



Title	The Effectiveness and Cost Effectiveness of Medical Treatments for Smoking Cessation
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Aim

To evaluate the effectiveness of medical treatments for smoking cessation by reviewing the existing literature. In addition, we reviewed the cost effectiveness of these interventions.

Conclusions and results

In Belgium, smoking prevalence is 26%. Smokers die on average 6 years earlier, and studies with longer followup report even higher loss of life years. Smoking cessation is the single most important intervention improving the health of smokers at all ages. Quitting before the age of 35 will remove nearly all health consequences of smoking.

Brief physician advice, individual and group therapies, telephone counseling, and tailored self-help materials are modestly effective in helping people to stop smoking. Nicotine replacement therapy (NRT) is also effective. Evidence on the different forms of nicotine replacement does not show a significant difference among them. Bupropion and nortryptiline both have similar significant effects on smoking cessation rates. The adverse events profiles differ, with seizures in approximately 1/1000 patients as the most serious event for bupropion, and cardiac block as the most serious for nortryptiline.

The costs and cost effectiveness of NRT and bupropion are similar, the incremental cost per quitter ranges between 1000 € and 2500 €. Costs per saved life year vary between 400 € to 13 000 €, while the costs per saved QALY vary between 1200 € and 4000 €. In most studies, NRT and bupropion are part of strategies including brief advice or counseling. The costs increase as the intensity of the advice or counseling increases. Compared to other health interventions among smokers, smoking cessation therapy is highly cost effective.

Recommendations

Non-pharmacological therapies have a modest, but significant, effect on quitting rates. As for pharmacological therapies, both NRT and bupropion are effective. Nortryptiline is an interesting alternative, but the ad-

verse events need to be studied more in the context of smoking cessation. As all these interventions are cost effective, and the benefit of quitting is so large, therapy should be offered to all smokers, provided they are motivated to stop.

Methods

A literature review of medical databanks, HTA reports, and guidelines.

Further research/reviews required

More information is needed on the adverse events caused by bupropion and nortryptiline used for smoking cessation. Nortryptiline is an inexpensive generic product, and its cost effectiveness in smoking cessation may be several times greater than nicotine replacement therapies or bupropion. To make a more informed choice between the various therapies, more studies are needed that directly compare NRT, bupropion and nortryptiline, and the optimal intensity of counseling.