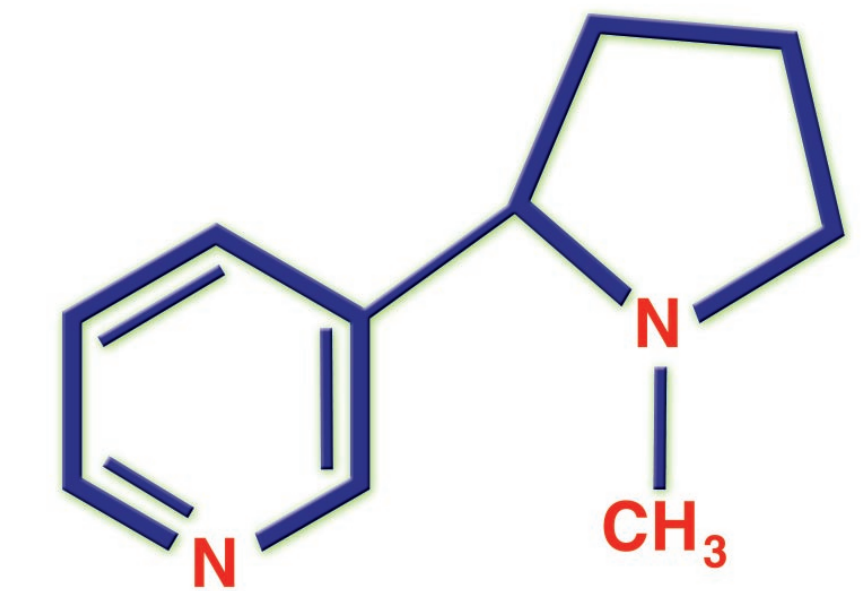


Clinical Smoking-Cessation Interventions: A Concise Review of the Evidence for Use in Clinical Guidelines



ABSTRACT

This review updates the evidence base published by West et al in Thorax in 2000. It presents the evidence concerning the effect of categories of intervention on 6-month continuous abstinence rates compared with one or more comparison conditions. The estimates are based primarily on Cochrane reviews of randomized trials supplemented by individual studies or other reviews where appropriate. Brief opportunistic advice from a physician to smokers attending a surgery clinic for a health problem can generate quit attempts; by itself, however, brief advice probably does not increase the chances of success of those quit attempts. The evidence strongly supports the conclusion that the optimal treatment programme to aid smoking cessation in those wanting help with stopping involves multi-session behavioural support delivered face-to-face in groups or individually, or by telephone, together with either nicotine replacement therapy (NRT), bupropion, nortriptyline or varenicline. With NRT, beginning use before the target quit date and using a combination of more than one form of NRT probably lead to higher success rates. Use of tailored written or web-based self-help materials can also increase cessation rates in smokers using NRT. Depending on the context and patient population the optimal treatment package can be expected to help 1 in 10 to 1 in 7 smokers to remain abstinent for at least 6 months. A promising low-cost treatment to aid smoking cessation is cytisine. Other treatments, including relapse prevention sessions after the acute nicotine withdrawal period (about 4 weeks), clonidine, complementary therapies, anxiolytics, glucose, promoting partner support, and promoting physical activity do not have clear evidence of effectiveness at this point.

STUDY BACKGROUND INFORMATION

Smoking cessation guidelines are being prepared and updated on a regular basis. It should help with quality to have a common, rigorous statement of the key findings expressed in a way that allows cost-effectiveness estimates of efficiency

STUDY GOAL

To aid in the development of guidelines for smoking cessation

STUDY OBJECTIVES

To provide a concise review of the evidence-based data on effectiveness of clinical interventions to promote smoking cessation

INTERVENTIONS COVERED

COGNITIVE-BEHAVIOURAL INTERVENTIONS

- **Brief opportunistic advice from a health professional**
 - Involves a health professional raising the topic of smoking with a patient, advising the patient to stop and offering support and follow-up
- **Behavioural support**
 - Involves providing advice and encouragement and sometimes practical exercises designed to bolster and sustain motivation to remain abstinent and minimize motivation to smoke during a quit attempt.
- **Tailored web-based support**
 - Involves advice, encouragement and practical exercises delivered via websites designed to bolster and maintain motivation to remain abstinent and minimize motivation to smoke by means of messages and information targeted at the individual user on the basis of his or her answers to a series of questions on such matters as situations that trigger the need to smoke
- **Written self-help materials, audio materials, videos or website**
 - Includes leaflets, books, cassette tapes, videos and DVDs designed to provide encouragement, advice and support to bolster motivation to stop smoking and reduce motivation to smoke.

