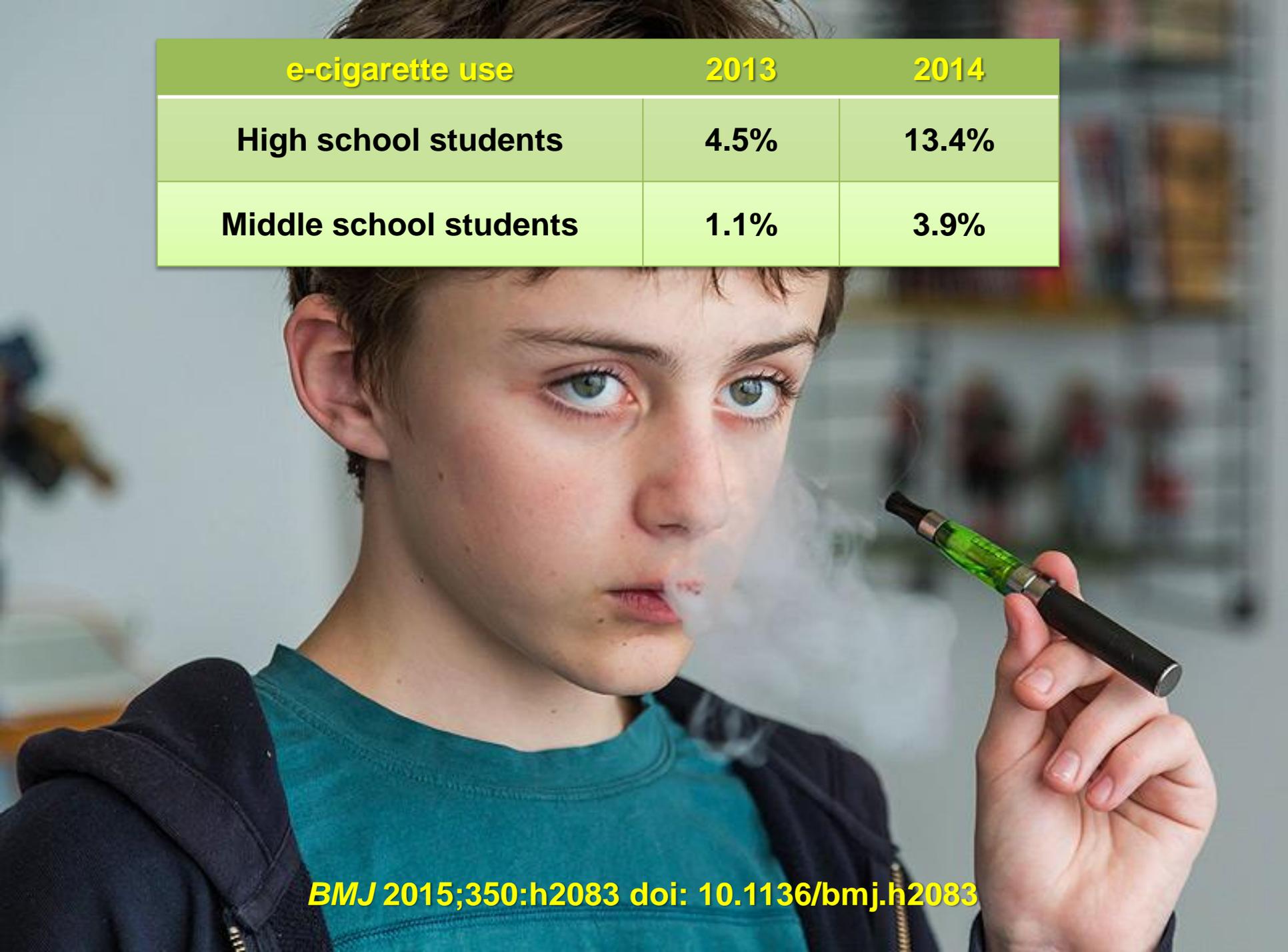


*Harm reduction potential – Vapour vs. Smoke
Cessation of smoking? Dual-Use?
Tobacco industry – Perpetuation of smoking?
Initiation of smoking? – Adolescents?*



The E-cigarette.

e-cigarette use	2013	2014
High school students	4.5%	13.4%
Middle school students	1.1%	3.9%



BMJ 2015;350:h2083 doi: 10.1136/bmj.h2083

WHY QUIT? SWITCH TO BLU

blu is the smart choice for smokers wanting a change. Take back your freedom to smoke when and where you want without ash or smell.

blu is everything you enjoy about smoking and nothing else.

Nobody likes a quitter, so make the switch today.

Visit blucigs.com



* New blu Smart Pack





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How Megan Can...

Smoke Anywhere

[Learn More](#)



New Smoking Technology Featured On:



Wild Candy Flavors GUMMY BEARS





**THE COCHRANE
COLLABORATION®**

Electronic cigarettes for smoking cessation and reduction (Review)

McRobbie H, Bullen C, Hartmann-Boyce J, Hajek P

Citation: McRobbie H, Bullen C, Hartmann-Boyce J, Hajek P. Electronic cigarettes for smoking cessation and reduction. *Cochrane Database of Systematic Reviews* 2014, Issue 12. Art. No.: CD010216. DOI: 10.1002/14651858.CD010216.pub2.



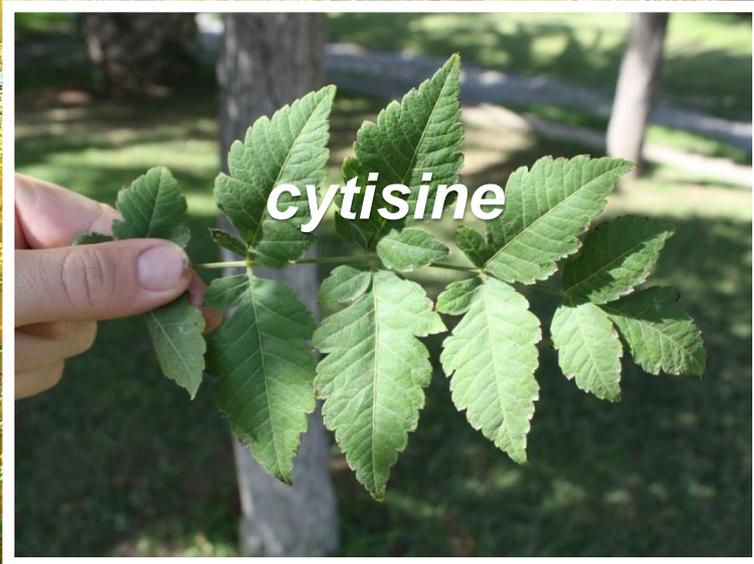
Review

Electronic Cigarettes for Smoking Cessation: A Systematic Review

**Muhannad Malas MPH¹, Jan van der Tempel MPhil², Robert Schwartz PhD³,
Alexa Minichiello MScPI⁴, Clayton Lightfoot BA⁴, Aliya Noormohamed MSPH⁵,
Jaklyn Andrews MA⁴, Laurie Zawertailo PhD⁵, Roberta Ferrence PhD⁶**

In accordance with the GRADE system, the quality of the evidence in support of e-cigarettes' effectiveness in helping smokers quit was assessed as very low to low, and the evidence on smoking reduction was assessed as very low to moderate.

While inconclusive due to low quality, overall the existing literature suggests e-cigarettes may be helpful for some smokers for quitting or reducing smoking.



