

戒菸輔助用藥介紹及 其依賴性處置

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Smoking Cessation intervention

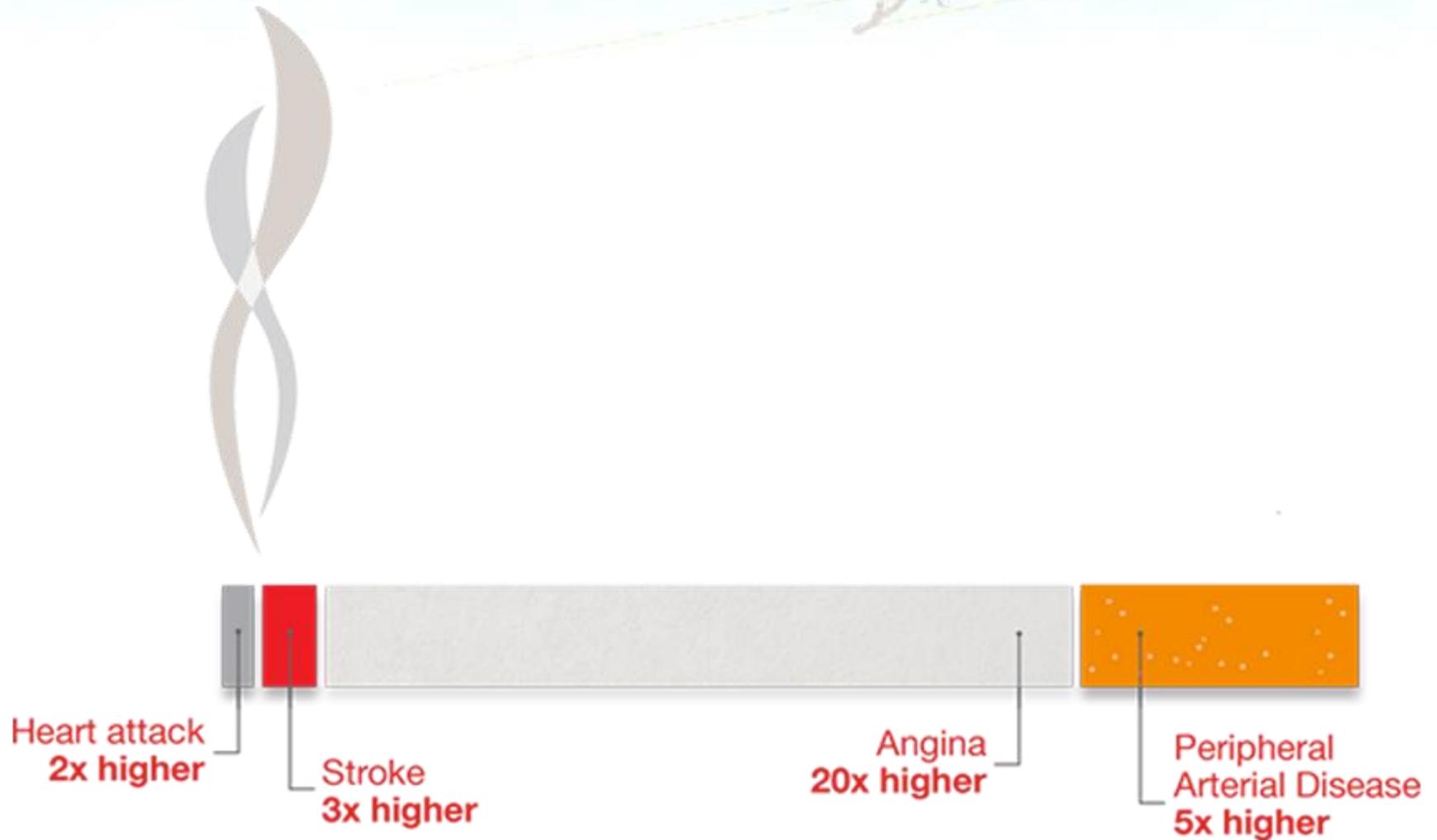
One of the Top 3 Most Important Areas for Focus

- The NCPP highlighted priorities among effective clinical preventive services
- Total score for each service is based on 2 measures: clinically preventable burden and cost-effectiveness (both scored from 1 to 5 points)

<ul style="list-style-type: none">• Tobacco-use screening and intervention for adults• Aspirin chemoprophylaxis for adults• Childhood immunization	Highest Ranking Total Score: 10
<ul style="list-style-type: none">• Colorectal cancer screening• Hypertension screening• Influenza immunization• Pneumococcal immunization• Problem-drinking screening and brief counseling• Vision screening—adults	Total Score: 8
<ul style="list-style-type: none">• Cervical cancer screening• Cholesterol screening	Total Score: 7

Despite having a high ranking, tobacco-use screening and intervention still have low utilization rates.

Smoking and Heart



Cardiovascular risks of smoking

Percentage increase in risk

100%
increase in risk



stroke; coronary
heart disease;
impotence

300%
increase in risk



death from
undiagnosed
coronary heart
disease

more than 300%
increase in risk



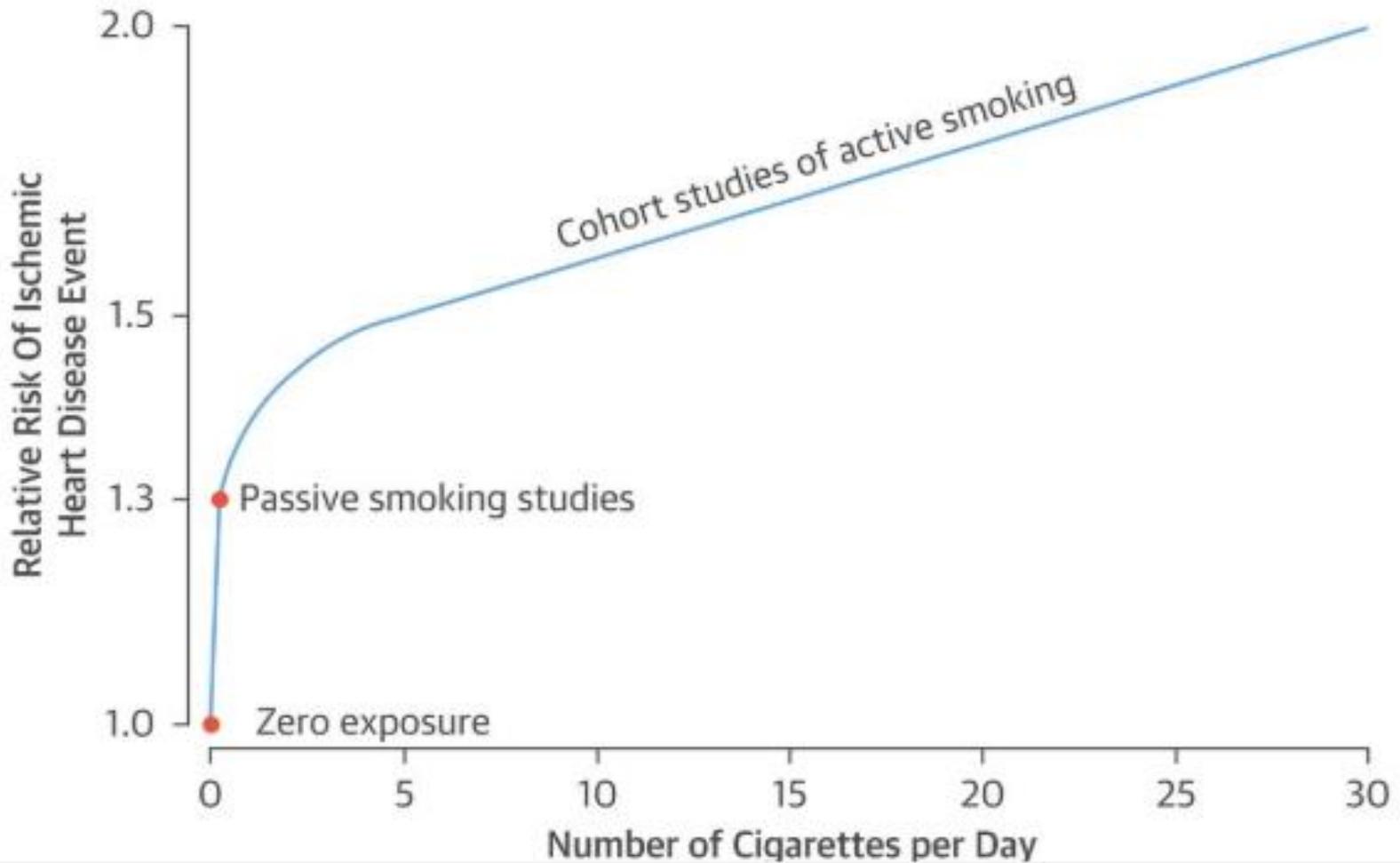
peripheral
arterial
disease

400%
increase in risk

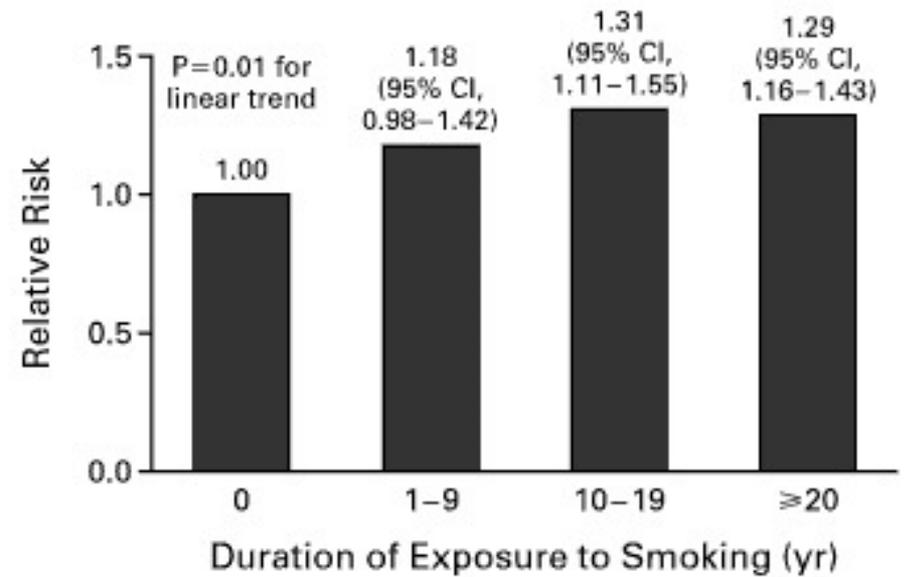
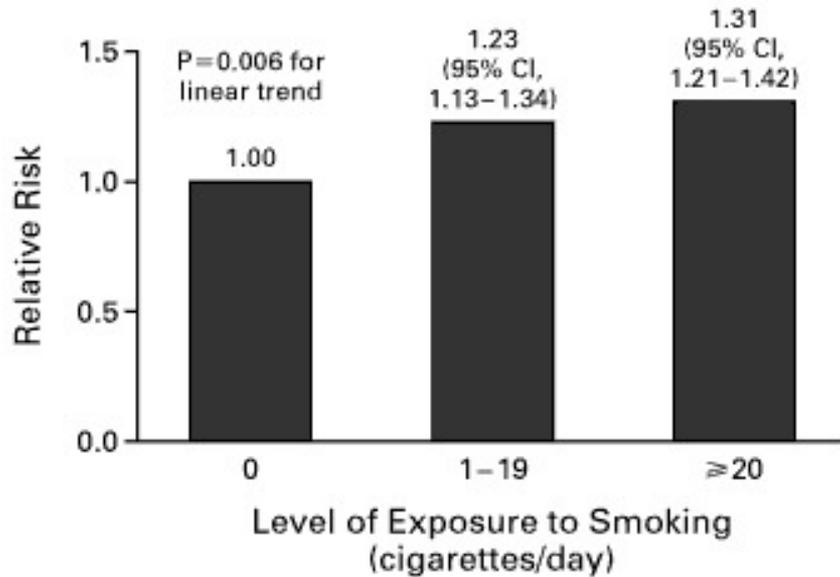


aortic
aneurysm

Dose-Response Relationship Between Cigarette Smoke Exposure and Risk for Ischemic Heart Disease Events



Level and Duration of exposure to smoking

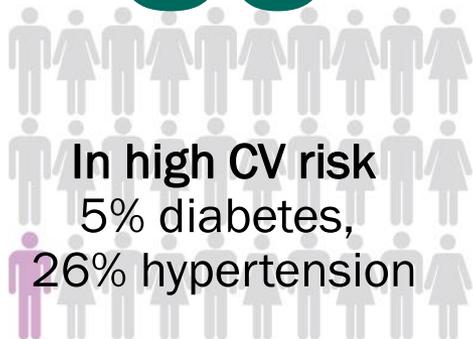


Number needed to treat (NNT) to save 1 life

4S¹

Simvastatin¹
for 5.4 years

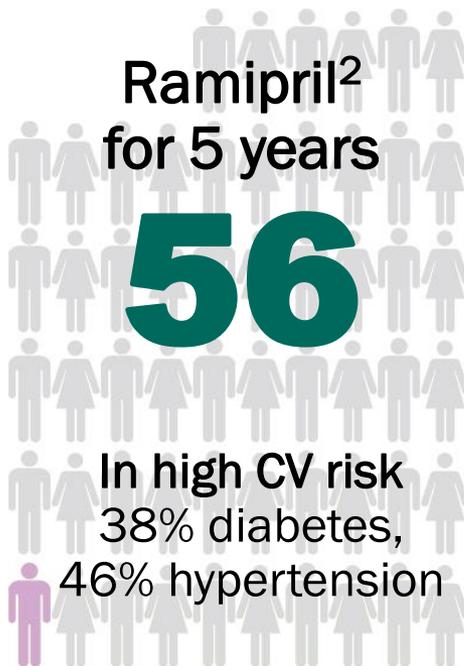
30



HOPE²

Ramipril²
for 5 years

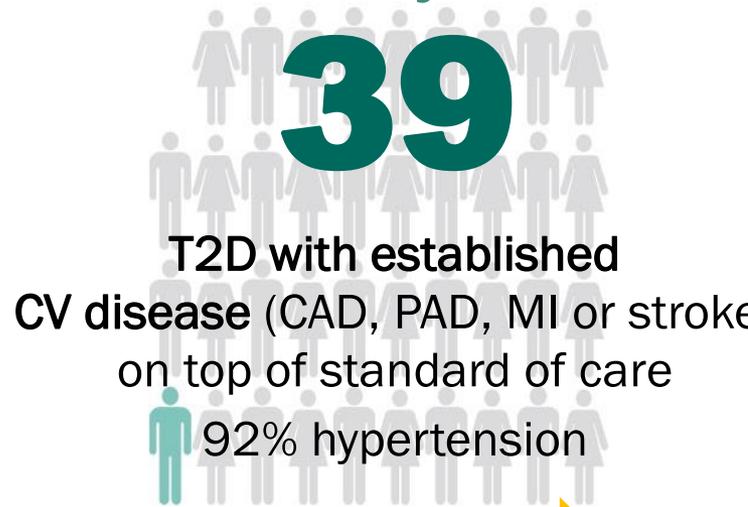
56



EMPA-REG OUTCOME^{®3}

JARDIANCE^{®3}
for 3.1 years

39



Pre-ACEi/ARB
era

> 80% ACEi/ARB

Pre-statin era

<29% statin

> 75% statin

1994

2000

No

4

0

W

Standard of care included low-dose aspirin, antihypertensive, lipid-lowering agents, anticoagulants and glucose-lowering therapies.³ ACEi, angiotensin converting enzyme inhibitor; ARB, angiotensin receptor blockers.

