

Quick wins: the short-term benefits of stopping smoking

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Author: Lion Shahab

Editor: Andy McEwen

Reviewers: Susan Michie and Robert West

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Summary

This briefing summarises evidence on the benefits of smoking cessation, focusing on gains within the first year of stopping smoking.

- The largest health gain in the first year is a 50% reduction in excess risk of fatal and non-fatal heart attack in those who are 35+ years old. This represents 14 premature deaths prevented for every 1,000 middle aged or older people who stop smoking
- For those suffering from chronic obstructive pulmonary disease (COPD) there are fewer hospital admissions and deaths because of a reduction in acute episodes known as 'exacerbations'
- Within three months there is improvement in overall lung function in people with mild to moderate COPD
- Erectile dysfunction reduces within one month
- There is a reduction in periodontal disease within one year
- In people undergoing surgery, wound healing is improved and risk of post-operative complications reduced
- In pregnancy, risk of low birth weight reduces, and risk of pre-term birth, spontaneous abortion, maternal and perinatal death decreases
- Facial appearance (pallor and wrinkles) improves within one month
- Improved sense of taste and smell occurs within 12 months
- Overall life satisfaction increases within one year
- Anxiety and depression levels decrease within three to six months
- Potential to save an average of £1,300 in the first year on the cost of cigarettes

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1. Background

Stopping smoking improves healthy life expectancy by an average of six hours for each day of smoking prevented after early middle age,¹ up to approximately 10 years in both men and women if they stop smoking in their 30s.

For most people this benefit does not accrue until later in life. Many people who smoke and public bodies for whom smoking represents a financial cost are interested in knowing what benefits can be expected much sooner than that. This briefing summarises evidence on benefits that can be expected within the first year of stopping.

2. Methods

Electronic research databases (PubMed, Web of Science and Google Scholar) were reviewed using the terms "benefit", "advantage", "improvement", "amelioration" or "gain" and the terms "short-term", "immediate", "acute", "rapid", "instant" or "quick" in addition to terms for smoking cessation. Where existing reviews were found these were used. Otherwise, primary research findings were analysed and summarised.

3. Results

Physical health

Table 1 shows the expected physical health benefits from stopping smoking. The most notable benefits are improved lung functioning (including a decrease in COPD symptoms), lower heart rate, decrease in risk to babies during and after pregnancy and faster wound healing.

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Table 1: Expected physical health benefits within 12 months of smoking cessation

Time since quit	System				
	Respiratory	Vascular*	Re-productive	Gastro-intestinal	General
<1 months	Improvement in pulmonary CO diffusing capacity ^{2,3} and pulmonary epithelial permeability ⁴	Improvement in coronary vaso-constriction, lipid and fibrinolytic profile and oxidative injury ⁵⁻⁷	Improvement in hemodynamics, rigidity and tumescence in men with erectile dysfunction ^{8,9}	Reduction in daily gastro-esophageal reflux, ¹⁰ faster gastric ulcer healing ¹¹	
<2 months	Improvement in FEV1, decreased sputum neutrophils in asthmatics ¹²	Lowered arterial pressure and heart rate ^{13, 14}			Reduced post-operative complications and improved wound healing ^{15, 16}
<3 months	Decrease in COPD/respiratory disease symptoms (wheeziness, expectoration, cough) and reduced severity ¹⁷⁻¹⁹		Possible improvement in sperm quality ²⁰		
<4 months	Improved airway hyper-activity and respiratory symptoms in asthmatics ²¹				
<6 months		Improved airway hyper-activity and respiratory symptoms in asthmatics ²¹	Excess risk of low birth weight and associated complications eliminated ²³⁻²⁵	Faster healing of duodenal ulcers, ²⁶ reduced recurrence of gastric ulcer ²⁷	
<9 months			Perinatal death and preterm delivery likely to be reduced ¹¹		
<12 months	Improved FEV1 and reduced airway inflammation in healthy individuals or individuals with mild COPD; ²⁸⁻³⁰ improved airway hyper-reactivity and decreased epithelial remodelling in COPD patients ^{30, 31}	Decreased risk of primary as well as secondary CHD ^{11, 32, 33} including MI; ^{34, 35} improved survival following surgery for PAD ¹¹		Reduction in duodenal ulcer relapse and Crohn's disease flare-up ^{36, 37}	Improved olfaction ³⁸