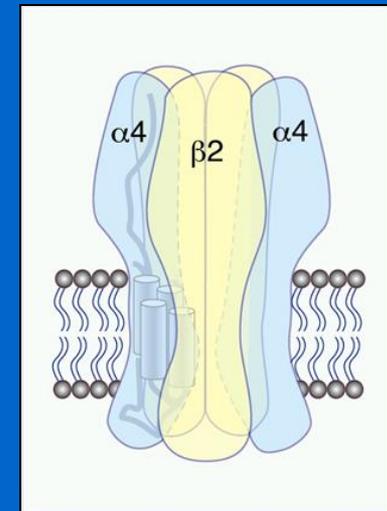
cytisine

Golden Rain

Varenicline



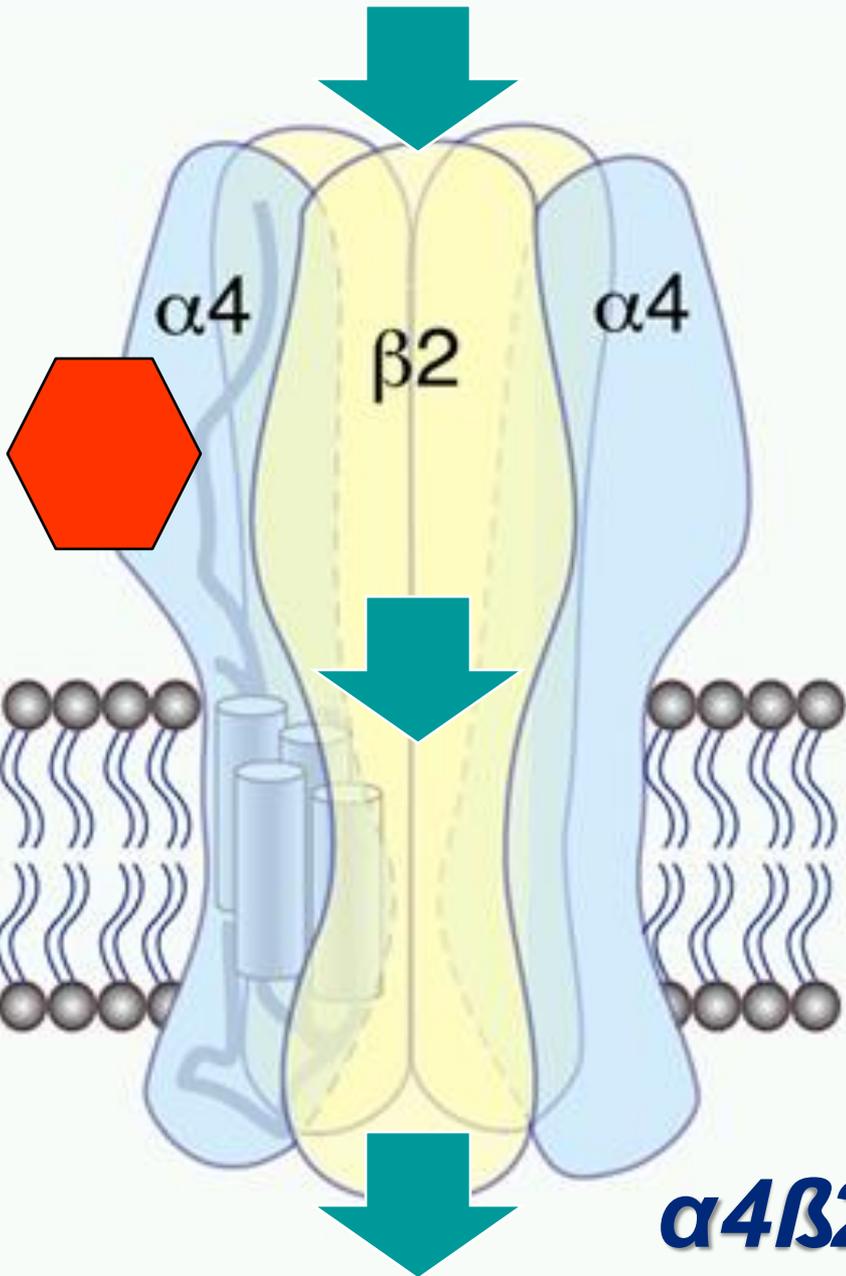
Varenicline →



$\alpha 4 \beta 2$ receptor

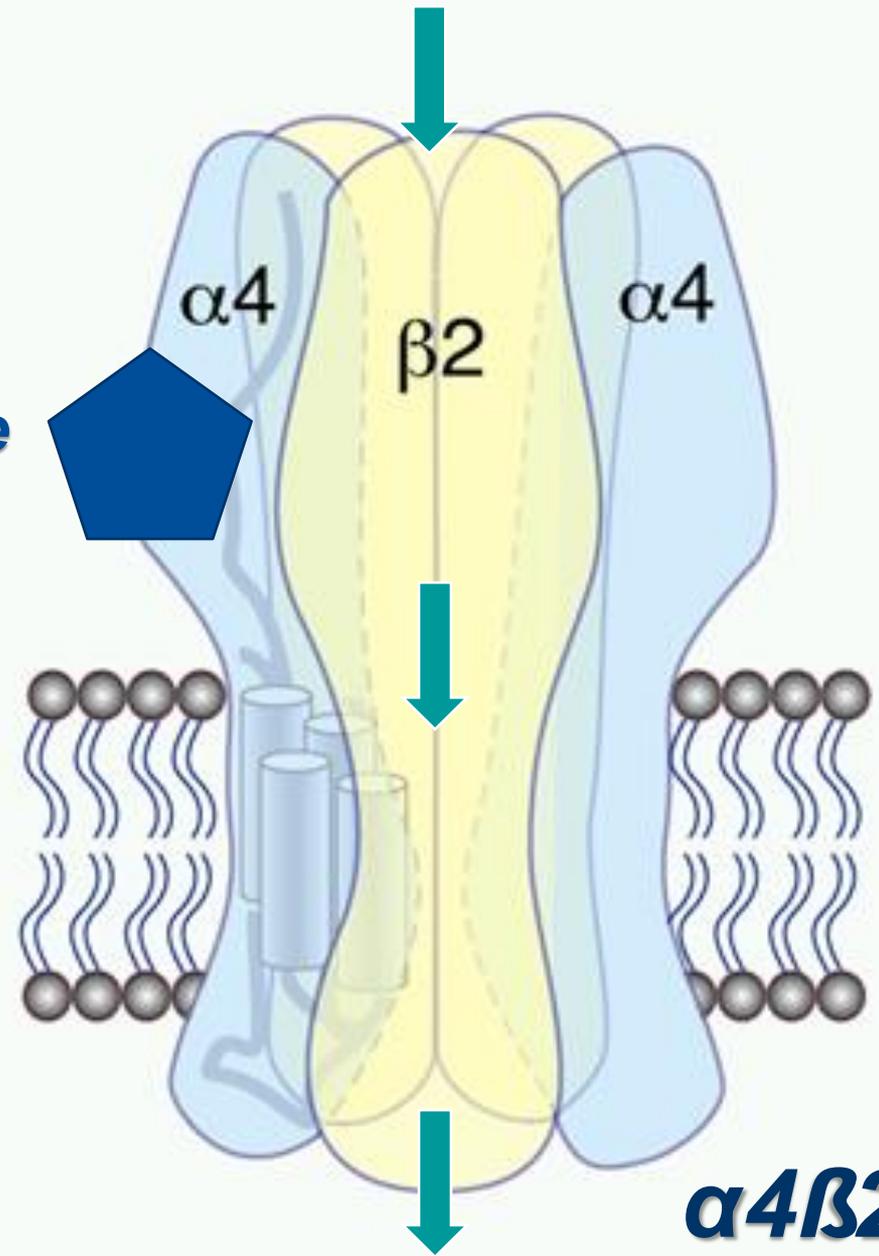
Influences neurotransmitters and receptors
Addresses the neurochemistry of addiction