1. 4S investigators. *Lancet* 1994;344:1383-89. 2. HOPE investigators. *N Engl J Med* 2000;342:145-53. 3. Zinman B et al. *N Engl J Med* 2015;373:2117-24

Projected Outcomes of Preventive Interventions

<u>Intervention</u>	<u>Lives Saved</u>	<u>NNT</u>
● Smoking cessation	328,400	9
● Lipid lowering	132,777	34
● BP control	63,282	31
● β -blockers (MI)	17,023	120
● ASA (MI)	10,365	143
● Coumadin (A. fib)	3,418	2,014

Woolf AH. *JAMA* 1999; 282(24):2358-65.



TREATING TOBACCO is a GOLD STANDARD TREATMENT

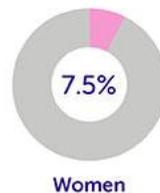
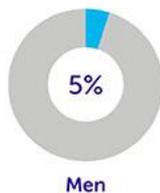
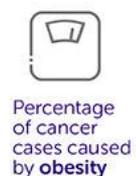
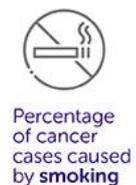
Intervention	Outcome	NNT
Statins	Prevent 1 death over 5 years	107
Aspirin	Prevent 1 MI over 5 years	118
Antihypertensive therapy	Prevent 1 stroke, MI, death over 1 year	700
Cervical cancer screening	Prevent 1 death over 10 years	1140
MD 5 min advice to stop smoking	Prevent 1 premature death	80
+ cessation medication	Prevent 1 premature death	38-56
+ behavioral support	Prevent 1 premature death	16-40

NNT = Number Needed to Treat

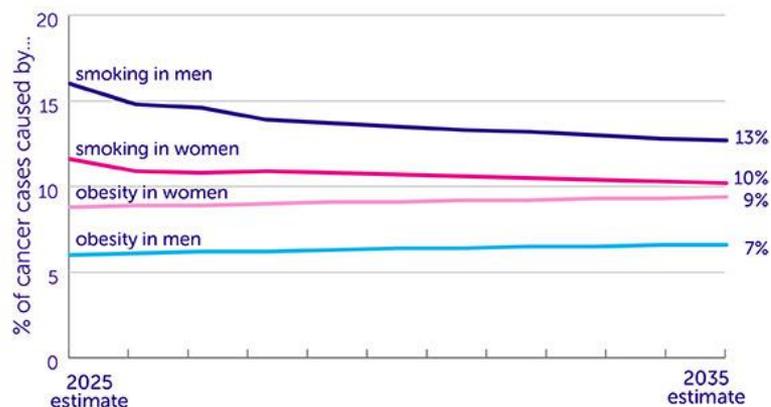
Authorison, 2006, Ann Intern Med; McQuay & Moore, 2006, Bandolier; Gates 2001, Am Fam Phys; Cochrane Reviews by Stead, Bergeson, et al., 2008; Stead, Perera, et al. 2012; Stead & Lancaster, 2012; Cahill et al., 2010; and USPSTF, 2009

When could obesity top smoking as the biggest preventable cause of cancer?

Right now, smoking causes more cancers than obesity in both men and women.



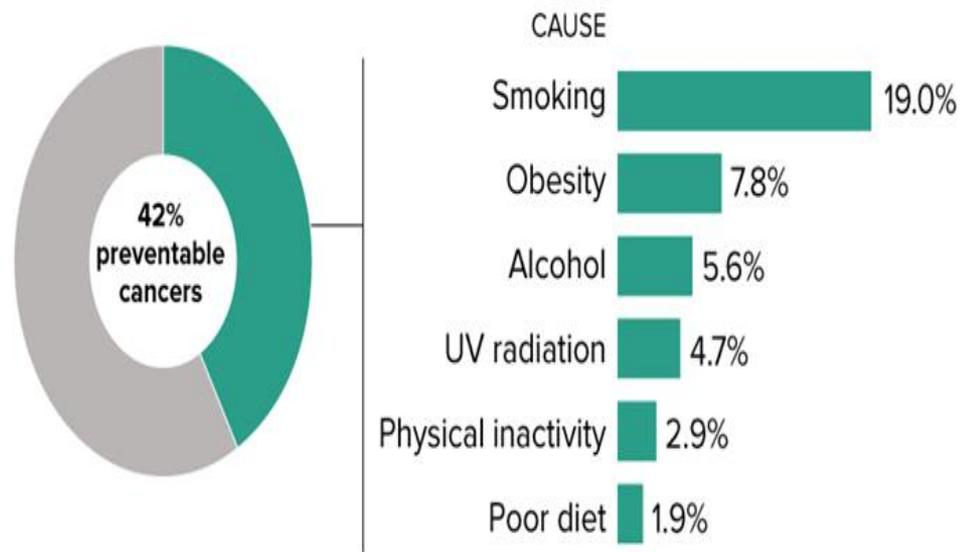
But if current trends continue, the gap will close. And it's happening faster in women than men.



Source of 2014 data: Brown et al, British Journal of Cancer, 2018
 Source of 2025-2035 data: When could overweight and obesity overtake smoking as the biggest cause of cancer in the UK, Cancer Research UK, September 2018

Preventable cancers

More than 40 percent of cancer cases can be prevented, the American Cancer Society finds in a new report. Here is a list of things people can change and their share of cancer cases:



Source: American Cancer Society





#購物優惠情報



Final Fantasy XVI

PS5遊戲2023 12大必玩名單

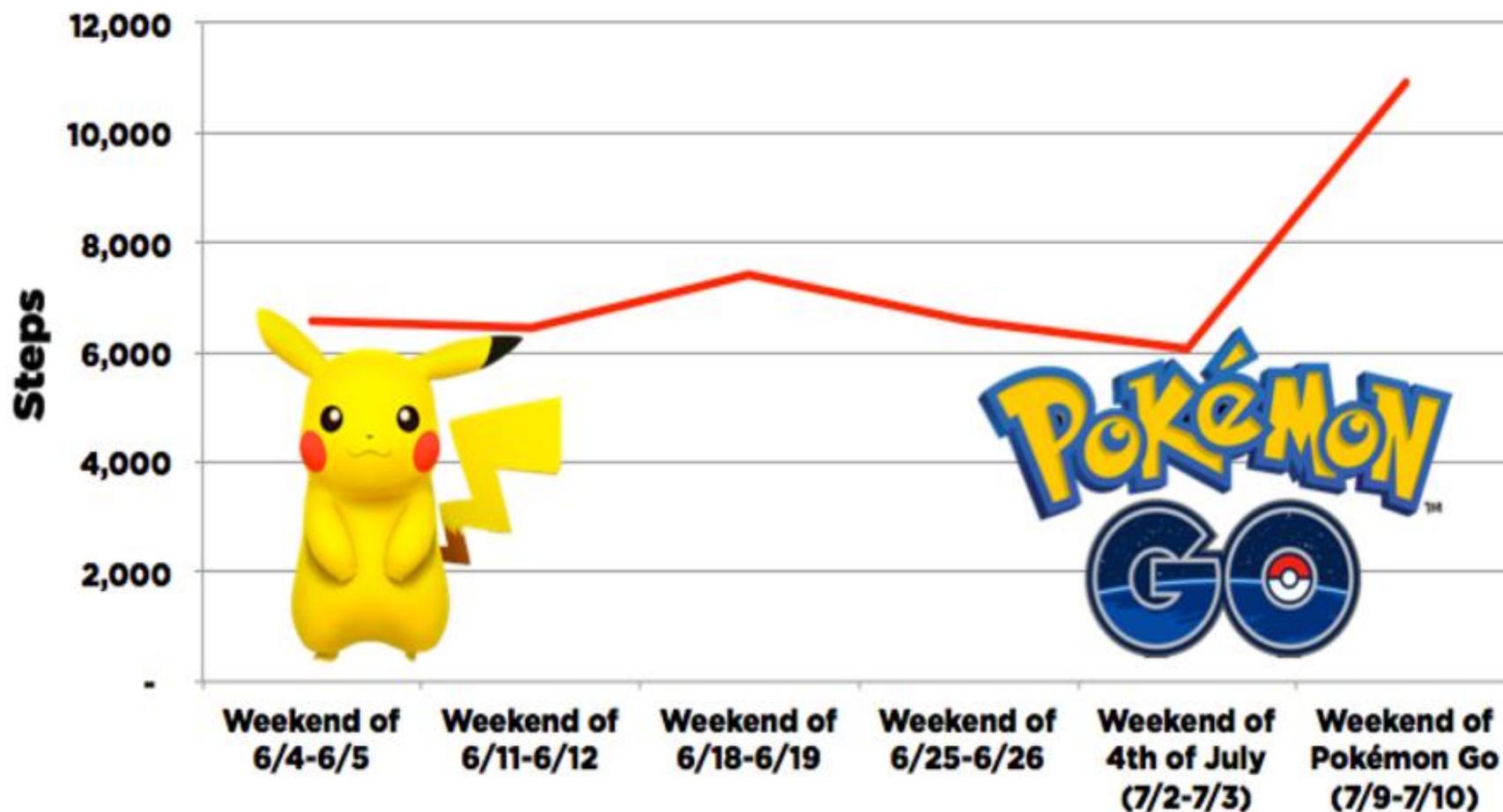
蜘蛛俠、地平線系列新作 + 霍格華茲的傳承

POKÉMON

GO

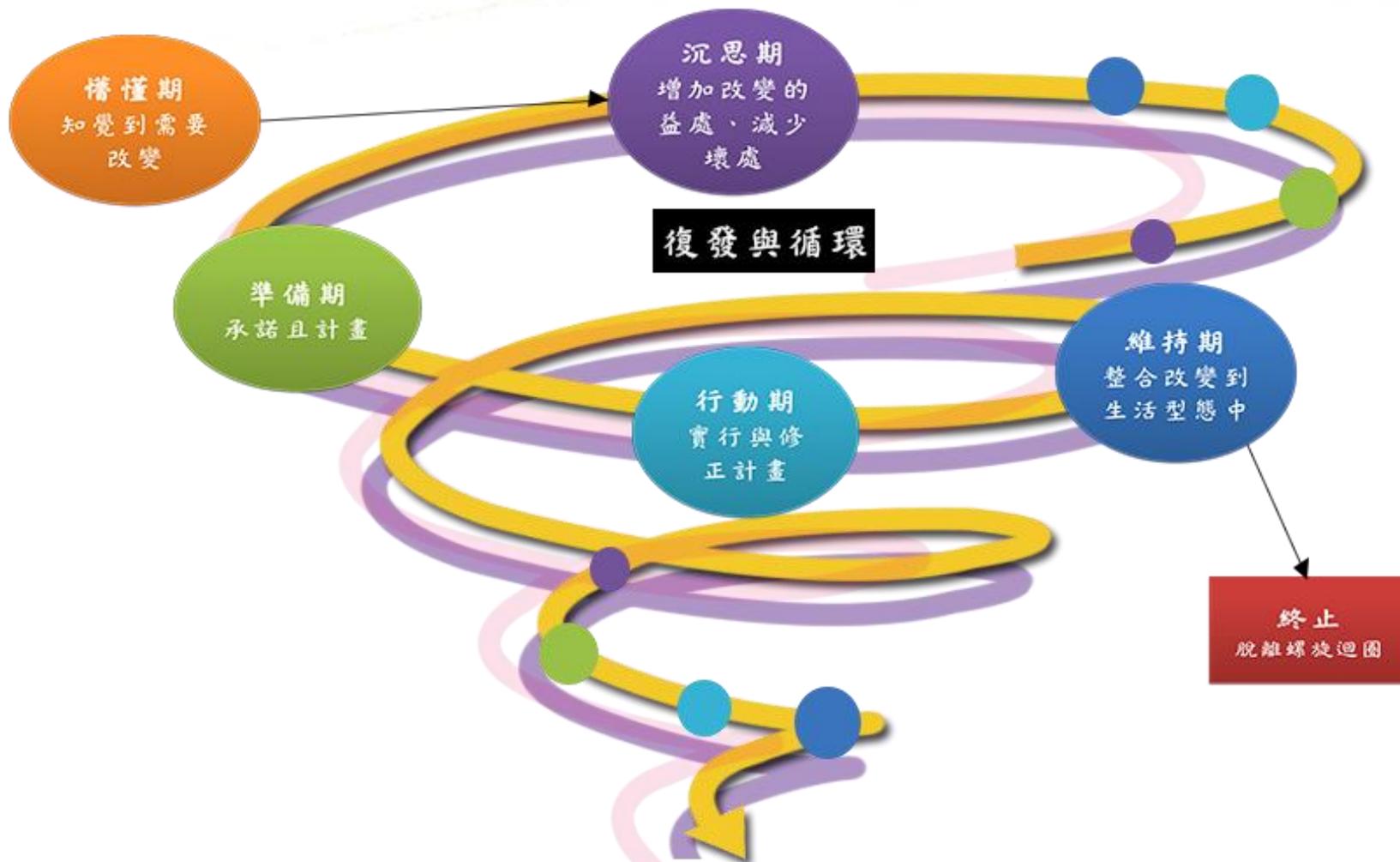


Steps for Jawbone UP Users Who Commented on Pokémon Go



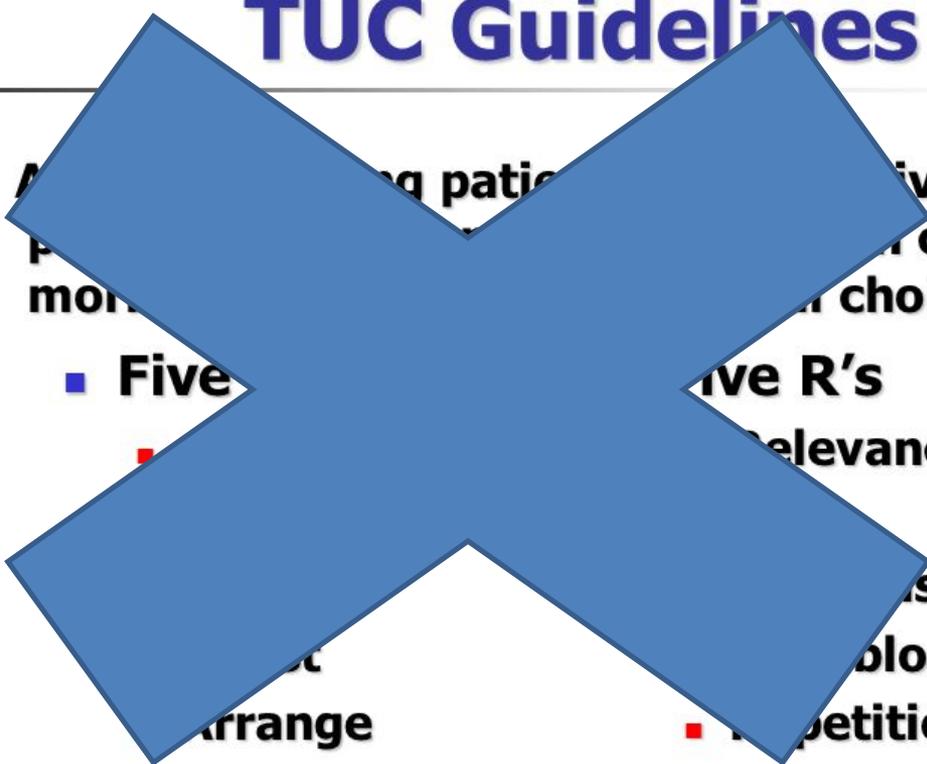
Jawbone 發現《Pokémon Go》推出後用戶走動量大幅提升 (圖 / Jawbone)

