

Clinical reviews

Our panel of GPs review recent research papers in their specialist areas that may influence the way you practise

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Smoking cessation

Evaluating interventions to help smokers quit

Varenicline and a combination of pharmacological and behavioural interventions were the two most effective methods for smoking cessation, a systematic review by the US Preventive Services Task Force (USPSTF) has found. Data on the effectiveness and safety of e-cigarettes for smoking cessation in adults were limited and study results inconsistent.

Behavioural interventions were effective for smoking cessation in pregnant women, but data were limited on the use of medications.

In 2015, the USPSTF issued a number of recommendations relating to tobacco cessation interventions for adults. The objective of this systematic review was to inform the USPSTF as it considers updating those recommendations.

To gather data three separate literature searches of articles in the English language, published since January 2014, were carried out. Two researchers independently reviewed all identified abstracts and full text articles against predetermined eligibility criteria. Studies that examined the effectiveness of tobacco cessation interventions for adults were included if they were systematic

reviews, with or without meta-analysis.

A method was developed to identify one or more reviews for each population and intervention group that represented the most current and applicable evidence. These reviews were used as the basis for the main findings. All other reviews were examined for complementary or discordant findings.

The study addressed two specific populations: the general adult population and pregnant women.

Sixty-seven reviews addressing pharmacotherapy and behavioural interventions were included. In addition, 9 trials (n = 3,942) that investigated e-cigarettes for smoking cessation and 7 trials (n = 2,285) of nicotine replacement therapy (NRT) in pregnancy were also included.

In the general adult population, the following interventions were all associated with increased quit rates at 6 months or longer compared with minimal support or placebo, pooled risk ratio (RR):

- Varenicline RR 2.24 (95% CI: 2.06-2.43)
- Combined pharmacotherapy and behavioural interventions RR 1.83 (95% CI: 1.68-1.98)
- Behavioural interventions e.g. advice from clinicians RR 1.76 (95% CI: 1.58-1.96)
- Bupropion RR 1.64 (95% CI: 1.52-1.77)
- NRT RR 1.55 (95% CI: 1.49-1.61)

Average quit rates in trials of combined pharmacotherapy and behavioural interventions ranged from 2% to 50% with a mean of 15.2%, while rates in control groups were between 0% and 36% with a mean of 8.6%. None of the drugs reviewed were associated with serious adverse events.

Five trials on the effectiveness of e-cigarettes on smoking cessation (n = 3,117) reported inconsistent findings when compared with placebo or NRT. Few trials reported on potential adverse events.

In pregnant women, behavioural interventions were associated with greater smoking cessation during late

pregnancy RR 1.35 (95% CI: 1.23-1.48) compared with no intervention. Rates of validated cessation among pregnant women allocated to NRT were not significantly different compared with placebo RR 1.11 (95% CI: 0.79-1.56), n = 2,033.

The study authors state: 'Evidence on the potential benefits and harms of pharmacotherapy for smoking cessation during pregnancy is limited, with few placebo-controlled trials and limited power for detecting both potential benefits and harms.'

'Data on the effectiveness and safety of electronic cigarettes for smoking cessation among adults are also limited and results are inconsistent,' they add.

DR JEZ THOMPSON

Patnode CD, Henderson JT, Coppola EL et al. Interventions for tobacco cessation in adults, including pregnant persons updated evidence report and systematic review for the US Preventive Services Task Force. JAMA 2021;325(3):280-98 >>