

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
All smoking of tobacco should be stopped, as tobacco use is strongly and independently causal of ASCVD. <sup>487,488</sup>	I	A
In smokers, offering follow-up support, nicotine replacement therapy, varenicline, and bupropion individually or in combination should be considered. <sup>489–494</sup>	IIa	A
Smoking cessation is recommended regardless of weight gain, as weight gain does not lessen the ASCVD benefits of cessation. <sup>495</sup>	I	B

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#### 4.5.1. Smoking cessation

Stopping smoking is potentially the most effective of all preventive measures, with substantial reductions in (repeat) myocardial infarctions or death. Lifetime gains in CVD-free years are substantial at all ages, and benefits are obviously even more substantial if other complications from smoking would be accounted for. From age 45 years, gains of 3 – 5 years persist in men to age 65 and in women to age 75 years. Even in heavy smokers ( $\geq 20$  cigarettes/day), cessation lowers CVD risk within 5 years, although it remains elevated beyond 5 years. Total health benefits will be even larger because of gain in non-CVD health.

Quitting must be encouraged in all smokers, and passive smoking should be avoided as much as possible. Very brief advice may be advantageous when time is limited (See intersection). A major impetus for cessation occurs at the time of diagnosis or treatment of CVD. Prompting a person to try to quit, brief reiteration of CV and other benefits of quitting, and agreeing on a specific plan with a follow-up arrangement are evidence-based interventions.

##### ‘Very brief advice’ for smoking cessation

‘Very brief advice’ on smoking is a proven 30-second clinical intervention, developed in the UK, which identifies smokers, advises them on the best method of quitting, and supports subsequent quit attempts. There are three elements to very brief advice:

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ASK – establishing and recording smoking status

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ADVISE – advising on the best ways of stopping

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ACT – offering help

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UK = United Kingdom.

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Smokers who quit may expect an average weight gain of 5 kg, but the health benefits of tobacco cessation outweigh risks from weight gain. Persistent or reuptake of smoking is common in patients with CHD, in particular in those with severe depression and environmental exposures. Mood-management therapies may improve outcomes in patients with current or past depression.

#### 4.5.2. Evidence-based drug interventions

Drug support for stopping smoking should be considered in all smokers who are ready to undertake this action. Evidence-based drug interventions include nicotine-replacement therapy (NRT), bupropion, varenicline, and cytisine (not widely available). All forms of NRT (chewing gum, transdermal nicotine patches, nasal spray, inhaler, sublingual tablets) are effective. Combination vs. single-form NRT and 4 mg vs. 2 mg gum can increase success. NRT shows no adverse effects in patients with ASCVD, but evidence of efficacy in this group is inconclusive. In patients with ASCVD, varenicline (RR 2.6), bupropion (RR 1.4), telephone therapy (RR 1.5), and individual counselling (RR 1.6) all increase success rates. The antidepressant, bupropion, aids long-term smoking cessation with similar efficacy to NRT.

Varenicline 1 mg *b.i.d.* (twice a day) increases quitting rates more than two-fold compared with placebo. The RR for abstinence vs. NRT was 1.25 and vs. bupropion, 1.4. Lower or variable doses are also effective and reduce side-effects. Varenicline beyond the 12-week standard regimen is well tolerated. Varenicline initiated in hospital following ACS is efficacious and safe.

The main side-effect of varenicline is nausea, but this usually subsides. A causal link between varenicline and neuropsychiatric adverse events is unlikely. Varenicline, bupropion, and NRT do not increase serious CV adverse event risks during or after treatment.

Cytisine is effective for smoking cessation, but evidence to date is limited.

##### 4.5.2.1 Electronic cigarettes

Electronic cigarettes (e-cigarettes) simulate combustible cigarettes by heating nicotine and other chemicals into a vapour. E-cigarettes deliver nicotine without most of the tobacco chemicals, and are probably less harmful than tobacco.

Recent evidence suggests that e-cigarettes are probably more effective than NRT in terms of smoking cessation. The long-term effects of e-cigarettes on CV and pulmonary health, however, require more research. Dual use with cigarettes should be avoided. Furthermore, as

e-cigarettes are addictive, their use should be subject to similar marketing controls as standard cigarettes, especially the flavoured varieties that appeal to children. Despite being lower in toxicants than regular cigarettes, 'heat-not-burn' cigarettes do contain tobacco and should be discouraged.