行為改變階段



行為醫學5A5R原則

TUC Guidelines

- 
- Five R's
 - Relevance
 - Risks
 - Resources
 - Repetition

價值觀



水的價值



價值取捨

為了健康
禁菸 &
拒吸二手菸





傳統醫療模式

- 需要性
 - 精神導向
 - 問題導向
- 根屬性
- 解決力
- 損益比



戒菸服務醫療模式

- 解決力
- 根屬性
- 需要性
- 損益比



語言的力量

- 「尿液無菌，可以喝。」
- 「人，皆生而平等！」
- 「窮山惡水出刁民。」
- 「他不笨，他是我孩子！」
- 「生命應該浪費在美好的事物上。」

The LEARN Model

L

Listen

with sympathy and understanding to the /patient's perception of the problem.

E

Explain

your perceptions of the problem.

A

Acknowledge

and discuss the differences and similarities.

R

Recommend

a course of action.

N

Negotiate

agreement.

Adapted from Berlin EA. & Fowkes WC, Jr. (1983). A teaching framework for cross cultural health care--Application in family practice. *Western Journal of Medicine* 139 (6): 934-938.

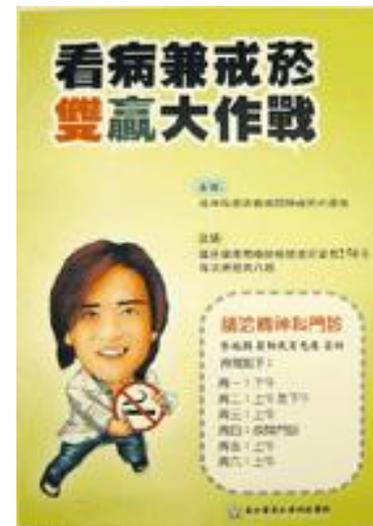
Initiation of Appropriate Treatment



Treatment

國民健康局門診戒菸補助計畫

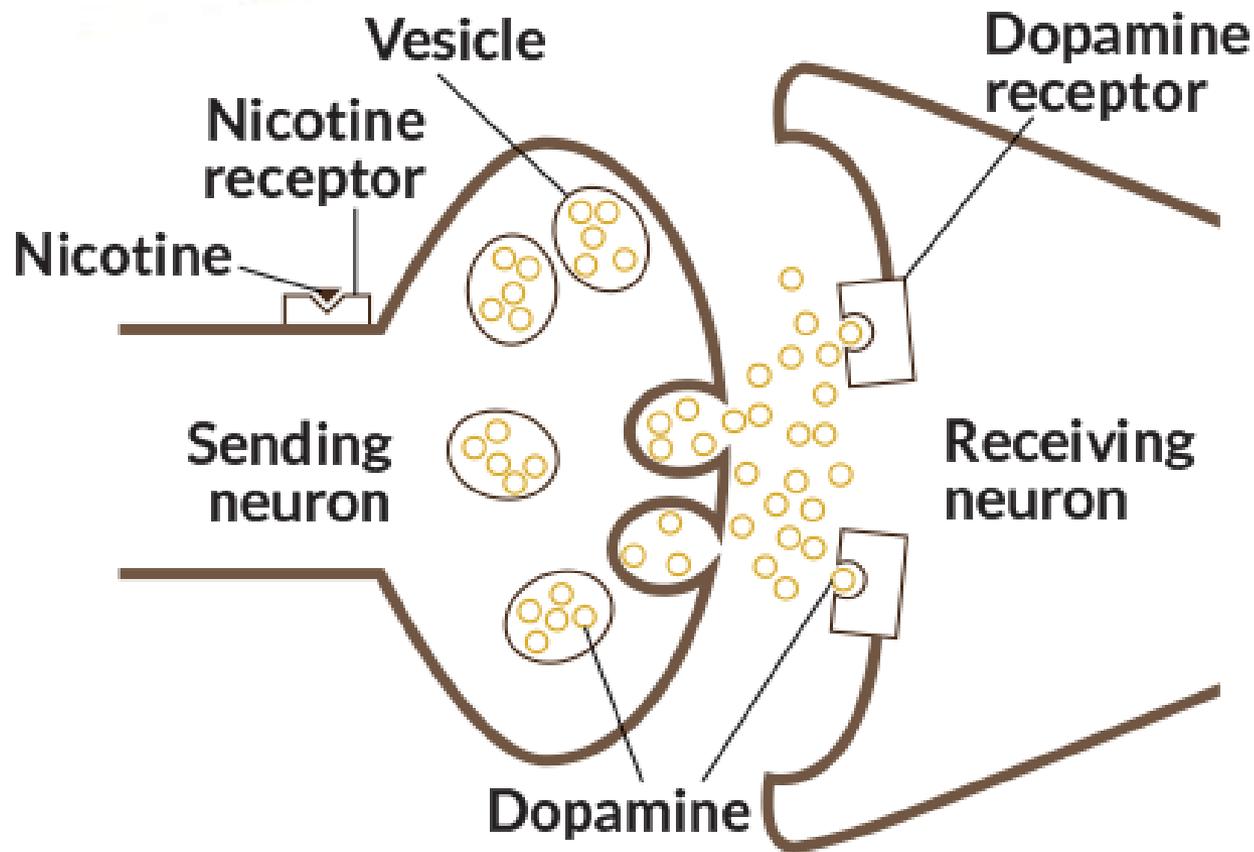
- 18歲（含）以上之全民健康保險保險對象，其尼古丁成癮度測試分數達4分（含）以上（新版Fagerström量表），或平均1天吸10支菸（含）以上者
- 不論過去有無利用過戒菸治療服務，每人每年內至多補助2次療程，每次療程最多補助8週次藥費，且每一療程（8週藥物）限於同一醫療院所90天內完成。
- 若於甲院所戒菸治療期間，又另赴乙院所進行治療，則視同放棄未完成之第一療程，進入第二療程，且無法再繼續使用第一療程。
- 須本人親自前往合約醫療院所接受戒菸治療服務，不得由他人代領藥物。



尼古丁成癮度測試

		得 分			
題 目	3	2	1	0	
1	您早上醒來多久抽第一根菸?	<5分鐘	6-30分	31-60分	>60分
2	您在禁菸場所是否難以忍受?			是	否
3	您每天最不願意放棄的是那一支香菸?			早上第一支	其他
4	您一天平均抽幾支菸?	>31支	21~30	11~20	<10支
5	早上抽菸量是否較其他時間多?			是	否
6	即使生病臥床您還是會抽菸?			是	否