NICOTINE

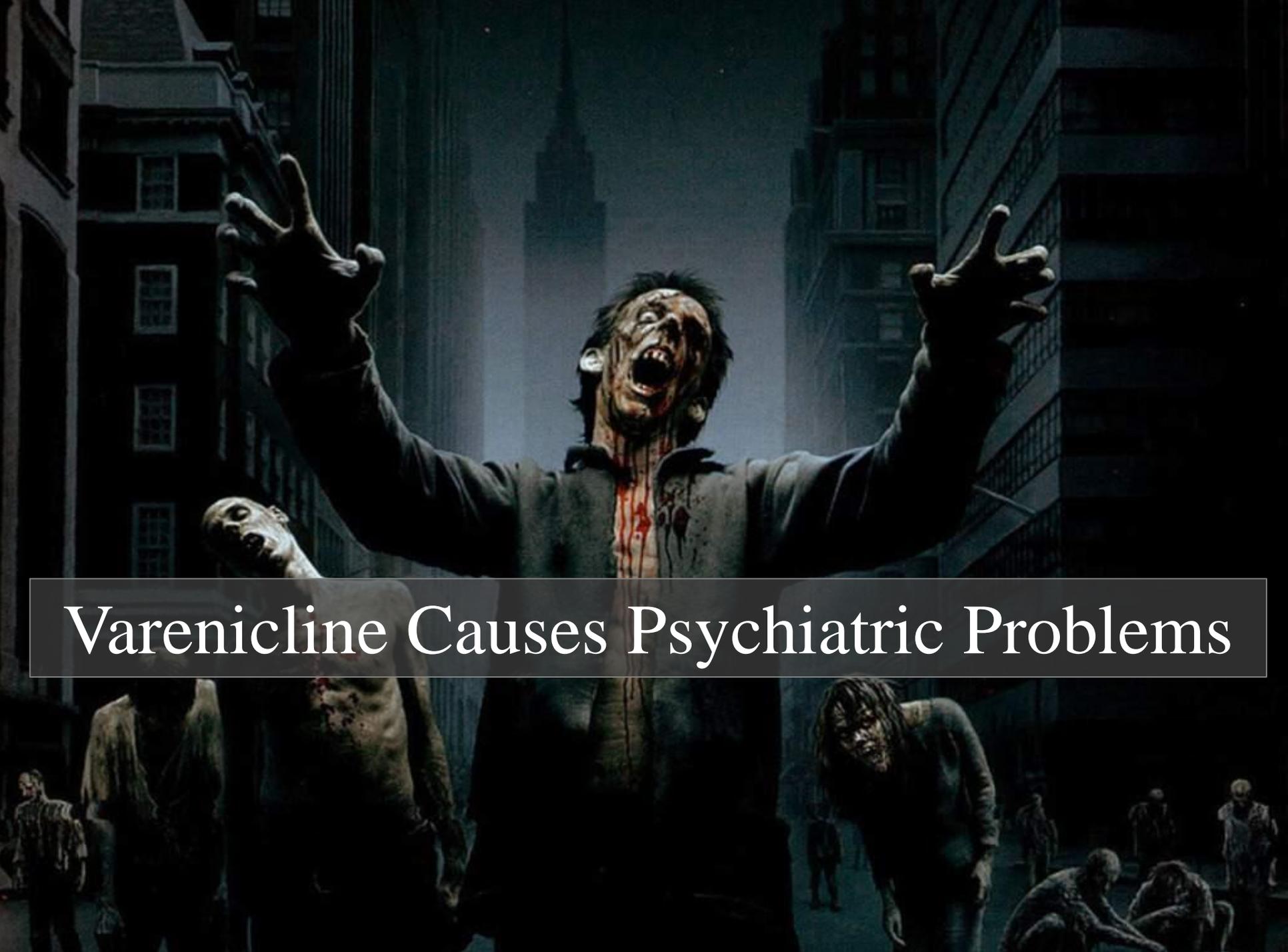


$\alpha 4 \beta 2$ receptor

Varenicline



$\alpha 4 \beta 2$ receptor

A dark, horror-themed image depicting a zombie in a city street. The central figure is a zombie with a grotesque, bloody face, wide-open mouth in a scream, and arms raised in a gesture of agony or rage. He is wearing a dark jacket with blood splatters. In the background, other zombies are visible, some crouching and others standing, amidst tall, dark buildings under a gloomy sky. The overall atmosphere is one of intense horror and despair.

Varenicline Causes Psychiatric Problems



Systematic studies do not support the view that varenicline causes neuropsychiatric side effects other than sleep disturbance and vivid dreams.

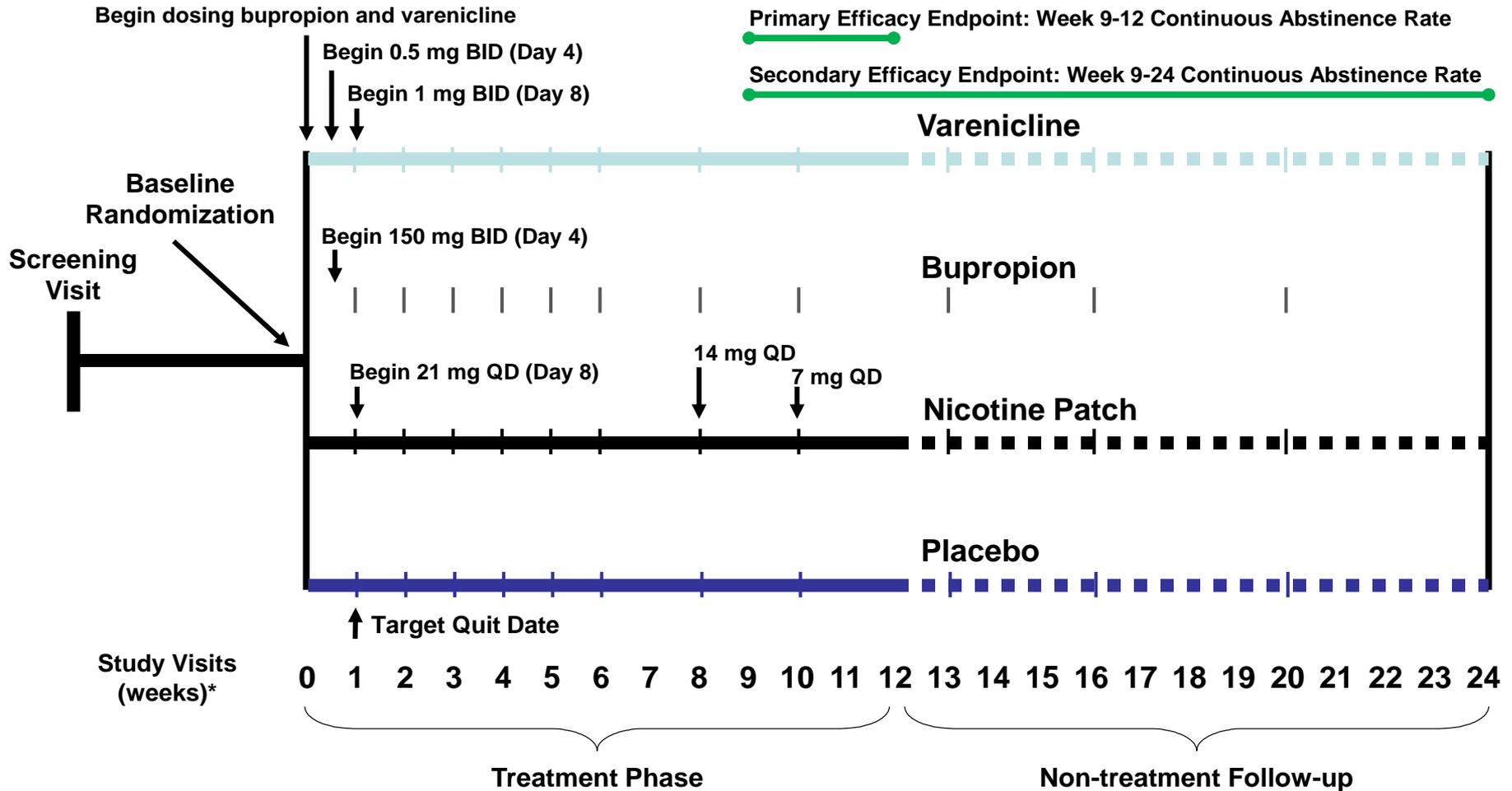
Expert Opin Pharmacother 2011;12(11):1799-1812