MOTIVATION INTERVENTION

- **Nicotine Replacement Therapy**
 - Consists of products designed to deliver nicotine to the body in a form that does not involve smoking or ingestion of other toxins
- **Sustained release bupropion/amfebutamone**
 - Atypical antidepressant that has multiple actions in the brain involving dopamine and noradrenalin pathways and may also act as a nicotinic antagonist.
- **Varenicline**
 - Partial agonist designed to act primarily on the nicotinic acetylcholine receptor composed of alpha4beta2 subunits.
- **Nortriptyline**
 - Tricyclic anti-depressant.
- **Clonidine**
 - Adrenergic antagonist formerly used to control high blood pressure.
- **Cytisine (Tabex)**
 - Partial agonist acting primarily on the nicotinic acetylcholine receptor composed of alpha4beta2 subunits.

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MAIN FINDINGS

Evidence on Smoking Cessation Interventions

INTERVENTION	POPULATION	6-MONTH ABSTINENCE	CONTROL
Brief opportunistic advice from a health professional	Unselected smokers attending a consultation for some other condition	Increased 1-3% over a baseline quit rate of 3% (NNT= 33-100)	Vs doing nothing
Behavioural support	Smokers seeking help with stopping	Increased 3-7% (NNT=14-33)	Vs 5% quit rate for people trying to quit but not receiving face to face support
Tailored web-based support	Smokers using NRT to help them stop and not using behavioural support	Increased 1-3% (NNT=33-100)	Vs untailored websites or nothing
Leaflets, books, cassette tapes, videos and DVDs	Smokers with varied interest in quitting	Clinical and statistical trials too heterogeneous to draw conclusions	Vs no intervention
NRT	Smokers who smoke 15 or more cigarettes per day	Increased 5-8% (NNT=13-20)	Vs placebo group quit rates of 8-12%
Combining different forms of NRT (eg, patch plus gum)	Smokers who smoke 15 or more cigarettes per day	Increased 1-6% (NNT=17-100)	Vs single form of NRT
Sustained release bupropion/amfebutamone	Smokers who smoke 15 or more cigarettes per day	Increased 6-10% (NNT=10-17)	Vs placebo groups quit rates of 10%
Varenicline	Smokers who smoke 15 or more cigarettes per day	Increased 19-20% (NNT=5-11)	Vs placebo quit rate of 8%
Nortriptyline	Smokers of 15 or more cigarettes per day	Increased 3-10% (NNT=8-33)	Vs bupropion quit rate of 14%
Clonidine	Smokers wanting help with stopping	Increased 4-15% (NNT=7-25)	Vs placebo quit rate of 8%
Cytisine (Tabex)	Smokers wanting help with stopping	Increased 2-10% (NNT=10-50)	Vs placebo
	Smokers of 10 or more cigarettes per day	Increased 3-7% (NNT=14-33)	Vs placebo

CONCLUSIONS

A wide range of clinical interventions are available to increase the chances of smoking cessation. Brief advice from a physician, given opportunistically to patients seeking healthcare for reasons other than smoking, can trigger quit attempts. Offering multi-session, face-to-face behavioural support in groups or individually by specially trained healthcare workers can increase cessation rates, as can a similar kind of support provided by telephone. NRT, bupropion, nortriptyline and varenicline all significantly increase smokers' chances of stopping successfully. Starting to use nicotine patches prior to the target quit date and using a combination of different forms of NRT probably increase success rates compared with the conventional pattern of usage. Tailored self-help materials delivered by post or via the internet can increase success rates in those not using face-to-face or telephone support. Cytisine is inexpensive and may help achieve cessation but further clinical trials are needed to be sure. In every case where a smoking cessation intervention has been found to have at least some benefit, it will be extremely cost-effective in preserving life.

It may be the case that different interventions work with different smokers or that the same intervention will fail to prevent a smoker resuming smoking on one occasion but succeed on another. It will certainly be the case that some smokers will be more affected by adverse reactions from some interventions than others or be more attracted to some interventions than others. Therefore, smokers should have access to as wide a range of proven interventions as possible and be encouraged to use one of these rather than unproven aids or no aid at all. In many cases their health and even their lives will depend on it.