尼古丁的作用



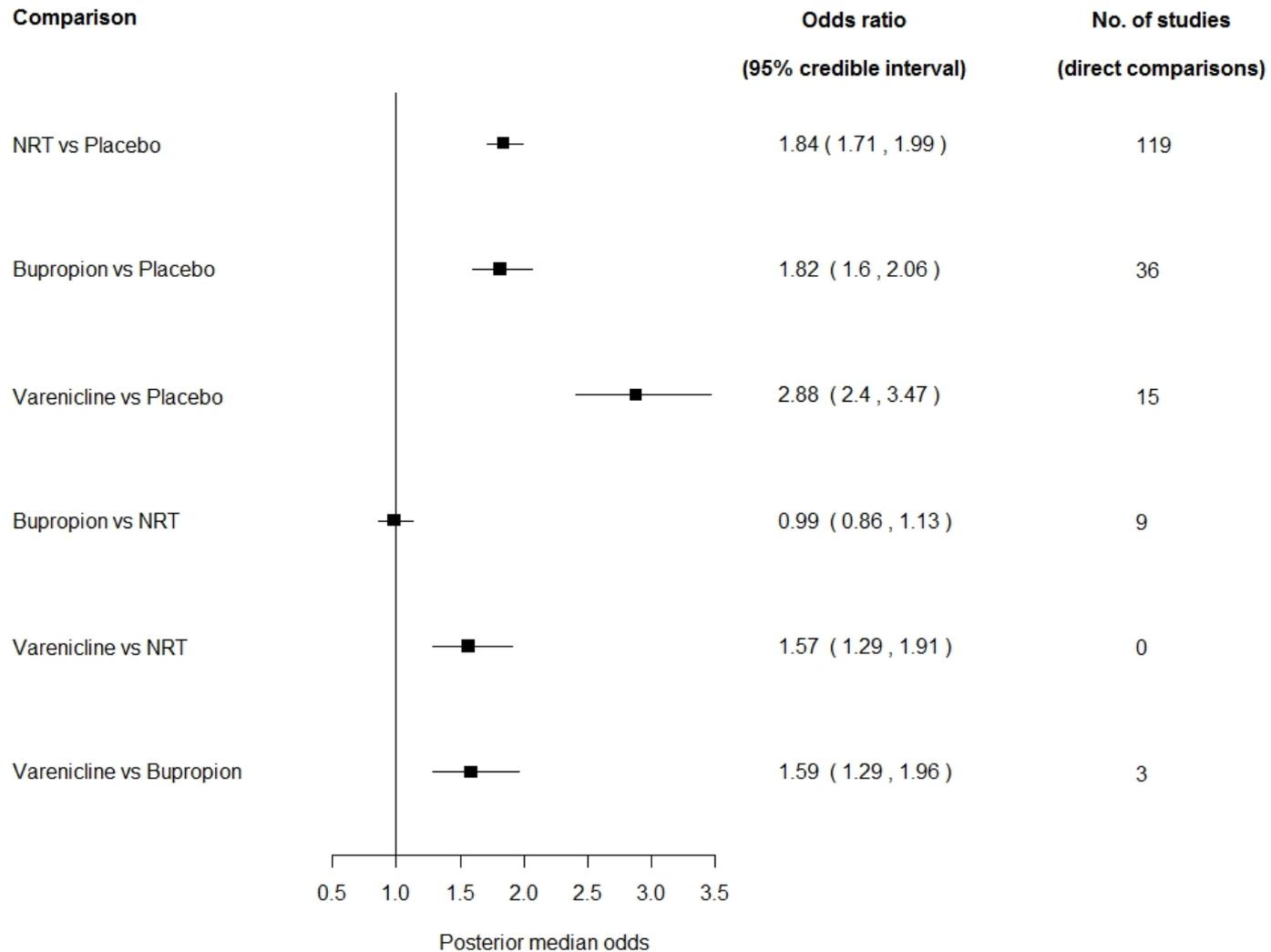
佛系戒菸



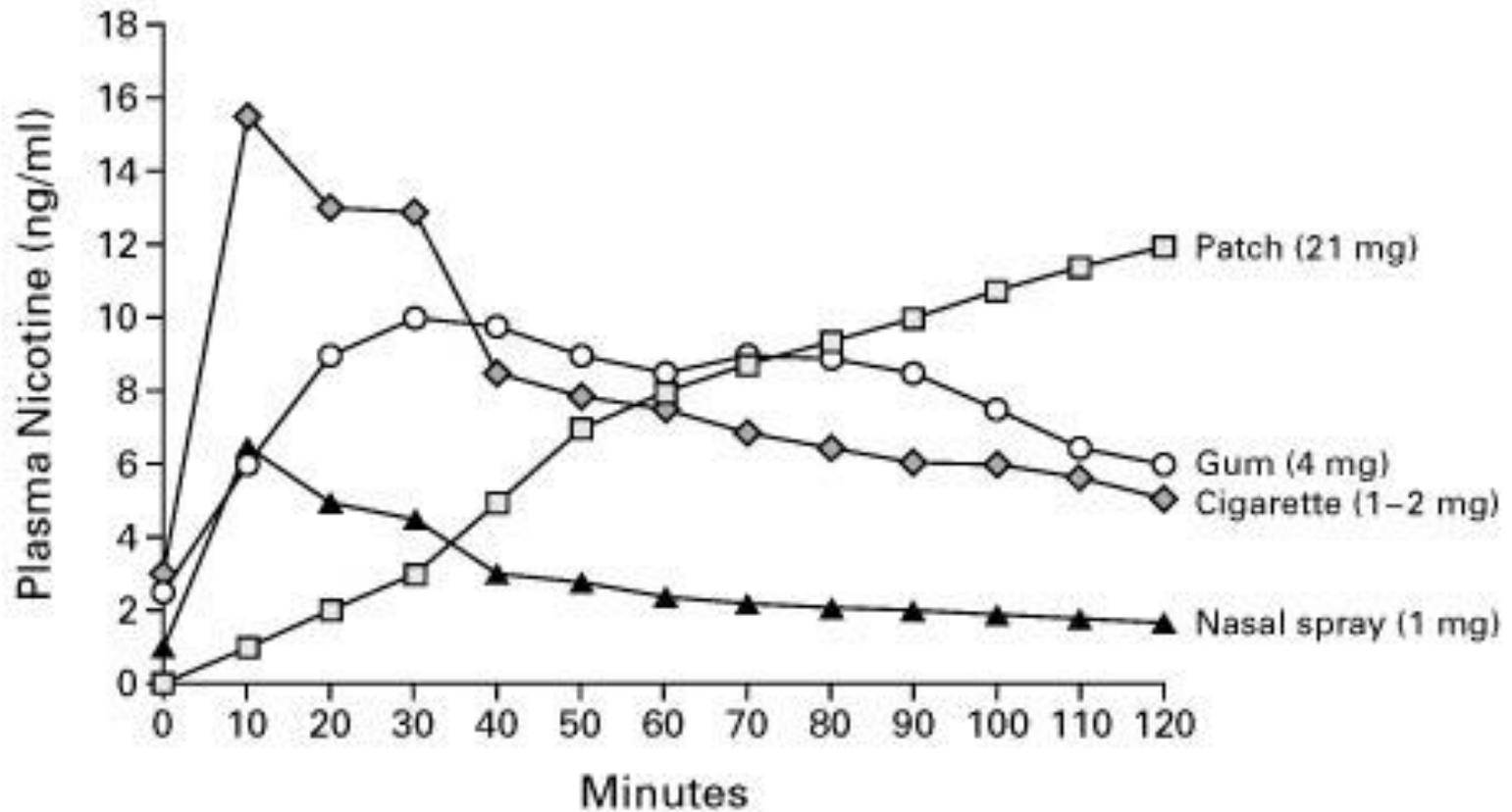
不勉強 不強迫
不刻意 不用藥

緣份到了 自然會戒菸

大型META-ANALYSIS結果



抽菸、嚼片、鼻噴劑、貼片的血中尼古丁濃度變化

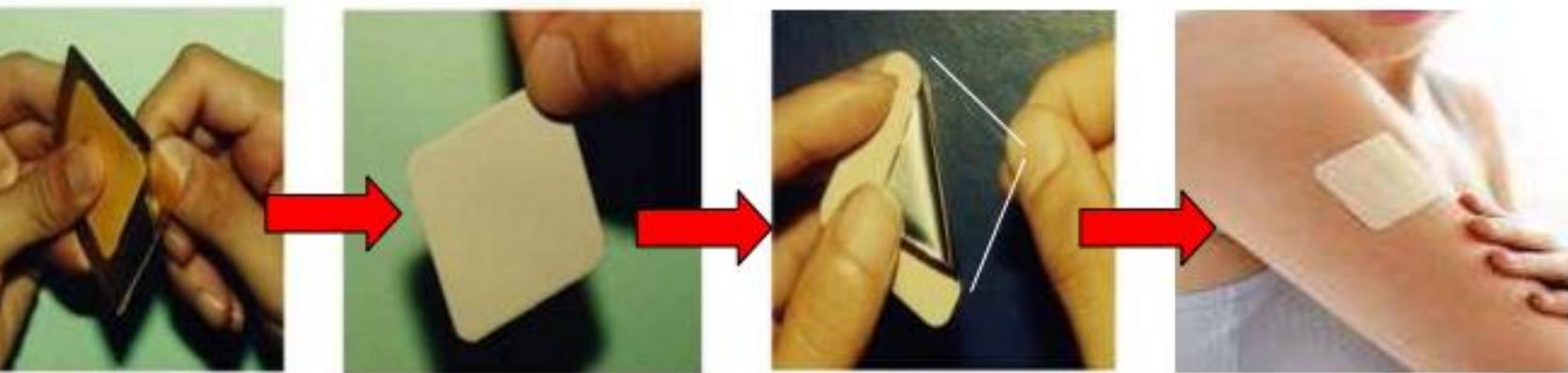


戒菸貼片

- 淨菸(smokfree[®]) 有5、10與15三種型號
- 克菸(nicotinell[®])有10、20與30三種
- 高度依賴者可在晚上睡覺前使用
- 貼片可黏貼於頸部與腰部之間、無毛髮之部位
- 副作用：皮膚紅腫及搔癢、頭痛、失眠等



用法	一天貼一片，每日應換貼不同的位置。最好在腰部以上，頸部以下毛髮較稀少之處，通常貼於上臂或肩膀。因其劑量平均分布於白天及晚上，所以要達到同樣的血中濃度，所需的每日劑量較嚼錠高（嚼錠都集中在白天清醒時使用）。21mg/24hrs (Nicotinell TTS 30) 貼片所能達到的血中尼古丁濃度約為10.3~17.7ng/ml，為每天吸一包菸的人血中濃度（25~35ng/ml）的一半。 使用後的貼片仍殘存60%的尼古丁，丟棄的貼片不要讓兒童拿來玩，以免發生尼古丁中毒的危險。
劑型規格	Nicotinell TTS克菸貼片10(17.5 mg/patch, 7mg/24hrs), 7片/盒 Nicotinell TTS克菸貼片20(35 mg/patch, 14mg/24hrs), 7片/盒 Nicotinell TTS克菸貼片30(52.5mg/patch, 21mg/24hrs), 7片/盒 Smokfree Nicotine TDDS淨菸5 (10.4mg/片, 4.2 mg/24hrs), 7片/盒 Smokfree Nicotine TDDS淨菸10 (20.8mg/片,8.3mg/24hrs), 7片/盒



副作用	皮膚刺激、失眠
優點	提供穩定濃度的尼古丁，使用容易。
缺點	尼古丁釋放緩慢，渴求香菸時無法調整劑量。

口嚼錠

- 有2mg、4mg兩種劑量
- 尼古清(Nicorette®)有原味與薄荷兩種口味
- 克菸(Nicotinell®)有薄荷、水果口味兩種
- 停止初期應每日使用10-15錠並逐步減少使用
- 緩慢咀嚼每分鐘內1至2次，口內出現辛辣味時應暫時咀嚼而留置於頰側
- 使用前應避免使用酸性飲料，如咖啡、可樂等
- 副作用為消化不良、噁心、下頷關節酸痛、打嗝



口嚼錠

用法	有2mg、4mg 兩種嚼錠，約50%的尼古丁可被吸收。每顆2mg 嚼錠可取代2 支菸（達到吸兩支菸所吸收尼古丁量的一半），每顆4mg 嚼錠可取代3~4 支菸（達到吸3~4 支菸所吸收尼古丁量的一半）。對於高度尼古丁依賴（尤其是早上起床後五分鐘內需吸菸者）或每日菸量 ≥ 25 支者，要使用4mg 嚼錠。每日菸量 < 25 支者，則使用2mg 嚼錠。剛開始要每1-2 小時定時嚼一顆，四周後可視情況遞減用量（每週減1~2 顆），最後才能改成需要時投藥。
劑型規格	Nicorette chewing gum(尼古清薄荷口嚼錠) 2 mg/Tab, 105 顆/盒 Nicorette chewing gum (尼古清薄荷口嚼錠) 4mg/Tab, 105 顆/盒 Nicotinell Mint Chewing Gum(克菸咀嚼錠薄荷口味) 2mg, 96 顆/盒 Nicotinell Mint Chewing Gum(克菸咀嚼錠薄荷口味) 4mg, 96 顆/盒 Nicotinell Fruit Chewing Gum(克菸咀嚼錠水果口味) 4mg, 96 顆/盒
療程	8-12 週
副作用	口腔刺激，下頷關節酸痛，胃部不適，打嗝
優點	使用者可自行操控劑量，有行為取代的效果
缺點	需適當的咀嚼技巧以避免副作用及達到成效，同時飲用咖啡及酸性飲料會阻斷尼古丁的吸收，裝假牙者使用上較為困難

口含錠

- 在口內慢慢吸含20~30分鐘
- 會有刺熱的感覺
- 使用中及使用前15分勿喝水以外的飲料
- 前6周每天可用到9錠
- 打嗝、噁心、胸前燒灼感
- 若有吸菸渴求時即可含，慢慢減量



吸入劑

- 由代煙器和尼古丁膠管兩個部份組成。
- 釋放出大約等於一支香煙30%的尼古丁，和二毫克咀嚼錠相同。
- 每支吸入劑大約可使用20分鐘
- 建議的起始使用量為每天6至12支
- 療程一般為十八至二十四周
- 常見的副作用為喉嚨刺激感和咳嗽。



尼古丁替代療法的好處及侷限

- 減輕尼古丁戒斷症狀，降低戒菸的痛苦
- 使吸菸者不暴露於致癌物及其他有毒物
- 尼古丁濃度較低，穩定及緩慢的釋出尼古丁，以減少吸菸者感官上之刺激（減少正向增強作用）
- 由於無法到達與香菸一樣的最高濃度，不能完全解除菸癮



Bupropion SR (耐菸盼)

- 利用抑制多巴胺和正腎上腺素再吸收的作用 (Norepinephrine - dopamine reuptake inhibitor, NDRI) 來達戒菸的功效
- 有癲癇病、併用MAO inhibitor、厭食症者忌用
- 有失眠、口乾等副作用
- 戒菸前1~2週開始服用
- 一般使用7~12星期；維持長期服用6個月
- 使用容易、不含尼古丁、能暫時減緩體重增加
- 每天早上使用150毫克，三天後再改成150mg一日兩次

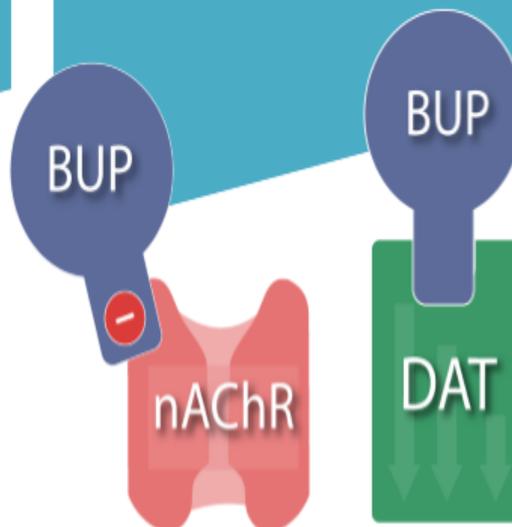
Bupropion for smoking cessation

FDA-approved for smoking cessation.



Mechanism unclear, might involve:

- Antagonism of nAChR
- Dopaminergic effect on reward mechanisms



Benefits in improving long-term abstinence rates are not immediate and take several weeks or longer to be evident.



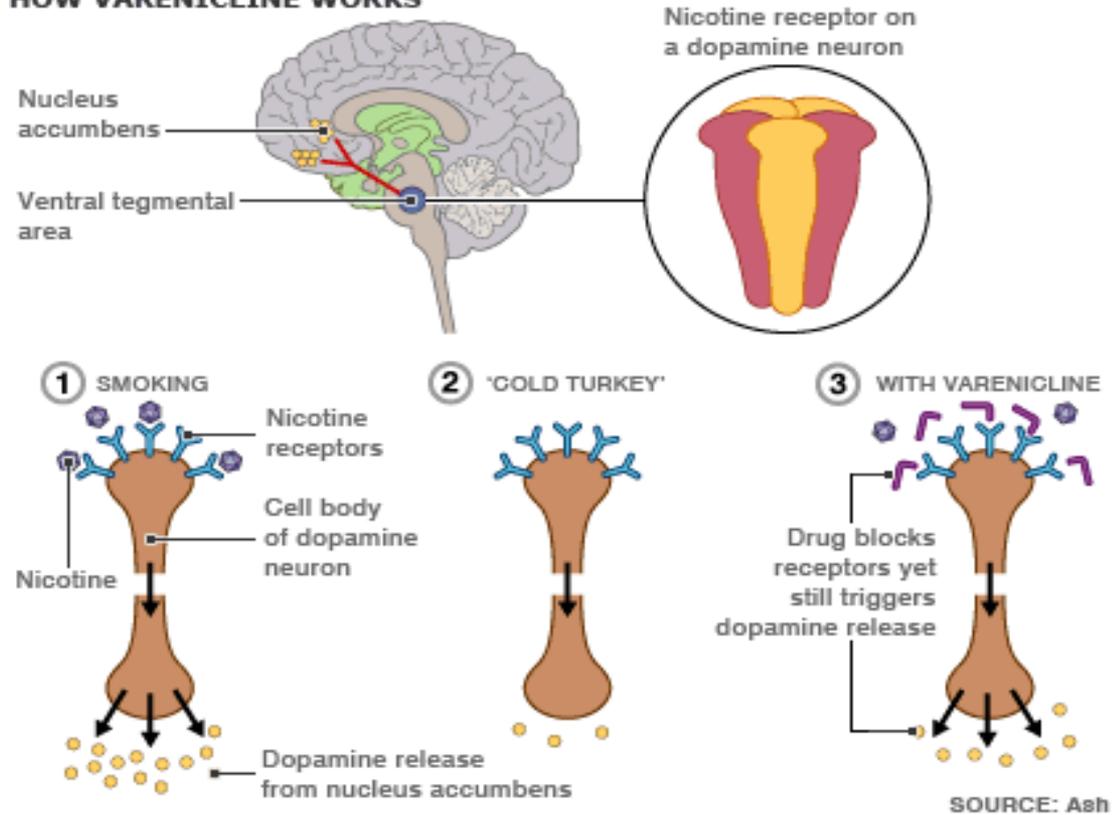
VARENICLINE

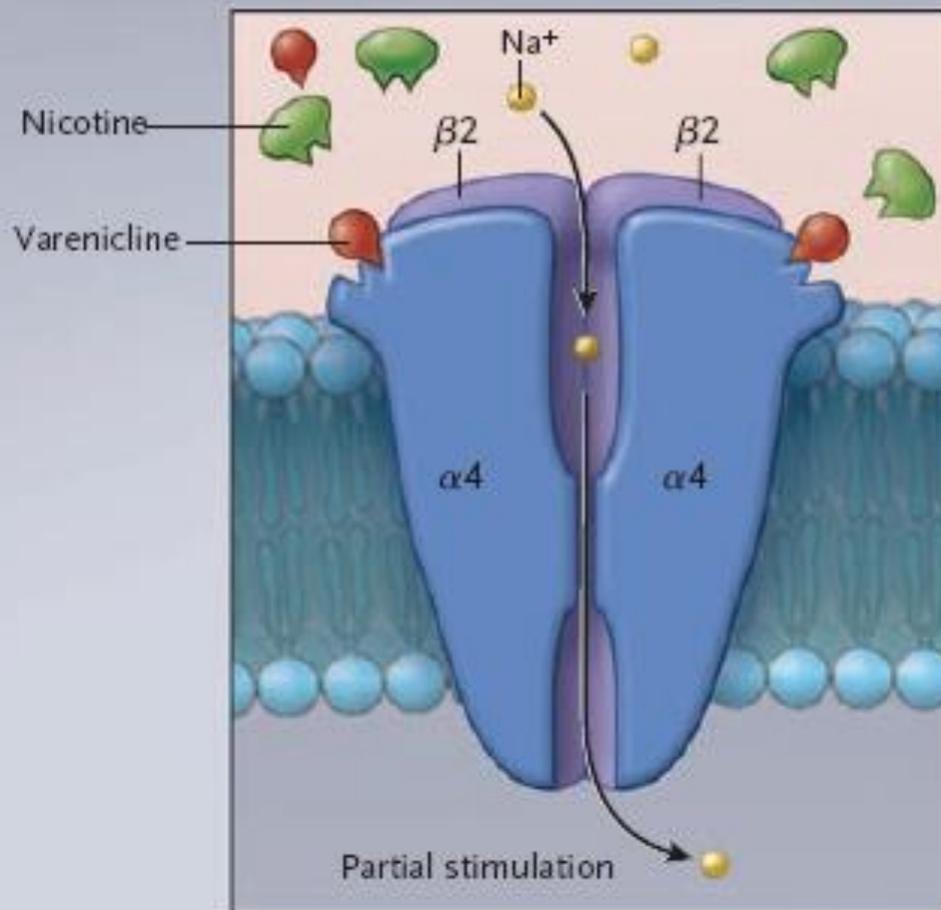
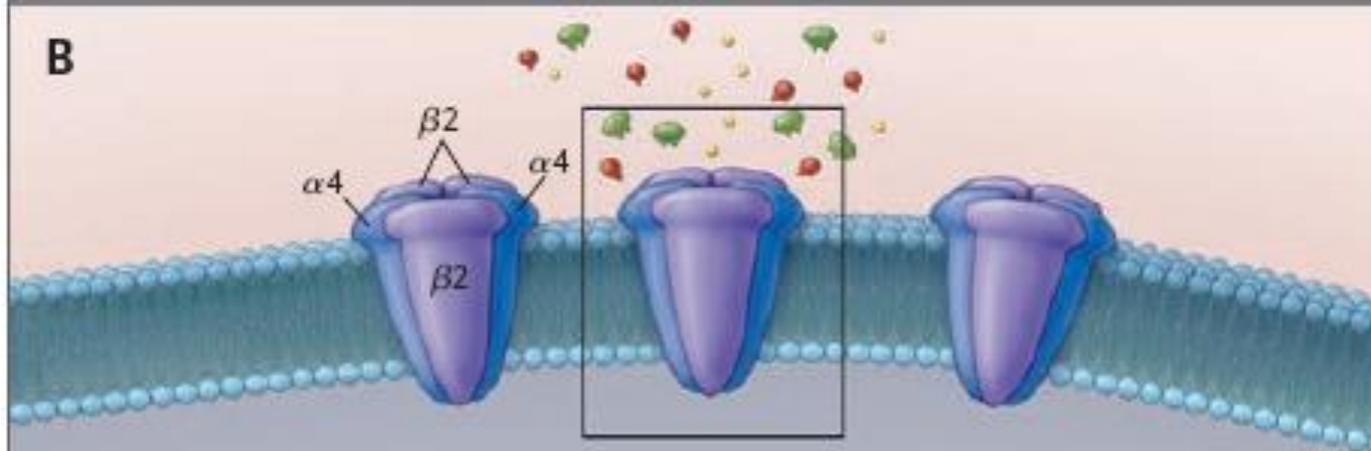
具有刺激及阻斷尼古丁接受器的雙重作用