“EAGLES”



'EAGLES' – Study Design

8000 subjects: 4000 Psychiatric. 4000 Non-Psychiatric.



* Up to 15 face-to-face visits and 11 telephone visits

Anthenelli RM, Benowitz NL, West R, et al. Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial. *Lancet* 2016 Apr 22. [Epub ahead of print]

'EAGLES': Severe-Only NPS AEs

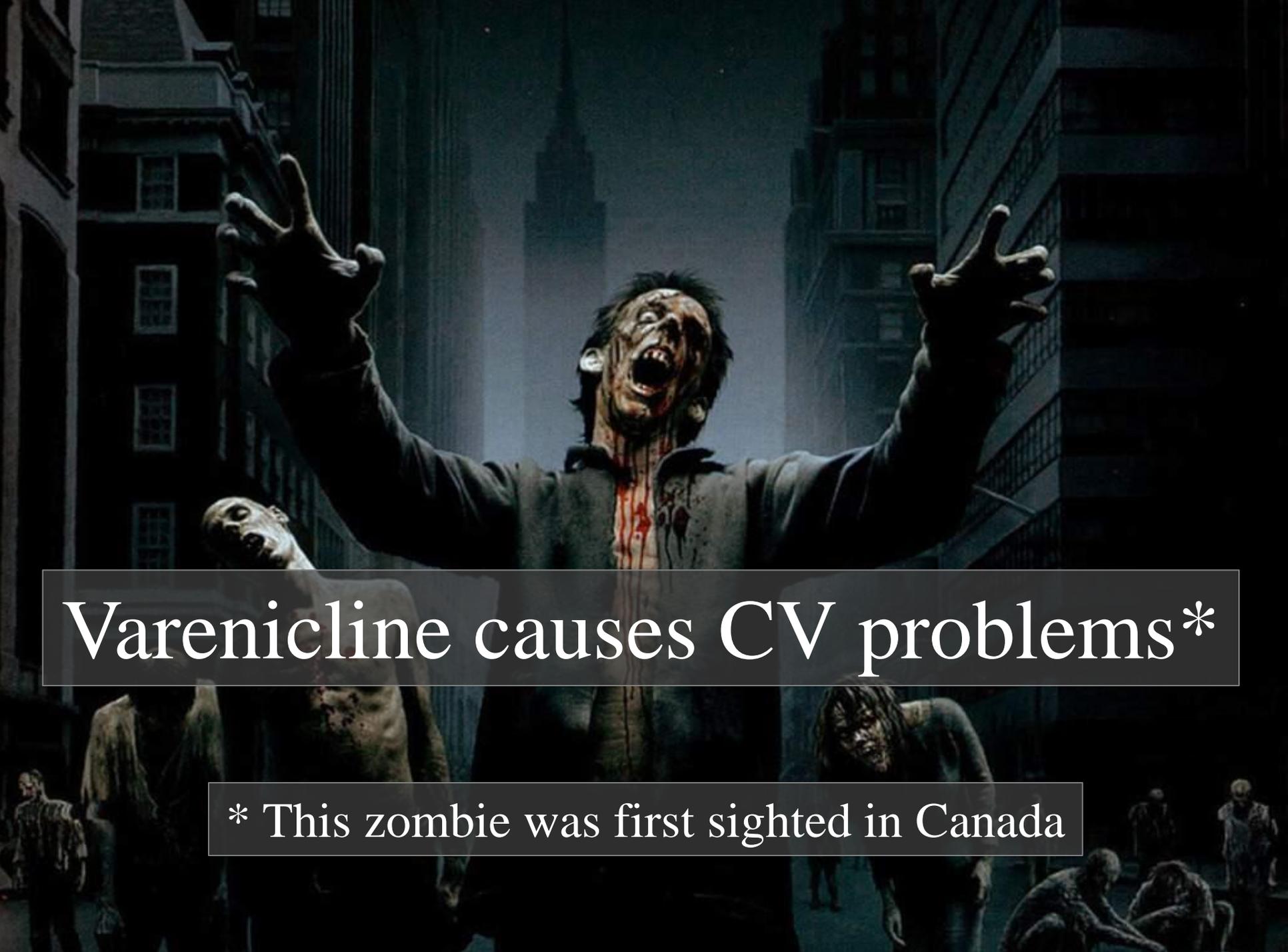
		Varenicline	Bupropion	NRT	Placebo
Non-Psychiatric	Cohort, N	990	989	1006	999
NPS AE Endpoint, total, n (%)		13 (1.3%)	22 (2.2%)	25 (2.5%)	24 (2.4%)
Severe-only, n (%)		1 (0.1%)	4 (0.4%)	3 (0.3%)	5 (0.5%)
Psychiatric	Cohort, N	1026	1017	1016	1015
NPS AE Endpoint, total, n (%)		67 (6.5%)	68 (6.7%)	53 (5.2%)	50 (4.9%)
Severe-only, n (%)		14 (1.4%)	14 (1.4%)	14 (1.4%)	13 (1.3%)

Anthenelli RM, Benowitz NL, West R, et al. Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial. *Lancet* 2016 Apr 22. [Epub ahead of print]

Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial

Robert M Anthenelli, Neal L Benowitz, Robert West, Lisa St Aubin, Thomas McRae, David Lawrence, John Ascher, Cristina Russ, Alok Krishen, A Eden Evins

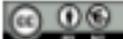
“The study did not show a significant increase in neuropsychiatric adverse events attributable to varenicline or placebo relative to nicotine patch or placebo. Varenicline was more effective than placebo, nicotine patch, and bupropion in helping smokers achieve abstinence, whereas bupropion and nicotine patch were more effective than placebo.”

A zombie with a bloody, screaming face and outstretched arms stands in the center of a dark, foggy city street. Other zombies are visible in the background, some crawling and some standing. The scene is dimly lit, with a blueish-grey color palette.

Varenicline causes CV problems*

* This zombie was first sighted in Canada

RESEARCH

Risk of cardiovascular serious adverse events associated with varenicline use for tobacco cessation: systematic review and meta-analysis OPEN ACCESSJudith J Prochaska *associate professor*¹, Joan F Hilton *professor*²¹Department of Psychiatry and Center for Tobacco Control Research and Education, University of California, San Francisco, CA 94143-0984;²Department of Epidemiology and Biostatistics, University of California



Meta-analysis of all published, randomised controlled trials found no significant increase in cardiovascular serious adverse events associated with varenicline use.

Cardiovascular Events Associated With Smoking Cessation Pharmacotherapies: A Network Meta-Analysis

Mills EJ et al. *Circulation* 2014;129:28-41

“Smoking cessation therapies do not appear to raise the risk of serious cardiovascular disease events.”