Table 1: Rapid health gains from stopping smoking; *Generally, most pronounced benefits are seen in those with pre-existing conditions; CO: carbon monoxide, COPD: Chronic obstructive pulmonary disease, FEV1: Forced-expiratory volume in one second; CHD: Coronary heart disease, PAD: Peripheral arterial disease

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Wellbeing

Below, a number of other positive effects of smoking cessation that occur within a relatively short amount of time are presented. These include healthier appearance of the skin and improvement of bad breath; also increased self-confidence, more social interaction and greater engagement in other healthy behaviours.

Aesthetic improvements

- Smoking is associated with a number of oral conditions such as bad breath, stained teeth and periodontal disease and these tend to be quickly reversible in the early stages after smoking cessation^{39, 40}
- Smoking also has dermatological consequences, and there are a number of rapid improvements following smoking cessation, such as a reduction in the recurrence of psoriasis, palmoplantar pustulosis and skin ulcers⁴¹
- Smoking cessation also improves the appearance of skin and nails in the absence of nicotine staining and a halting in the aging of skin and formation of wrinkles which is enhanced in those who smoke⁴²

Psychosocial improvements

- There is evidence that smoking cessation is not only a consequence of higher self-confidence (or self-efficacy) but that smoking cessation itself causes improvements in both these cognitions within a short timeframe^{11, 43–45}
- Studies increasingly suggest that as people who used to smoke play an active role in structuring social interactions and support, so as to maintain abstinence and remain at the centre of social networks, those who continue to smoke become pushed to the periphery and socially isolated^{11, 46}

Improvements in other health behaviours

- Smoking cessation appears to go hand in hand with fairly rapid improvements and orientation towards other healthy life choices including increases in exercise, healthy dieting, reduction in alcohol consumption and taking part in health screening programs^{11, 47–51}

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Mental health

There is increasing evidence that stopping smoking yields improvement in psychological well-being and that this occurs relatively soon after the quit date. Whilst low mood, anxiety and feeling generally unwell are common withdrawal symptoms, they are relatively short-lived.⁵² In fact, within a year of stopping smoking, life enjoyment and satisfaction levels start to increase towards those of someone who has never smoked.⁵³ Moreover, the majority of people who have recently stopped smoking report feeling happier than when they smoked.⁵⁴

In terms of mental illness, there is also good evidence that the benefits from smoking cessation are experienced relatively rapidly. Anxiety levels can start to decrease from one week after quitting⁵⁵ and this is maintained at six months, leading to a reduction in the prevalence of anxiety disorders among people who used to smoke.⁵⁶

The prevalence of anxiety and depression decreases within 12 months of stopping smoking in the general population and is not associated with any an worsening of symptoms following smoking cessation among those with a history of mental health problems.^{57–59}

Financial gains

Stopping smoking results in obvious financial gains. Recent data from the UK show that on average people spent £5.45 for 20 hand-rolled cigarettes and £6.06 for 20 manufactured cigarettes.⁶⁰ Given that the latest figures show that people on average consume 12.4 cigarettes a day,⁶¹ this means a weekly spend on cigarettes of £23.7 for hand-rolled and £26.3 for manufactured cigarettes, or £1,232.40 and £1,367.60 per year; equivalent to 5.2% of the average UK household spend.⁶²

Conclusion

There are many immediate benefits or “quick gains” from stopping smoking: ranging from improvements in physical and mental health, general well-being and appearance, plus substantial financial savings.

Making those struggling to quit aware of these acute and rapid positive effects of smoking cessation, and asking them to self-monitor to observe these improvements for themselves, may strengthen their motivation to remain abstinent and provide further reasons to stick with a quit attempt.

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The National Centre for Smoking Cessation and Training (NCSCT) was established to support the delivery of smoking cessation interventions provided by local stop smoking services, support the NHS and Local Authorities to deliver effective evidence-based tobacco control programmes, and deliver training and assessment programmes to stop smoking practitioners and other health care professionals.