Varenicline的雙重作用

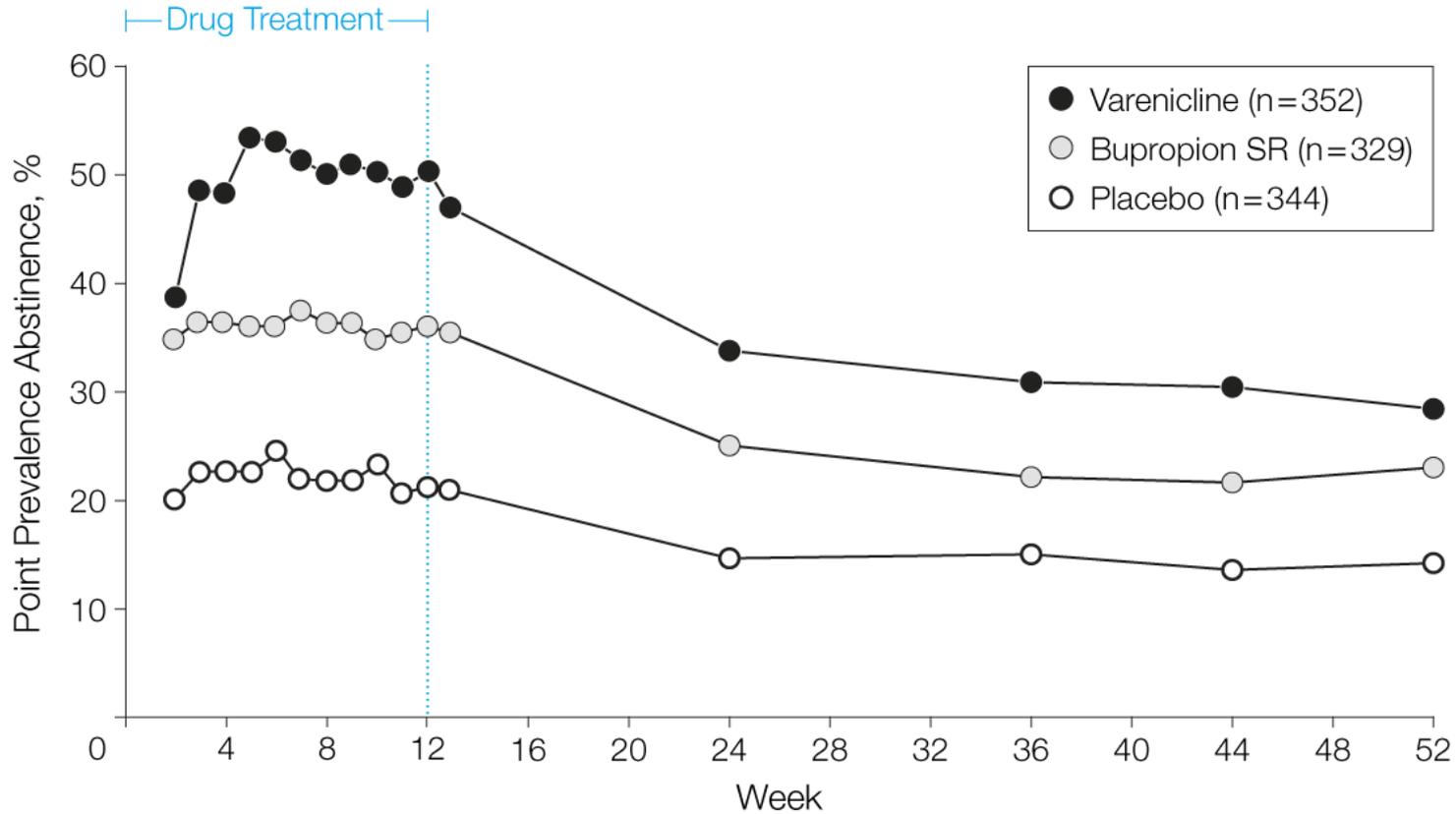
- ➡ 部分致效劑 (Partial agonist)
- ➡ 拮抗劑 (Antagonist)

HOW VARENICLINE WORKS



B

成功戒菸率



JAMA. 2006;296(1):47-55.

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

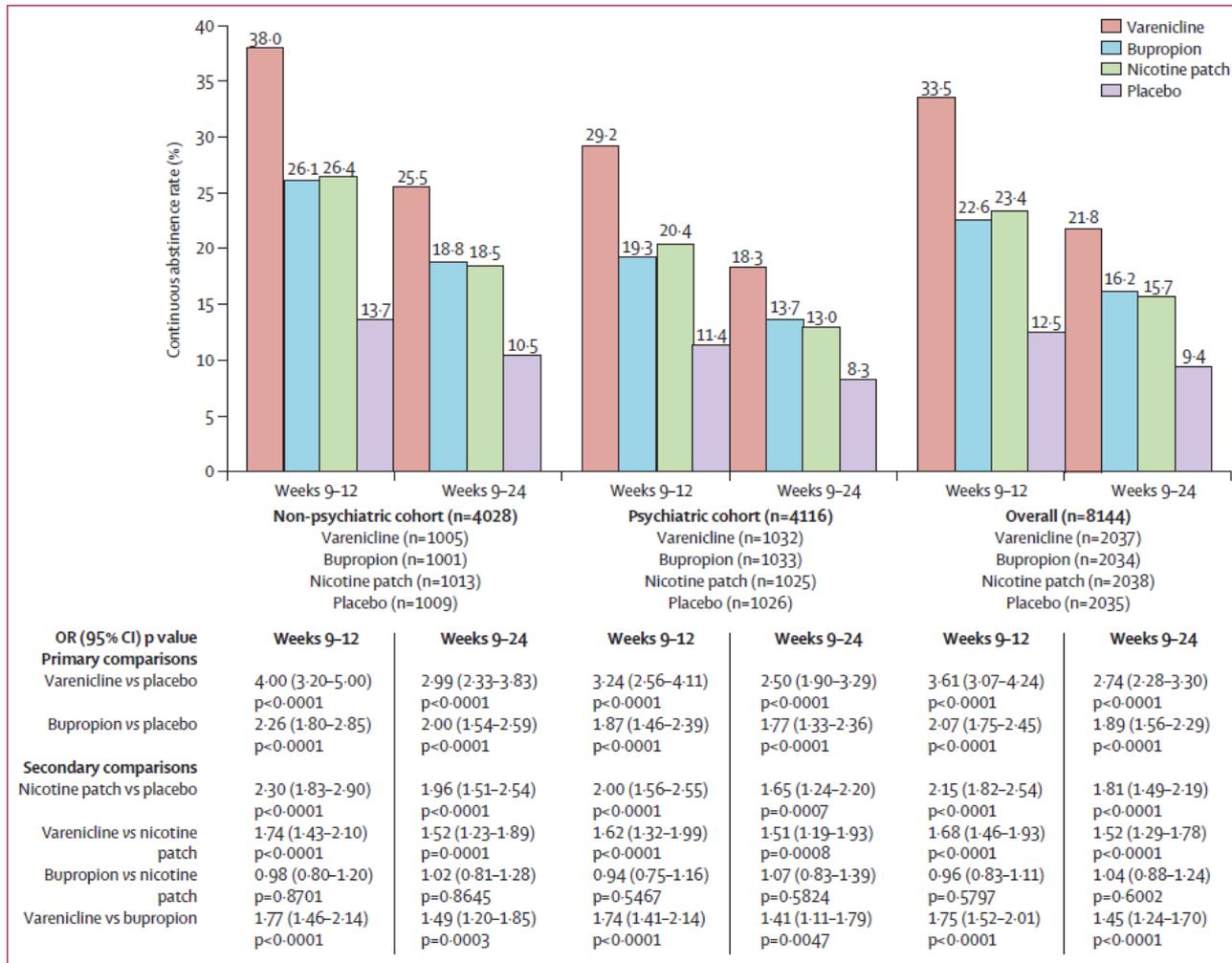
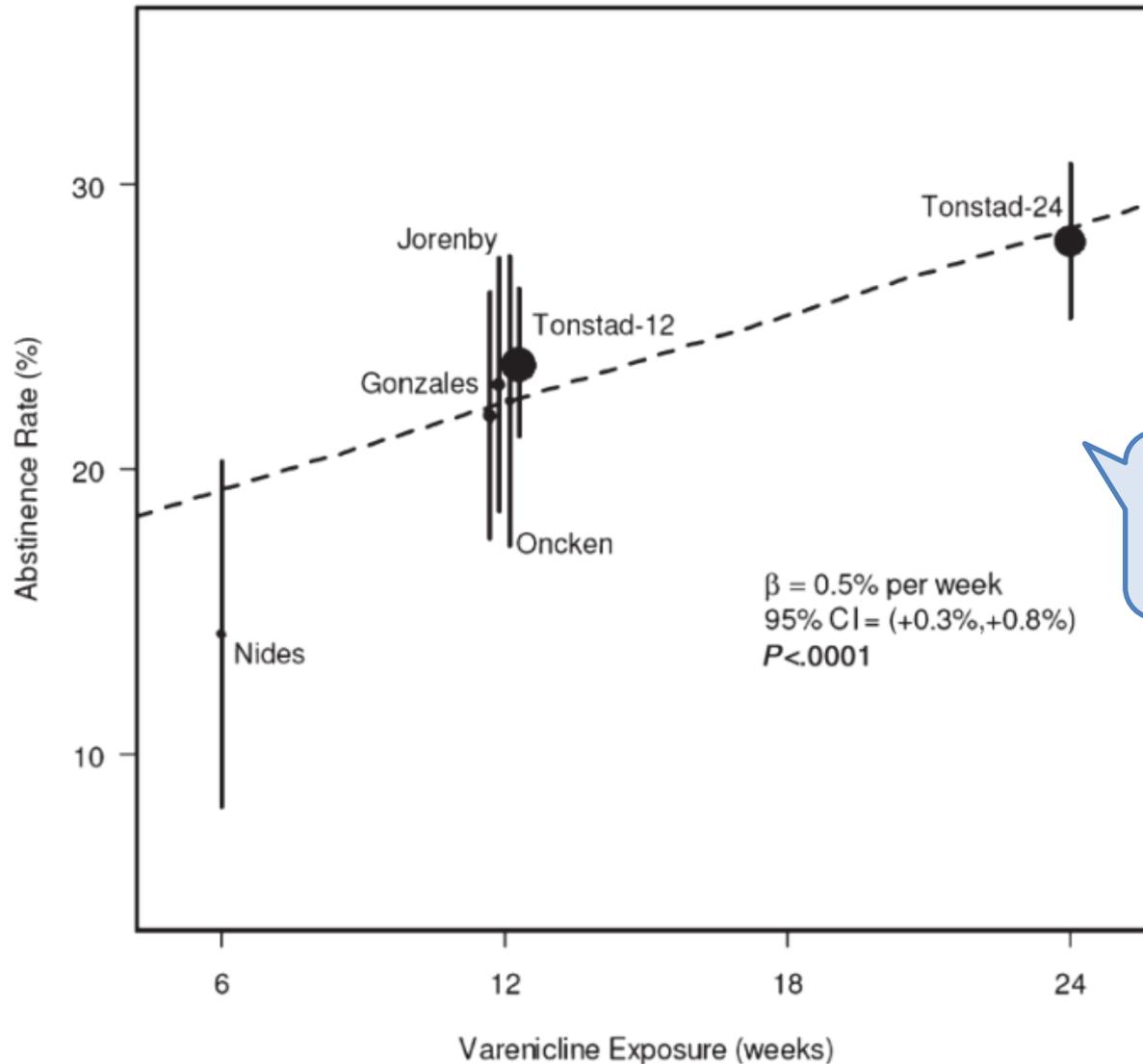


Figure 3: Continuous abstinence rates for weeks 9-12 and 9-24. Analyses based on the all-randomised population. OR=odds ratio.