Medication Effectiveness ...

Medication	Number of arms	Estimated odds ratio	% Estimated abstinence rate
Placebo	80	1.0	13.8
Varenicline (2 mg/d)	5	3.1 (2.5-3.8)	33.2 (28.9-37.8)
Nicotine patch	32	1.9 (1.7-2.3)	23.4 (21.3-25.8)
Nicotine gum	15	1.5 (1.2-1.7)	19.0 (16.5-21.9)
Bupropion SR	26	2.0 (1.8-2.2)	24.2 (22.2-26.4)
Patch + Gum (ad lib)	3	3.6 (2.5-5.2)	36.5 (28.6-45.3)
Patch + Bupropion	3	2.5 (1.9-3.4)	28.9 (23.5-35.1)

Treating Tobacco Use and Dependence. Clinical Practice Guideline. US DHHS. 2008.

RESEARCH ARTICLE

Open Access



Combination therapy of varenicline with nicotine replacement therapy is better than varenicline alone: a systematic review and meta-analysis of randomized controlled trials

Ping-Hsun Chang^{1,4†}, Chien-Hsieh Chiang^{1,2,3†}, Wei-Che Ho¹, Pei-Zu Wu¹, Jaw-Shiun Tsai^{1,2*} and Fei-Ran Guo^{1,2*}

Conclusions

The combination therapy of varenicline with NRT is more effective than varenicline alone in smoking cessation. This effect is more evident if pre-cessation treatment of nicotine patch is administered. The adverse events of combination therapy are comparable to varenicline mono-therapy with the exception of skin reactions. Larger RCTs are needed to make more robust conclusions.



Cannabis Sativa

**Marijuana 2017:
*Some Considerations***

CANNABIS USE IN CANADA

Canada has one of the highest rates
of cannabis use in the world.



40%

OF CANADIANS HAVE
USED CANNABIS



10%

OF CANADIANS HAVE
USED CANNABIS IN
THE PAST YEAR



20%

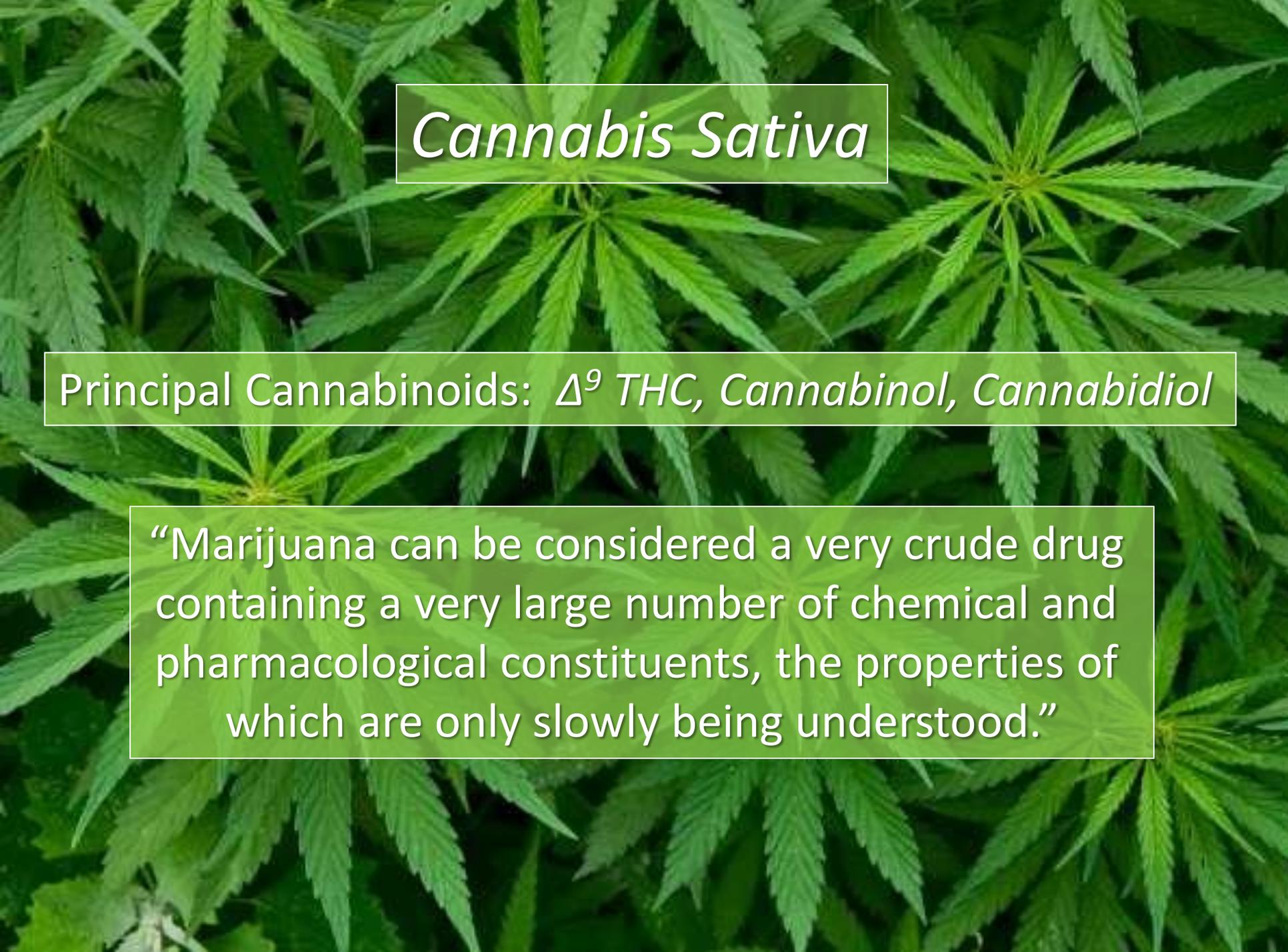
OF CANADIANS
AGED 15-24 YEARS
USED CANNABIS IN
THE PAST YEAR



70%

OF CANADIAN
CANNABIS USERS ARE
AGE 25 OR OLDER





Cannabis Sativa

Principal Cannabinoids: Δ^9 THC, Cannabinol, Cannabidiol

“Marijuana can be considered a very crude drug containing a very large number of chemical and pharmacological constituents, the properties of which are only slowly being understood.”