使用varenicline時間越長，戒菸成功率越高



多服用1個禮拜戒菸成功率增加0.5%！

Adherence to Varenicline and Associated Smoking Cessation

TABLE 2 Distribution of Select Characteristics Among the 1,477 Study Participants by Adherence^a to Varenicline Therapy

Variable	Entire Sample (n=1,477)	Primary Non-adherent (n=823)	Partially Adherent (n=295)	Adherent (n=359)	P Value ^b
Male (%)	41.8	41.8	40.7	42.9	NS
Age (years, mean)	49.1	49.9	47.7	48.5	<0.05
Caucasian (%)	98.4	98.4	98.6	98.0	NS
Married (%)	62.3	62.8	54.6	67.4	<0.01
Body mass index (median)	28.3	28.2	28.3	29.0	NS
Systolic blood pressure (mmHg, mean)	124.1	124.2	122.6	125.2	<0.05
Diastolic blood pressure (mmHg, mean)	74.7	74.5	74.5	75.2	NS
Influenza vaccination (%)	35.8	36.2	35.6	35.1	NS
Pneumonia vaccination (%)	16.6	16.5	17.6	15.9	NS
Previous bupropion use ^c (%)	7.6	0.5	15.6	17.6	<0.0001
Previous NRT use ^c (%)	2.1	0	6.4	3.3	<0.0001
Comorbidities (%)					
COPD	9.4	9.2	10.8	8.6	NS
Coronary artery disease	8.5	9.5	6.1	8.1	NS
Asthma	8.0	7.4	8.1	9.2	NS
Peripheral vascular disease	3.7	3.8	3.4	3.6	NS
Cardiovascular disease	8.6	9.4	7.1	8.1	NS
Diabetes mellitus	13.9	13.8	13.2	14.5	NS
Cancer, any	5.8	5.5	5.8	6.7	NS
Cancer, lung	0.5	0.2	1.4	0.3	<0.05

TABLE 3 Hazard Model Results Predicting Probability of Achieving Smoking Cessation During the Follow-Up Period

Characteristic	Category ^a	Hazard Ratio (95% CI) ^b
Adherence	Adherent vs. primary nonadherent	1.93 (1.59-2.33)
	Partially adherent vs. primary nonadherent	0.88 (0.69-1.13)

^aNonadherence, adherence, and partial adherence were defined as having no pharmacy claims, at least a 90-day supply, and a 1- to 89-day supply of varenicline, respectively, during the 113-day follow-up period.

^bAdjusted for age, systolic blood pressure, marital status, and prior lung cancer diagnosis.

CI = confidence interval.

Evaluation of varenicline as an aid to smoking cessation in UK general practice – a THIN database study

Table 2. Baseline characteristics of subjects who replied to the questionnaire (responders, $n=193$) and those who did not (non-responders, $n=539$).

Factor	Responders	Non-responders	
Demographics	($n=193$)	($n=539$)	
Mean age (yrs)	46.5	43.2	$p=0.002$
Female (%)	60.6	55.5	$p=0.215$
Social deprivation score*	($n=186$)	($n=512$)	
Townsend score 1 (%)	16.7	10.0	
Townsend score 5 (%)	21.0	27.5	
Overall Townsend score distribution			$p=0.081$
Co-morbidities	($n=193$)	($n=539$)	
% of subjects with:			
Asthma	22.8	20.4	$p=0.485$
COPD [^]	13.0	6.9	$p=0.009$
CHD [#]	6.2	4.8	$p=0.454$
Cerebrovascular disease [@]	1.5	2.4	$p=0.485$
Cancer	2.1	3.5	$p=0.321$
Depression	38.9	39.0	$p=0.980$
Antidepressant therapy	21.2	15.8	$p=0.084$
Bipolar disorder	0.5	0.4	$p=0.784$
Suicide attempt or ideation	2.1	1.9	$p=0.850$
Drug overdose	1.0	1.5	$p=0.646$
Self-harm	0.5	0.4	$p=0.784$

*Townsend score: 1 = most affluent, 5 = least affluent.

[^]Chronic obstructive pulmonary disease.

[#]Coronary heart disease.

[@]Cerebrovascular disease includes stroke and transient ischaemic attack.

Table 1. Smoking cessation rates beyond 5 months, 6 months and 7 months since initiation of varenicline.

Time since initiation of varenicline	Smoking cessation rate (%) (95% confidence interval)
Over 5 months ($n=190^*$)	49.5 (42.4, 56.6)
Over 6 months ($n=154$)	46.1 (38.2, 54.0)
(primary outcome)	
Over 7 months ($n=48$)	54.2 (40.1, 68.3)

*All patients with a valid smoking cessation answer.

Table 4. Odds of smoking cessation by self-reported varenicline duration ($n=189$).

Varenicline duration	Odds ratio (95% confidence interval)
<2 weeks (reference group, $n=33$)	1.0
2–4 weeks ($n=36$)	2.0 (0.6, 6.1)
5–8 weeks ($n=42$)	5.4 (1.9, 15.9)
9–12 weeks ($n=62$)	11.0 (3.9, 31.1)
>12 weeks ($n=16$)	7.5 (2.0, 28.8)

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

	Non-psychiatric cohort* (n=3984)				Psychiatric cohort* (n=4074)			
	Varenicline (n=990)	Bupropion (n=989)	Nicotine patch (n=1006)	Placebo (n=999)	Varenicline (n=1026)	Bupropion (n=1017)	Nicotine patch (n=1016)	Placebo (n=1015)
Primary composite neuropsychiatric endpoint	13 (1.3%)	22 (2.2%)	25 (2.5%)	24 (2.4%)	67 (6.5%)	68 (6.7%)	53 (5.2%)†	50 (4.9%)
Estimated primary composite neuropsychiatric adverse events (% [95% CI])	1.25% (0.60 to 1.90)	2.44% (1.52 to 3.36)	2.31% (1.37 to 3.25)	2.52% (1.58 to 3.46)	6.42% (4.91 to 7.93)	6.62% (5.09 to 8.15)	5.20% (3.84 to 6.56)	4.83% (3.51 to 6.16)
Difference in risk of composite primary endpoint (RD% [95% CI])								
Versus placebo	-1.28 (-2.40 to -0.15)	-0.08 (-1.37 to 1.21)	-0.21 (-1.54 to 1.12)	..	1.59 (-0.42 to 3.59)	1.78 (-0.24 to 3.81)	0.37 (-1.53 to 2.26)	..
Versus nicotine patch	-1.07 (-2.21 to 0.08)	0.13 (-1.19 to 1.45)	..	..	1.22 (-0.81 to 3.25)	1.42 (-0.63 to 3.46)	..	..
Versus bupropion	-1.19 (-2.30 to -0.09)	..	..	..	-0.20 (-2.34 to 1.95)	..	..	..
Components of primary neuropsychiatric composite endpoint								
Anxiety‡	0	1 (0.1%)	0	3 (0.3%)	5 (0.5%)	4 (0.4%)	6 (0.6%)	2 (0.2%)
Depression‡	1 (0.1%)	0	0	0	6 (0.6%)	4 (0.4%)	7 (0.7%)	6 (0.6%)
Feeling abnormal‡	0	0	0	0	0	1 (0.1%)	0	0
Hostility‡	0	1 (0.1%)	1 (0.1%)	0	0	0	0	0
Agitation§	10 (1.0%)	11 (1.1%)	19 (1.9%)	11 (1.1%)	25 (2.4%)	29 (2.9%)	21 (2.1%)	22 (2.2%)
Aggression§	3 (0.3%)	3 (0.3%)	2 (0.2%)	3 (0.3%)	14 (1.4%)	9 (0.9%)	7 (0.7%)	8 (0.8%)
Delusions§	0	0	1 (0.1%)	0	1 (0.1%)	1 (0.1%)	1 (0.1%)	0
Hallucinations§	1 (0.1%)	0	0	0	5 (0.5%)	4 (0.4%)	2 (0.2%)	2 (0.2%)
Homicidal ideation§	0	0	1 (0.1%)	0	0	0	0	0
Mania§	0	1 (0.1%)	2 (0.2%)	2 (0.2%)	7 (0.7%)	9 (0.9%)	3 (0.3%)	6 (0.6%)
Panic§	0	4 (0.4%)	1 (0.1%)	3 (0.3%)	7 (0.7%)	16 (1.6%)	13 (1.3%)	7 (0.7%)
Paranoia§	0	1 (0.1%)	0	0	1 (0.1%)	0	0	2 (0.2%)
Psychosis§	0	0	1 (0.1%)	0	4 (0.4%)	2 (0.2%)	3 (0.3%)	1 (0.1%)
Suicidal behaviour§	0	1 (1.0%)	1 (0.1%)	0	1 (0.1%)	1 (0.1%)	0	1 (0.1%)
Suicidal ideation§	0	1 (0.1%)	2 (0.2%)	3 (0.3%)	5 (0.5%)	2 (0.2%)	3 (0.3%)†	2 (0.2%)
Completed suicide§	0	0	0	1 (0.1%)	0	0	0	0

(Table 2 continues on next page)

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

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	Non-psychiatric cohort* (n=3984)				Psychiatric cohort* (n=4074)			
	Varenicline (n=990)	Bupropion (n=989)	Nicotine patch (n=1006)	Placebo (n=999)	Varenicline (n=1026)	Bupropion (n=1017)	Nicotine patch (n=1016)	Placebo (n=1015)
(Continued from previous page)								
Primary composite neuropsychiatric endpoint (severe intensity only)	1 (0.1%)	4 (0.4%)	3 (0.3%)	5 (0.5%)	14 (1.4%)	14 (1.4%)	14 (1.4%)	13 (1.3%)
Components of primary neuropsychiatric composite endpoint (severe intensity only)								
Anxiety‡	0	1 (0.1%)	0	3 (0.3%)	5 (0.5%)	4 (0.4%)	6 (0.6%)	2 (0.2%)
Depression‡	1 (0.1%)	0	0	0	6 (0.6%)	4 (0.4%)	7 (0.7%)	6 (0.6%)
Feeling abnormal‡	0	0	0	0	0	1 (0.1%)	0	0
Hostility‡	0	1 (0.1%)	1 (0.1%)	0	0	0	0	0
Agitation‡	0	0	2 (0.2%)	0	1 (0.1%)	1 (0.1%)	4 (0.4%)	2 (0.2%)
Aggression‡	1 (1.0%)	1 (0.1%)	0	0	1 (0.1%)	1 (0.1%)	0	1 (0.1%)
Delusions‡	0	0	0	0	0	0	0	0
Hallucinations‡	0	0	0	0	0	1 (0.1%)	0	0
Homicidal ideation‡	0	0	0	0	0	0	0	0
Mania‡	0	0	0	0	2 (0.2%)	1 (0.1%)	0	0
Panic‡	0	1 (0.1%)	1 (0.1%)	1 (0.1%)	0	1 (0.1%)	0	1 (0.1%)
Paranoia‡	0	0	0	0	0	0	0	0
Psychosis‡	0	0	0	0	0	1 (0.1%)	1 (0.1%)	0
Suicidal behaviour‡	0	1 (0.1%)	0	0	1 (0.1%)	1 (0.1%)	0	1 (0.1%)
Suicidal ideation‡	0	0	0	1 (0.1%)	1 (0.1%)	0	1 (0.1%)	0
Completed suicide‡	0	0	0	1 (0.1%)	0	0	0	0
Events in the primary endpoint								
Serious adverse events¶	0	1 (0.1%)	2 (0.2%)	3 (0.3%)	6 (0.6%)	5 (0.5%)	3 (0.3%)†	3 (0.3%)
Resulting in permanent treatment discontinuations	1 (0.1%)	5 (0.5%)	7 (0.7%)	3 (0.3%)	16 (1.6%)	15 (1.5%)	12 (1.2%)	15 (1.5%)
Leading to interventions**	0	2 (0.2%)	1 (0.1%)	3 (0.3%)	7 (0.7%)	12 (1.2%)	7 (0.7%)	11 (1.1%)
Combined serious adverse events, severe adverse events, and leading to treatment discontinuations or interventions (at least one of)	2 (0.2%)	8 (0.8%)	8 (0.8%)	10 (1.0%)	28 (2.7%)	28 (2.8%)	21 (2.1%)†	29 (2.9%)

電子煙產品簡介



- 電子煙係以電能驅動霧化器，加熱菸液(彈)內液體為煙霧，該液體可能混有尼古丁、丙二醇或其他香料等，以供使用者吸食。



多種口味電子煙油

電子煙無助於免於菸害

吸電子煙所含有害物

化學物	內含有害物質
丙烯腈 (acrylonitrile)	致癌物、呼吸系統毒素
丙烯醛 (acrolein)	呼吸系統毒素、心血管毒素
環氧丙烷 (propylene oxide)	致癌物、呼吸系統毒素
丙烯酰胺 (acrylamide)	致癌物
巴豆醛 (crotonaldehyde)	致癌物

資料來源：綜合外電及美國食品藥品監督管理局 (FDA)

電子煙內容成分-有害健康物質方面

(1)

- **尼古丁**：電子煙的尼古丁是霧狀尼古丁，係由肺部吸收，經過呼吸道時不會造成刺激，使用時吸得深，沉降到小支氣管再吸收，為高度成癮的物質
- **甲醛或乙醛**：吸入甲醛或乙醛會刺激眼部及呼吸道，引起咳嗽、喘鳴、胸痛及支氣管炎，長期吸入可能引起慢性呼吸道疾病。
- **丙二醇 (propylene glycol)**：電子煙的主要溶劑，會對皮膚及黏膜產生刺激性，過度使用會造成接觸性皮膚炎、落髮、知覺異常、腎臟損害及肝臟異常。
- **二甘醇 (Diethylene glycol, DEG)**：攝取過量，可損害肝臟和腎臟，嚴重者可引致死亡。

(National Cancer Institute, 1992; IARC, 2007, 2012; Doering et al., 2009; Simeonova R. et al., 2012)

Nicotine Gum 禁忌症

[禁忌] 胃潰瘍、心絞痛、心肌梗塞、食道炎、下顎關節疾病、孕婦。

[副作用] 大部分的副作用出現在治療初期，多是由於不正確的咀嚼步驟，或者是nicotine的局部或全身性的藥理反應，這跟你服用劑量有關。

[注意事項] 某些徵狀一如刺激性、睡眠障礙與頭重腳輕—只要nicotine量降低時，上述症狀立刻消失。在戒菸過程中曾有出現口腔潰瘍的報告，這與nicotine治療方式無關。未滿十八歲者，或懷孕及正在哺乳的婦女，若無醫師的指示下請勿使用，在使用本產品前請諮詢你的醫師、藥師或護理人員。

發生率：較常見 (> 1/100)

中樞神經系統：頭暈、頭痛

胃腸道：噁心、腸胃不適、打嗝、下顎肌肉疼痛、咽痛或口腔炎。

其它：戒菸後對nicotine仍具有依賴性。本品有可能黏牙，但很少會傷害到齒列。

發生率：少見 (1/100~1/1000)

心血管：快速或不規則的心跳。

皮膚：紅斑、蕁麻疹。

發生率：罕見 (< 1/1000)

心血管：可恢復的心房顫動。

[警告] 請置於兒童無法取得之處。

Table 1 Case series analysis for relative incidence of myocardial infarction immediately before and after first prescription for nicotine replacement therapy

Time period	Myocardial infarction analysis			Stroke analysis		
	Number of MIs	Relative incidence	95% CI	Number of strokes	Relative incidence	95% CI
Days before NRT						
43-56	13	3.29	1.89 to 5.71	4	1.49	0.55 to 3.99
29-42	24	6.02	3.99 to 9.09	8	2.93	1.45 to 5.93
15-28	18	4.48	2.80 to 7.18	17	6.17	3.78 to 10.09
1-14	33	8.51	5.96 to 12.14	10	3.72	1.97 to 7.02
Total	88	5.55	4.42 to 6.98	39	3.59	2.56 to 5.03
Days after NRT						
1-14	10	2.39	1.28 to 4.48	2	0.69	0.17 to 2.75
15-28	4	0.97	0.36 to 2.59	3	1.03	0.33 to 3.21
29-42	6	1.47	0.66 to 3.29	3	1.03	0.33 to 3.21
43-56	1	0.24	0.03 to 1.74	7	2.47	1.16 to 5.24
Total	21	1.27	0.82 to 1.97	15	1.30	0.77 to 2.19
All other time	752*			452†		

*431 events precede 56 days before NRT, 11 events of day of NRT prescription, and 310 events more than 56 days after prescription.

†243 events precede 56 days before NRT, 8 events of day of NRT prescription, and 201 events more than 56 days after prescription.

CI, confidence interval; MIs, myocardial infarctions; NRT, nicotine replacement therapy.



Research

JAMA Internal Medicine | [Original Investigation](#)

Cardiovascular Safety of Varenicline, Bupropion, and Nicotine Patch in Smokers

A Randomized Clinical Trial

Neal L. Benowitz, MD; Andrew Pipe, MD; Robert West, PhD; J. Taylor Hays, MD; Serena Tonstad, MD, PhD;
Thomas McRae, MD; David Lawrence, PhD; Lisa St Aubin, DVM; Robert M. Anthenelli, MD

Table 1. Baseline Characteristics of Participants

Characteristic	EAGLES (n = 8058)				EAGLES Extension Trial (n = 4595)			
	Varenicline (n = 2016)	Bupropion (n = 2006)	NRT (n = 2022)	Placebo (n = 2014)	Varenicline (n = 1192)	Bupropion (n = 1166)	NRT (n = 1116)	Placebo (n = 1121)
Demographics								
Age, mean (SD), y	46.5 (12.4)	46.3 (12.6)	46.9 (12.2)	46.4 (12.1)	48.1 (12.2)	47.7 (12.5)	48.3 (11.9)	47.5 (12.2)
Male, No. (%)	902 (44.7)	892 (44.5)	883 (43.7)	876 (43.5)	533 (44.7)	518 (44.4)	493 (44.2)	500 (44.6)
White race, No. (%)	1668 (82.7)	1636 (81.6)	1641 (81.2)	1639 (81.4)	978 (82.0)	946 (81.1)	904 (81.0)	893 (79.7)
BMI, mean (SD)	28.1 (6.4)	28.1 (6.4)	28.0 (6.3)	28.3 (6.4)	28.6 (6.4)	28.5 (6.6)	28.6 (6.6)	28.6 (6.6)
NPC, No. (%)	990 (49.1)	989 (49.3)	1006 (49.8)	999 (49.6)	564 (47.3)	547 (46.9)	515 (46.1)	534 (47.6)
PC, No. (%)	1026 (50.9)	1017 (50.7)	1016 (50.2)	1015 (50.4)	628 (52.7)	619 (53.1)	601 (53.9)	587 (52.4)
CV Risk Factors, No. (%)								
Diabetes	122 (6.1)	133 (6.6)	118 (5.8)	127 (6.3)	71 (6.0)	79 (6.8)	68 (6.1)	79 (7.0)
Type 1	3 (0.1)	3 (0.1)	1 (<0.1)	0	0	1 (0.1)	1 (0.1)	0
Type 2	119 (5.9)	130 (6.5)	117 (5.8)	127 (6.3)	71 (6.0)	78 (6.7)	67 (6.0)	79 (7.0)
CHD ^a	94 (4.7)	96 (4.8)	88 (4.4)	87 (4.3)	58 (4.9)	58 (5.0)	52 (4.7)	51 (4.5)
Carotid artery disease ^b	17 (0.8)	9 (0.4)	15 (0.7)	12 (0.6)	12 (1.0)	6 (0.5)	6 (0.5)	10 (0.9)
Family history of premature CHD ^c	304 (15.1)	277 (13.8)	280 (13.8)	300 (14.9)	181 (15.2)	153 (13.1)	163 (14.6)	162 (14.5)
Baseline CV risk score, mean (SD) ^d	8.3 (7.6)	8.4 (8.2)	8.4 (7.8)	8.2 (7.6)	8.8 (7.9)	8.6 (7.9)	9.0 (8.1)	8.6 (8.0)
Baseline CV risk category, No. (SD)^d								
Low risk (<10%)	1403 (69.6)	1410 (70.3)	1408 (69.6)	1444 (71.7)	798 (66.9)	809 (69.4)	747 (66.9)	787 (70.2)
Medium risk (10%-20%)	460 (22.8)	426 (21.2)	451 (22.3)	412 (20.5)	298 (25.0)	259 (22.2)	270 (24.2)	235 (21.0)
High risk (>20%)	153 (7.6)	170 (8.5)	163 (8.1)	158 (7.8)	96 (8.1)	98 (8.4)	99 (8.9)	99 (8.8)
CV Medical History, No. (%)								
Participants with ≥1 disease/syndrome	676 (33.5)	671 (33.4)	681 (33.7)	663 (32.9)	422 (35.4)	405 (34.7)	398 (35.7)	400 (35.7)
Atrial fibrillation	3 (0.1)	3 (0.1)	3 (0.1)	1 (<0.1)	2 (0.2)	1 (0.1)	2 (0.2)	1 (0.1)
Congestive cardiac failure	2 (0.1)	2 (0.1)	3 (0.1)	3 (0.1)	0	1 (0.1)	3 (0.3)	1 (0.1)
Dyslipidemia	374 (18.6)	374 (18.6)	383 (18.9)	356 (17.7)	241 (20.2)	236 (20.2)	221 (19.8)	217 (19.4)
Hypertension	451 (22.4)	450 (22.4)	474 (23.4)	448 (22.2)	273 (22.9)	265 (22.7)	284 (25.4)	267 (23.8)
PVD	20 (1.0)	16 (0.8)	16 (0.8)	22 (1.1)	15 (1.3)	8 (0.7)	10 (0.9)	9 (0.8)
Coronary artery bypass	2 (0.1)	0	2 (0.1)	1 (<0.1)	0	0	1 (0.1)	1 (0.1)
Percutaneous coronary intervention	1 (<0.1)	3 (0.1)	1 (<0.1)	3 (0.1)	0	3 (0.3)	0	1 (0.1)
Decreased ankle brachial index	0	0	0	3 (0.1)	0	0	0	1 (0.1)
Familial risk factor	49 (2.4)	43 (2.1)	45 (2.2)	42 (2.1)	27 (2.3)	29 (2.5)	26 (2.3)	22 (2.0)

Table 2. Overall Occurrence of CV End Points During Treatment and 52 Weeks of Follow-up

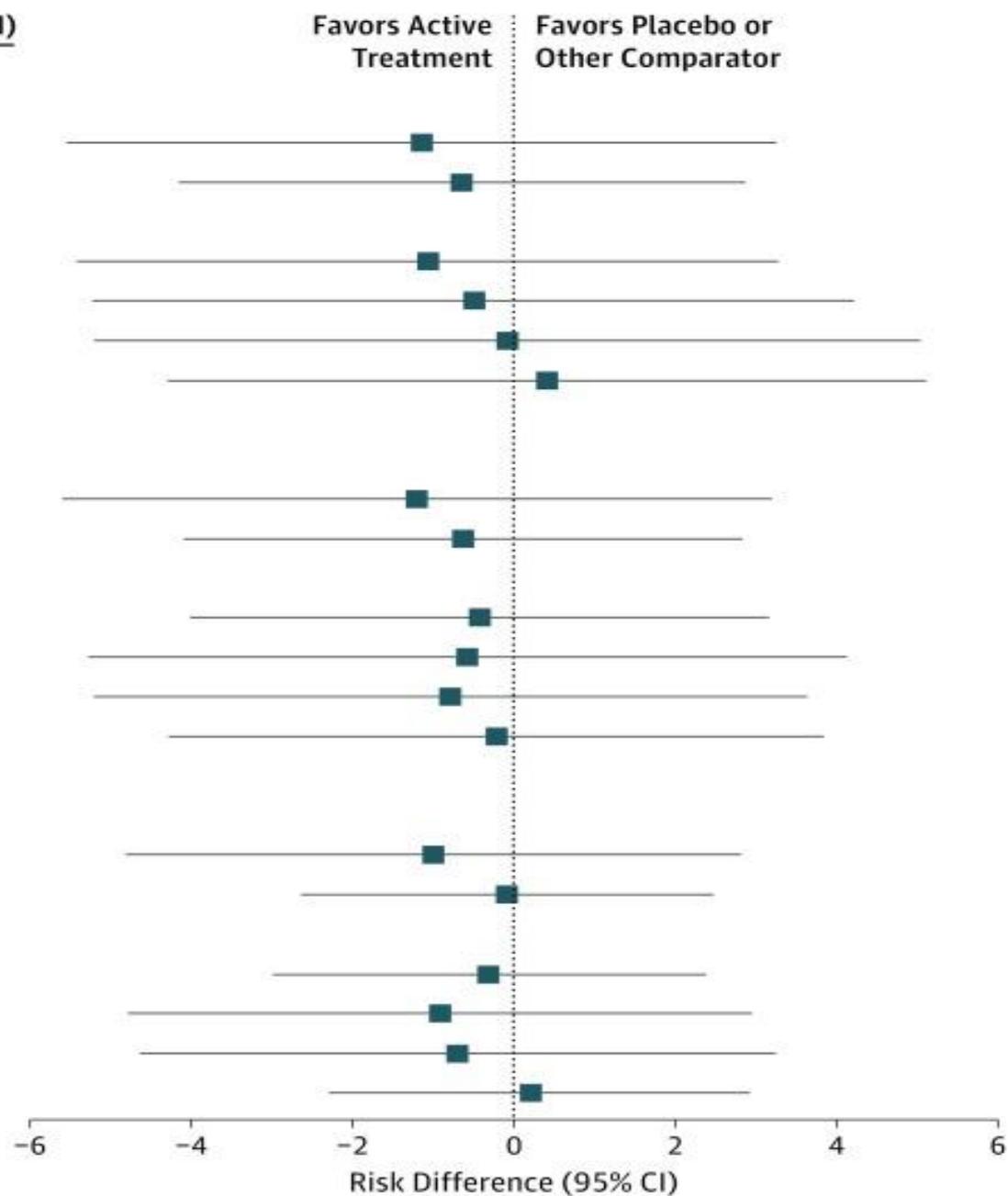
End Point	No. (%)			
	Varenicline (n = 2016)	Bupropion (n = 2006)	NRT (n = 2022)	Placebo (n = 2014)
MACE				
During treatment period	1 (<0.1)	2 (0.1)	1 (<0.1)	4 (0.2)
Until 30-d follow-up	1 (<0.1)	2 (0.1)	2 (0.1)	4 (0.2)
End of study ^a	3 (0.1)	9 (0.4)	6 (0.3)	8 (0.4)
MACE+				
During treatment period	5 (0.2)	4 (0.2)	2 (0.1)	5 (0.2)
Until 30-d follow-up	5 (0.2)	4 (0.2)	3 (0.1)	7 (0.3)
End of study ^a	10 (0.5)	15 (0.7)	10 (0.5)	12 (0.6)
CV Death				
During treatment period	0	1 (<0.1)	0	1 (<0.1)
Until 30-d follow-up	0	1 (<0.1)	0	1 (<0.1)
End of study ^a	1 (<0.1)	2 (0.1)	0	2 (0.1)
Nonfatal MI				
During treatment period	1 (<0.1)	1 (<0.1)	1 (<0.1)	3 (0.1)
Until 30-d follow-up	1 (<0.1)	1 (<0.1)	1 (<0.1)	3 (0.1)
End of study ^a	2 (0.1)	4 (0.2)	3 (0.1)	5 (0.2)
Nonfatal Stroke				
During treatment period	0	0	0	0
Until 30-d follow-up	0	0	1 (<0.1)	0
End of study ^a	0	4 (0.2)	3 (0.1)	1 (<0.1)
New-Onset or Worsening PVD Requiring Intervention				
During treatment period	0	1 (<0.1)	1 (<0.1)	0
Until 30-d follow-up	0	1 (<0.1)	1 (<0.1)	2 (0.1)
End of study ^a	3 (0.1)	3 (0.1)	3 (0.1)	2 (0.1)
Hospitalization for Unstable Angina				
During treatment period	1 (<0.1)	0	0	0
Until 30-d follow-up	1 (<0.1)	0	0	0
End of study ^a	1 (<0.1)	2 (0.1)	0	0
Coronary Revascularization				
During treatment period	4 (0.2)	2 (0.1)	1 (<0.1)	4 (0.2)
Until 30-d follow-up	4 (0.2)	2 (0.1)	1 (<0.1)	4 (0.2)
End of study ^a	4 (0.2)	5 (0.2)	2 (0.1)	7 (0.3)
Serious Cardiac Arrhythmia				
During treatment period	2 (0.1)	1 (<0.1)	3 (0.1)	0
Until 30-d follow-up	3 (0.1)	2 (0.1)	4 (0.2)	0
End of study ^a	5 (0.2)	2 (0.1)	8 (0.4)	3 (0.1)
Hospitalization for CHF				
During treatment period	0	0	0	3 (0.1)
Until 30-d follow-up	0	0	0	4 (0.2)
End of study ^a	0	1 (<0.1)	1 (<0.1)	5 (0.2)

Abbreviations: CHF, congestive heart failure; CV, cardiovascular; MACE, major adverse CV event; MACE+, any MACE or a new-onset or worsening peripheral vascular disease (PVD) requiring intervention, a need for coronary revascularization, or hospitalization for unstable angina; MI, myocardial infarction; NRT, nicotine replacement therapy (transdermal nicotine patch).

^a Last visit in the EAGLES extension trial or in EAGLES for individuals not enrolled in the EAGLES extension trial.