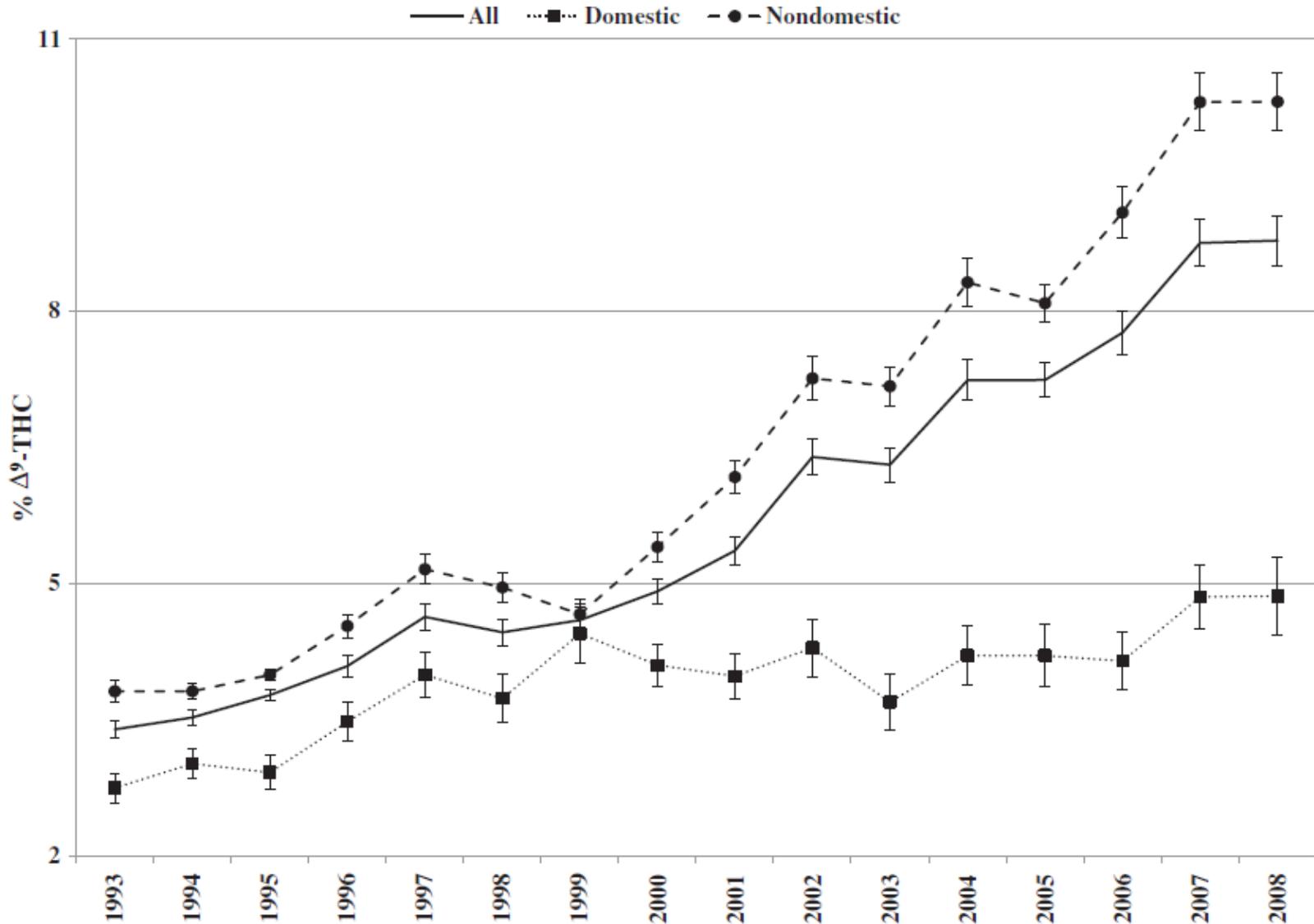


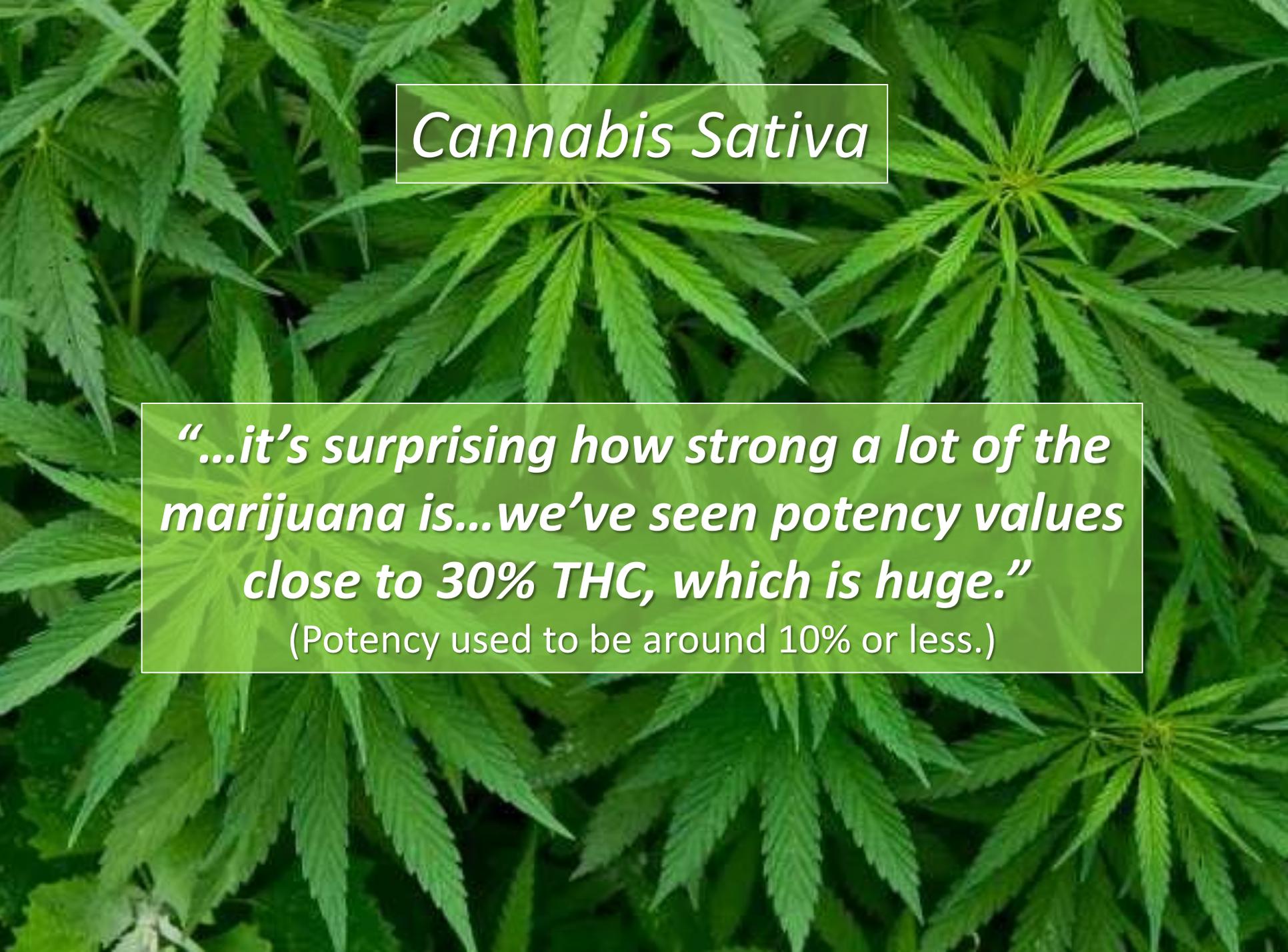
Cannabis Sativa

Pot = leaves of cannabis plant
Hash = resin of cannabis plant

Marijuana can be inhaled or ingested in foodstuffs

Δ^9 -THC concentration of domestic and nondomestic samples with 95% confidence intervals.





Cannabis Sativa

“...it’s surprising how strong a lot of the marijuana is...we’ve seen potency values close to 30% THC, which is huge.”

(Potency used to be around 10% or less.)



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OTTAWA MODEL
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MODÈLE D'OTTAWA
POUR L'ABANDON DU TABAC



University of Ottawa Heart Institute Quit Smoking Programme

Characteristics of Marijuana Users (18% of QSP patients)

56% Male

Average Age 49

Grade 9-11	16%	Working	49%
Grade 12	19%	Unemployed	12%
Some post-secondary	42%	Disability	31%
No response	23%	Retired	7%

Cannabis Sativa

The acute effects of smoking or eating cannabis include euphoria ('high') as well as cardiovascular, bronchopulmonary, ocular, psychological and psychomotor effects.”

“...most reviews note that cannabis use is associated with impaired function on a variety of cognitive and short-term memory tasks.”