A MACE

Period	Risk Difference (95% CI)
During treatment period	
Primary comparisons	
Varenicline vs placebo	-1.13 (-5.54 to 3.27)
Bupropion vs placebo	-0.64 (-4.15 to 2.88)
Secondary comparisons	
NRT vs placebo	-1.06 (-5.41 to 3.28)
Varenicline vs bupropion	-0.49 (-5.22 to 4.23)
Varenicline vs NRT	-0.07 (-5.20 to 5.05)
Bupropion vs NRT	0.42 (-4.28 to 5.13)
Until 30-d follow-up	
Primary comparisons	
Varenicline vs placebo	-1.20 (-5.60 to 3.21)
Bupropion vs placebo	-0.62 (-4.09 to 2.84)
Secondary comparisons	
NRT vs placebo	-0.42 (-4.01 to 3.17)
Varenicline vs bupropion	-0.57 (-5.27 to 4.13)
Varenicline vs NRT	-0.78 (-5.21 to 3.65)
Bupropion vs NRT	-0.21 (-4.27 to 3.85)
Until end of study	
Primary comparisons	
Varenicline vs placebo	-0.99 (-4.80 to 2.82)
Bupropion vs placebo	-0.08 (-2.63 to 2.48)
Secondary comparisons	
NRT vs placebo	-0.30 (-2.99 to 2.39)
Varenicline vs bupropion	-0.91 (-4.78 to 2.96)
Varenicline vs NRT	-0.69 (-4.63 to 3.26)
Bupropion vs NRT	0.22 (-2.48 to 2.93)



B MACE+

Period	Risk Difference (95% CI)
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During treatment period

Primary comparisons

Varenicline vs placebo	-0.21 (-3.36 to 2.94)
Bupropion vs placebo	-0.14 (-3.13 to 2.85)

Secondary comparisons

NRT vs placebo	-0.77 (-4.85 to 3.31)
Varenicline vs bupropion	-0.07 (-3.48 to 3.34)
Varenicline vs NRT	0.56 (-3.58 to 4.70)
Bupropion vs NRT	0.63 (-3.72 to 4.98)

Until 30-d follow-up

Primary comparisons

Varenicline vs placebo	-0.60 (-3.35 to 2.15)
Bupropion vs placebo	-0.39 (-2.92 to 2.14)

Secondary comparisons

NRT vs placebo	-0.37 (-3.23 to 2.50)
Varenicline vs bupropion	-0.21 (-3.22 to 2.81)
Varenicline vs NRT	-0.23 (-3.09 to 2.63)
Bupropion vs NRT	-0.02 (-3.32 to 3.27)

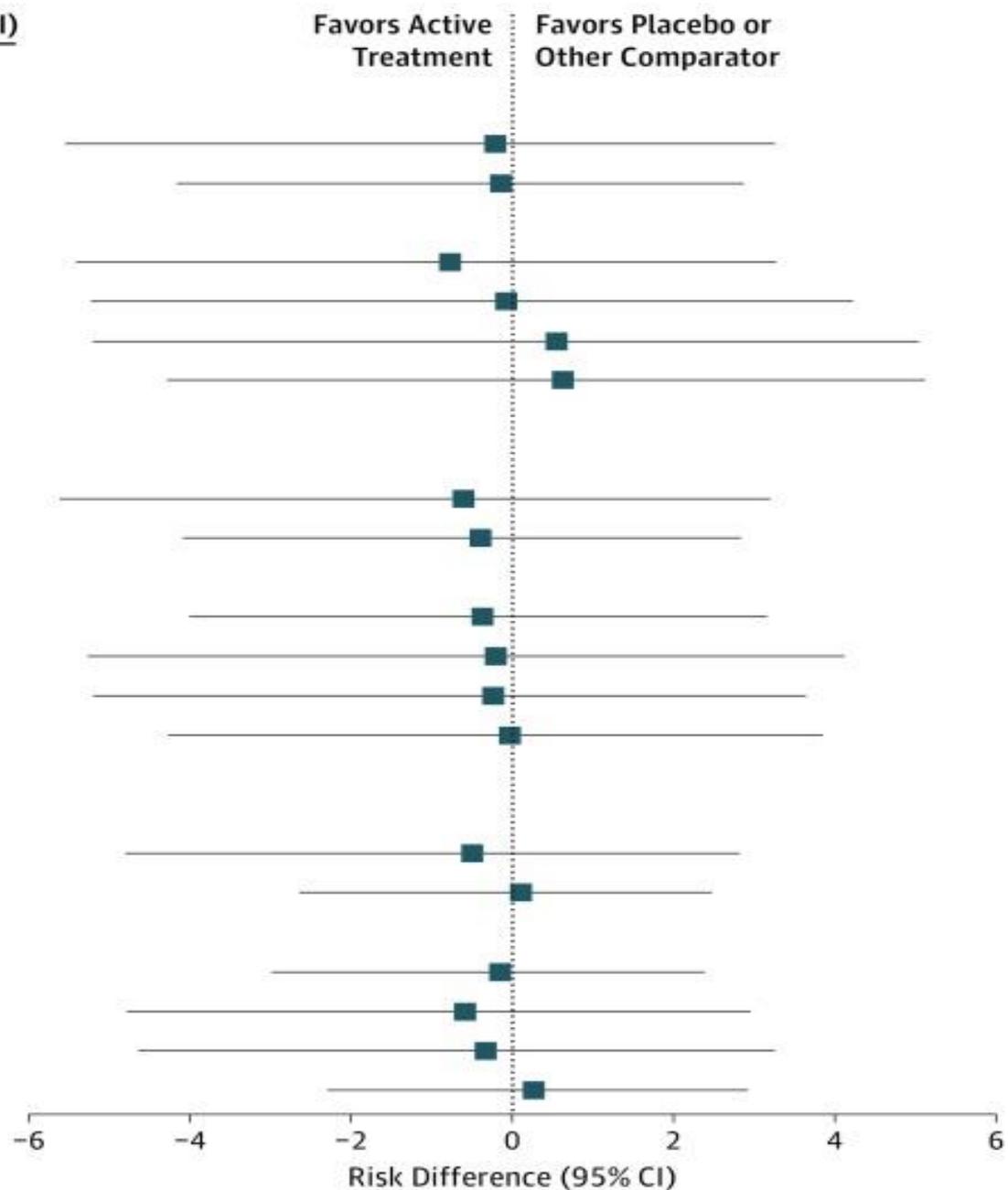
Until end of study

Primary comparisons

Varenicline vs placebo	-0.48 (-2.75 to 1.80)
Bupropion vs placebo	0.11 (-2.04 to 2.25)

Secondary comparisons

NRT vs placebo	-0.16 (-2.32 to 2.00)
Varenicline vs bupropion	-0.59 (-2.84 to 1.67)
Varenicline vs NRT	-0.32 (-2.65 to 2.01)
Bupropion vs NRT	0.27 (-1.95 to 2.49)





RESEARCH

Smoking abstinence 1 year after acute coronary syndrome: follow-up from a randomized controlled trial of varenicline in patients admitted to hospital

Sarah B. Windle MPH, Payam Dehghani MD, Nathalie Roy MD, Wayne Old MD, François R. Grondin MD, Iqbal Bata MD, Ayman Iskander MD, Claude Lauzon MD, Nalin Srivastava MD, Adam Clarke MD, Daniel Cassavar MD, Danielle Dion MD, Herbert Haught MD, Shamir R. Mehta MD, Jean-François Baril MD, Charles Lambert MD, Mina Madan MD, Beth L. Abramson MD MSc, Mark J. Eisenberg MD MPH; for the EVITA Investigators*

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See related article at www.cmaj.ca/lookup/doi/10.1503/cmaj.180125

The Evaluation of Varenicline in Smoking Cessation for Patients Post–Acute Coronary Syndrome (EVITA) trial

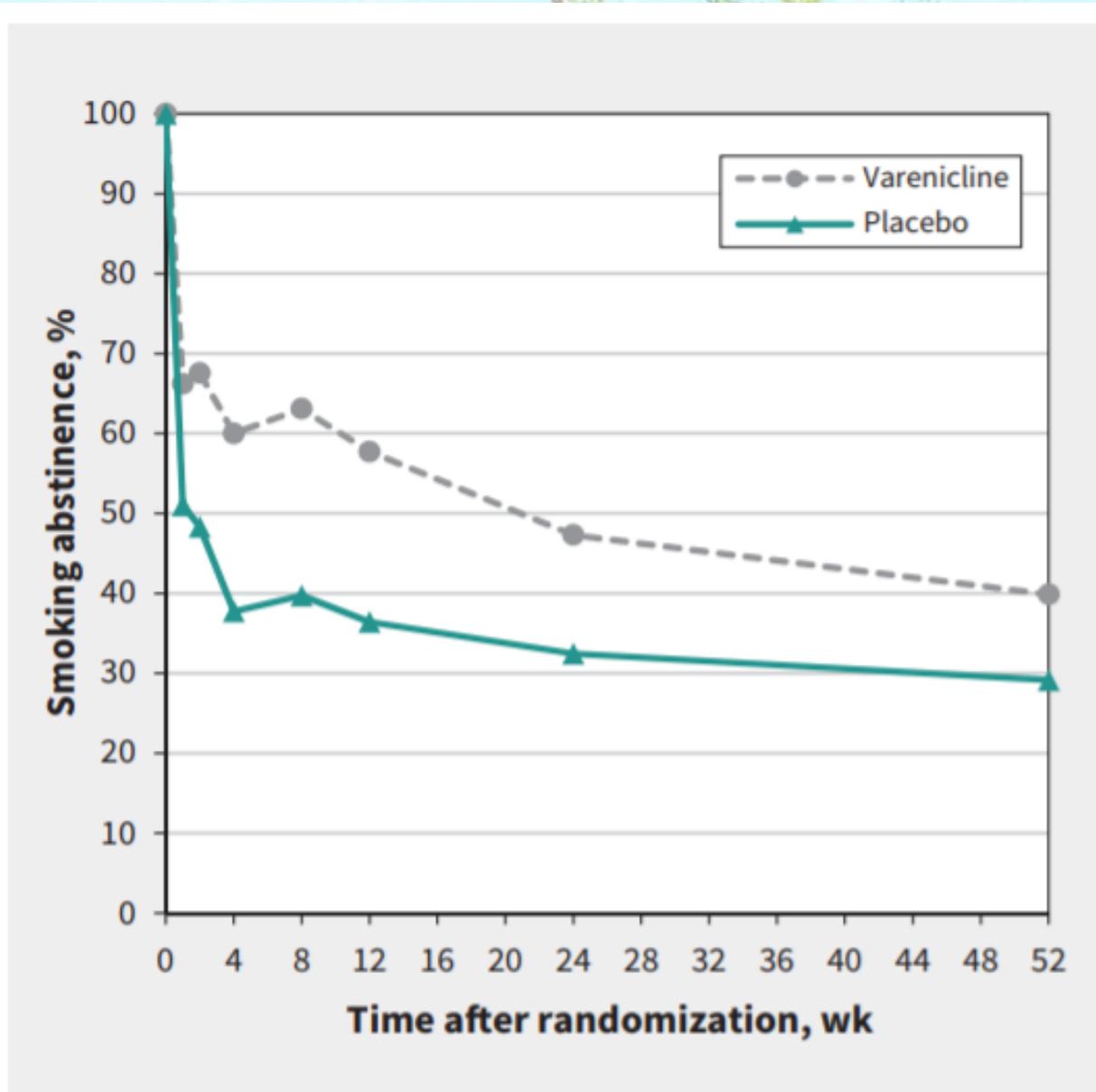


Table 2: Serious adverse events by treatment group

Serious adverse events from baseline to week 52	No. (%) of participants		Risk difference (95% CI)
	Varenicline <i>n</i> = 151	Placebo <i>n</i> = 151	
Any serious adverse event*	37 (24.5)†	33 (21.9)‡	2.7 (-7.3 to 12.6)
Composite major adverse cardiovascular events (cardiovascular death, MI, unstable angina)	13 (8.6)	14 (9.3)	-0.7 (-7.8 to 6.5)
Cardiovascular death	2 (1.3)	0	1.3 (-2.0 to 5.2)
MI	8 (5.3)	9 (6.0)	-0.7 (-6.7 to 5.4)
Unstable angina	4 (2.6)	6 (4.0)	-1.3 (-6.5 to 3.7)
Other cardiovascular event	6 (4.0)	3 (2.0)	2.0 (-2.8 to 7.1)
Noncardiovascular death	1 (0.7)	0	0.7 (-2.5 to 4.2)
Neuropsychiatric event			
Seizure	0	0	0.0 (-3.1 to 3.1)
Suicidal ideation	1 (0.7)	0	0.7 (-2.5 to 4.2)
Other neuropsychiatric event	1 (0.7)	0	0.7 (-2.5 to 4.2)
Other	19 (12.6)	17 (11.3)	1.3 (-6.6 to 9.3)

Note: CI = confidence interval, MI = myocardial infarction.

*Only the first event for each participant in each category was counted (i.e., the numbers represent the number of patients experiencing an event in each category, rather than the absolute number of events).

†37 patients in the varenicline arm experienced a total of 49 serious adverse events, with 8 patients experiencing more than 1 event.

‡33 patients in the placebo arm experienced a total of 44 serious adverse events, with 9 patients experiencing more than 1 event.

July 15, 2020

Guidelines Strongly Recommend Varenicline for Smoking Cessation

By Kelly Young

Edited by Susan Sadoughi, MD, and Richard Saitz, MD, MPH, FACP, DFASAM

Varenicline is strongly recommended over the nicotine patch and bupropion for adults who are trying to quit smoking, according to new guidelines from the American Thoracic Society published in the *American Journal of Respiratory and Critical Care Medicine*.

Among the other recommendations:

- Varenicline is also strongly recommended over the patch in patients with a comorbid psychiatric condition and for those who aren't ready to quit.
- For patients who are starting a controller therapy (e.g., varenicline, nicotine patch, bupropion), a treatment duration greater than 12 weeks is strongly recommended over 6-12 weeks.
- Varenicline is recommended over e-cigarettes for smoking cessation, but the authors caution that if adverse events continue to be reported with e-cigarettes, the strength of the recommendation could change.
- In another recommendation, they say that the use of varenicline plus a nicotine patch is preferred over varenicline monotherapy.

LINK(S):

[American Journal of Respiratory and Critical Care Medicine guidelines \(Free\)](#)

[Background: NEJM Journal Watch General Medicine coverage of varenicline plus nicotine replacement therapy \(Your NEJM Journal Watch subscription required\)](#)

Initiating Pharmacologic Treatment in Tobacco-Dependent Adults

An Official American Thoracic Society Clinical Practice Guideline

- For tobacco-dependent adults in whom treatment is being initiated
 - we recommend varenicline over a nicotine patch
 - we recommend varenicline over bupropion
 - we suggest varenicline plus a nicotine patch over varenicline alone
 - we suggest varenicline over electronic cigarettes

Initiating Pharmacologic Treatment in Tobacco-Dependent Adults

An Official American Thoracic Society Clinical Practice Guideline

- In tobacco-dependent adults who are not ready to discontinue tobacco use, we recommend that clinicians begin treatment with varenicline rather than waiting until patients are ready to stop tobacco use
- For tobacco-dependent adults with comorbid psychiatric conditions, including substance-use disorder, depression, anxiety, schizophrenia, and/or bipolar disorder, for whom treatment is being initiated, we recommend varenicline over a nicotine patch

Initiating Pharmacologic Treatment in Tobacco-Dependent Adults

An Official American Thoracic Society Clinical Practice Guideline

- For tobacco-dependent adults for whom treatment is being initiated with a controller, we recommend using extended-duration (>12 wk) over standard-duration (6–12 wk) therapy

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