Marijuana Ingestion



Edible products do not permit the user to accurately gauge the effect of the dose consumed.

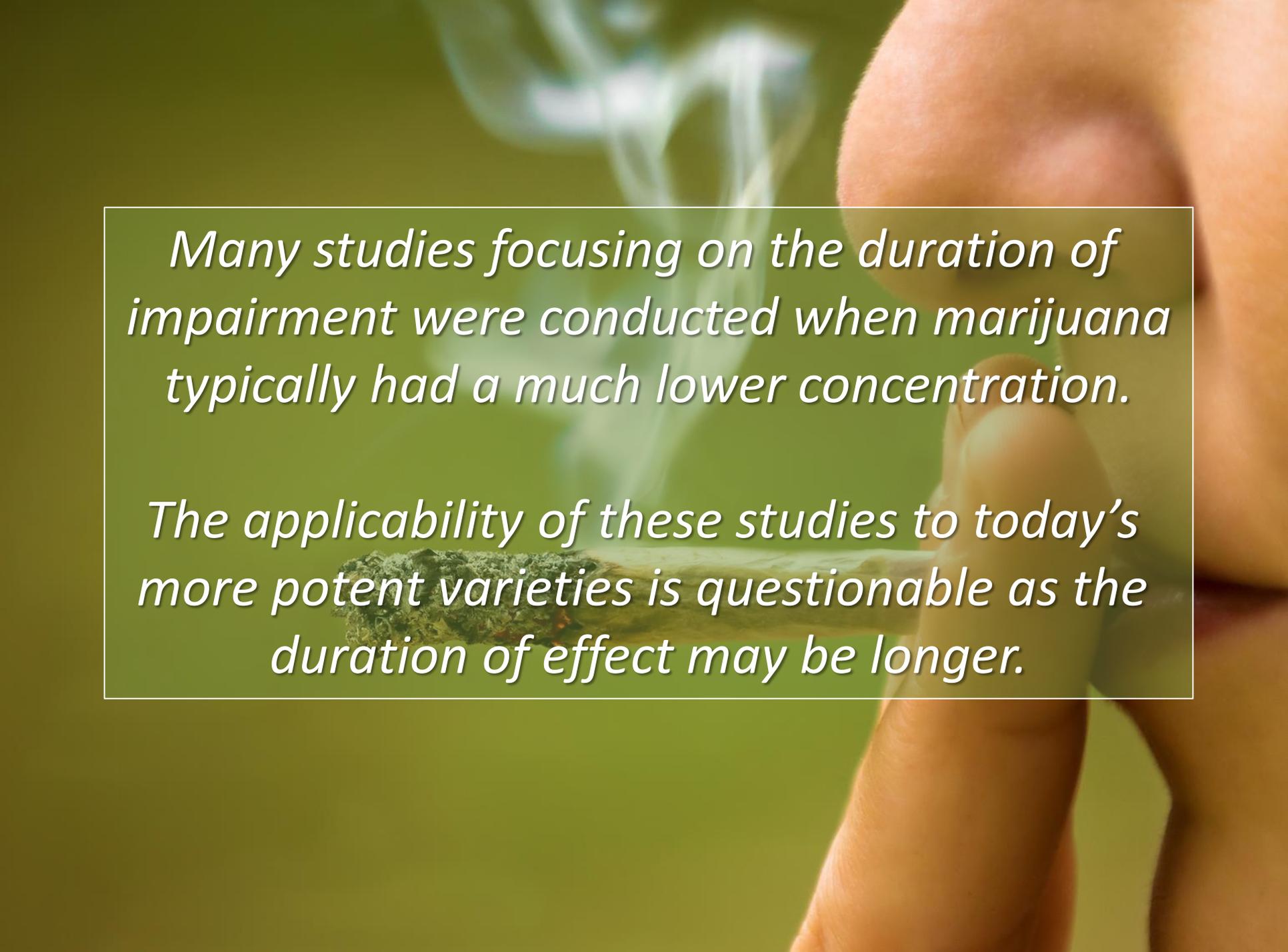
A “high” usually occurs after 30 minutes...but the effects may persist for 5 – 6 hours.

When marijuana products are consumed orally the effects are delayed but their duration is longer.

Users may have difficulty controlling the dose they consume when using edible marijuana products.



Safety Issues in the Workplace

A close-up photograph of a person's mouth and hand holding a lit joint. The person is exhaling a plume of white smoke that rises into the air. The background is a soft, out-of-focus green. The text is overlaid on a semi-transparent white box in the center of the image.

Many studies focusing on the duration of impairment were conducted when marijuana typically had a much lower concentration.

The applicability of these studies to today's more potent varieties is questionable as the duration of effect may be longer.



“Addiction (in about 9% overall, 17% of those who began use in adolescence and 25-50% of daily users).”



MEDICAL MARIJUANA



A non-psychoactive compound in marijuana:

Cannabidiol (CBD)

“...has anti-inflammatory, analgesic, anti-nausea, anti-emetic, anti-psychotic, anti-ischemic, anxiolytic, and anti-epilepsy activities.”

Therefore many potential beneficial properties.

A photograph of a hospital hallway with a gurney in the center, framed by a semi-transparent blue overlay containing text.

***Smoking is a leading
cause of hospitalization and
RE-HOSPITALIZATION***

Public Health Agency of Canada. 2009.

Canadian Institute for Health Information, Health Indicators 2009

“The Ottawa Model”

Identification

Documentation

Counseling

Pharmacotherapy

Long-term follow-up





**KEEP
CALM
AND
BE
SYSTEMATIC**



Primary Care

The **OMSC Primary Care Network** has reached over **83,000** tobacco users in Ontario!

Thunder Bay

Sudbury

Ottawa

Kingston

Toronto

London

83 Partner FHTs, FHNs, CHCs, NPLCs

174 Clinics in 13 LHINS

~ 740 MDs

~ 350 RNs

~ 180 NPs

~ 40 Pharmacists

Potential Reach:

~ **850,000** rostered patients

~ **155,000** tobacco users

~ **2.3 million** visits/year



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OTTAWA MODEL
FOR SMOKING CESSATION
IN PRIMARY CARE
MODÈLE D'OTTAWA
POUR L'ABANDON DU TABAC
EN SOINS PRIMAIRES

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THE 3As: ASK, ADVISE, ACT

30

SECONDS

Reception/ Triage
Nurse

ASK AND DOCUMENT

Include tobacco use question as one of the patient's vital signs

Have you used any form of tobacco in the last 7 days?

2

MINUTES

Physician/Nurse
Practitioner

ADVISE AND REFER

Provide strong, personalized, non-judgmental advice to quit with offer of support

10-20

MINUTES

Smoking Cessation
Counsellor (Nurse, NP,
Pharmacist, RRT)

ACT

For Patient who is **READY TO QUIT**:
QUIT PLAN VISIT

- Strategic counselling
- Pharmacotherapy
- Follow-up/OMSC Smoker's Follow-up Program

For Patient who is **NOT READY TO QUIT**:

- Follow-up/OMSC Smoker's
- Follow-up Program

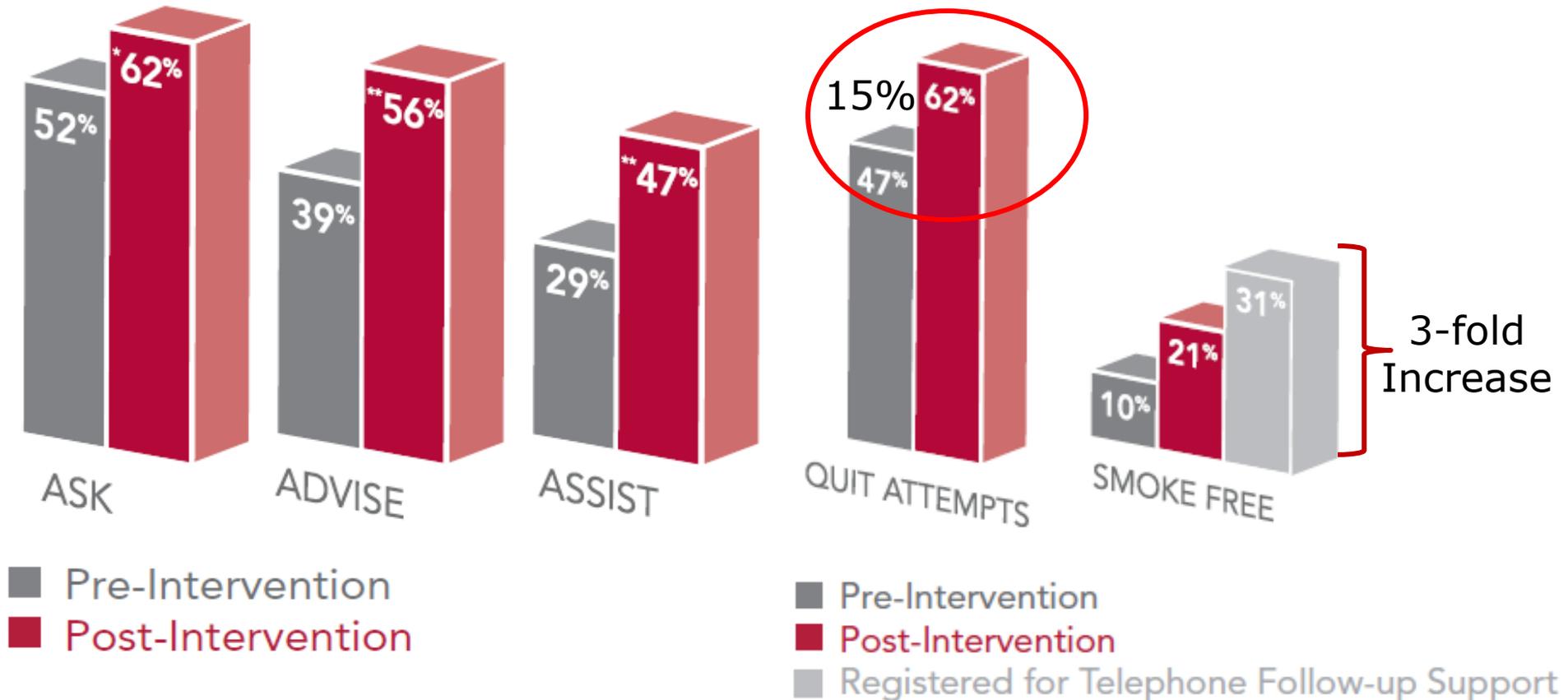


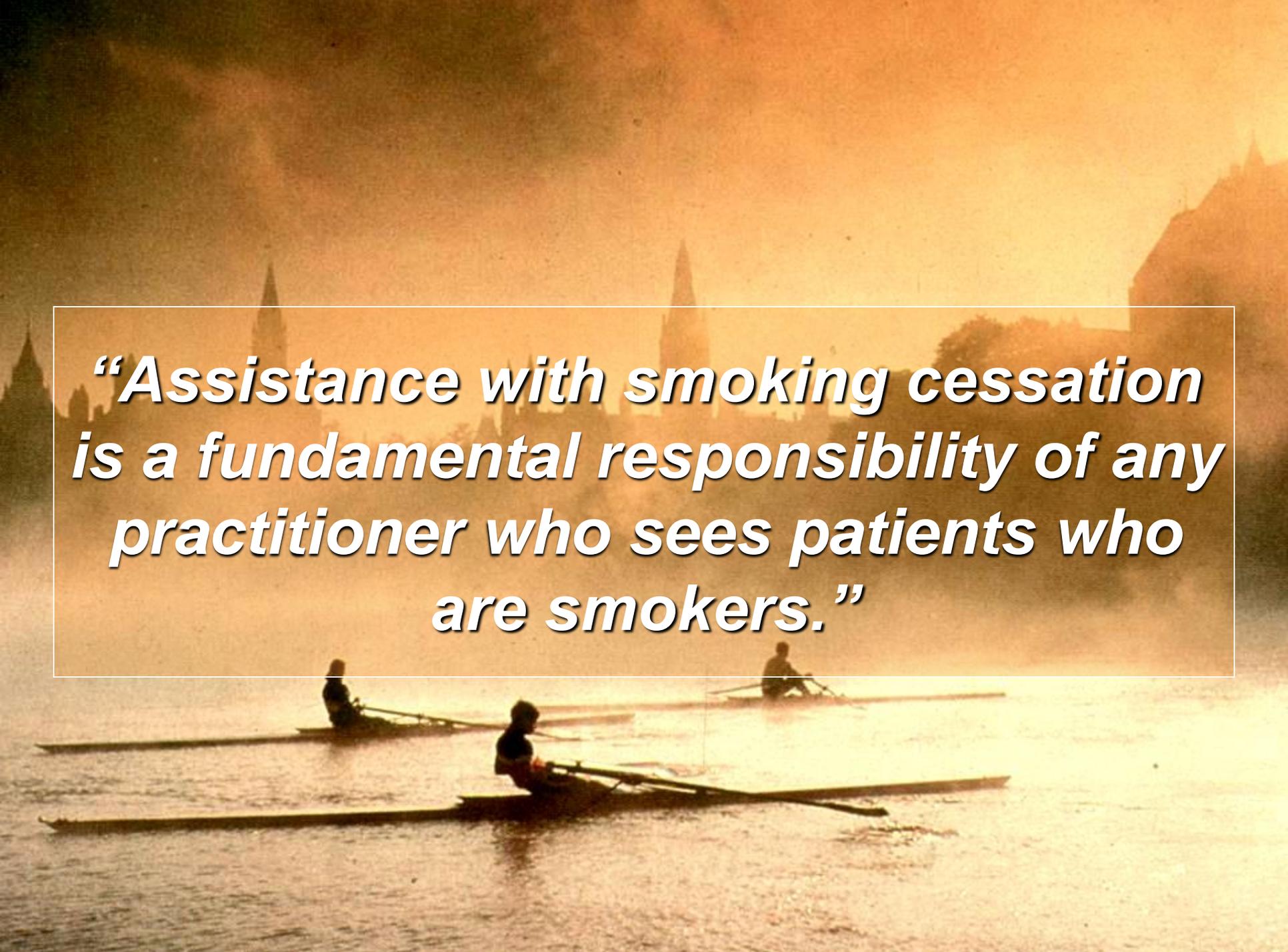
Delivering evidence-based smoking cessation treatment in primary care practice

Experience of Ontario family health teams

Sophia Papadakis MHA PhD Marie Gharib Josh Hambleton MHA Robert D. Reid PhD MBA Roxane Assi Andrew L. Pipe CMMD

Canadian Family Physician • Le Médecin de famille canadien | VOL 60: JULY • JUILLET 2014





“Assistance with smoking cessation is a fundamental responsibility of any practitioner who sees patients who are smokers.”



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Systematic Approaches to Smoking Cessation in EVERY Clinical Setting




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FOR SMOKING CESSATION**
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POUR L'ABANDON DU TABAC**

Contact Information: 613-761-4034
Email: scnetwork@ottawaheart.ca





Smoking Cessation

**The Most Important
Preventive Intervention !**



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Transforming ...



Patient Care

***Professional
Behaviours***

***Institutional
Practices***
