How to intervene against smoking

Andy McEwen MSc: BA RMN, Research Nurse
Robert West PhD, BSc, Professor of Psychology
St George's Hospital Medical School, London SW17 0RE
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Why intervene with smokers?

- **Smoking is the biggest killer in the UK**
The causal link between smoking and increased morbidity and mortality is firmly established: 120,000 people die each year in the UK as a result of smoking, about half of them in middle age or earlier. Smokers are less fit than non-smokers, they suffer more from both minor and major illness and they feel less healthy. They also cost each health authority an average of £14 million and each general practitioner (GP) more than £8,000 in additional consultation time each year.

- **Most of the 13 million adult smokers in the UK want to stop smoking, and many are engaged in quit attempts**
Two-thirds of all cigarette smokers (ca 8 million people) say they would like to give up smoking. Results from a national survey of smokers and ex-smokers revealed that in a 12-month period 32% of smokers had made a quit attempt and 51% had tried to cut down.

- **Physicians are ideally placed to deliver smoking cessation interventions**
Doctors are perceived as important sources of health information by patients, and smokers 'expect' to receive smoking cessation advice from them. About 80% of people consult their GP at least once a year, with a higher figure for smokers.

- **Smoking cessation interventions are cost-effective**
An international review found the median societal cost of over 300 medical interventions to be £17,000 per life-year gained. The cost of smoking cessation interventions per life-year gained in the UK ranges from £212–£837. Smoking cessation interventions are considerably more cost-effective than most medical life-saving interventions.

  - **The time is right**
In December 1998 the government issued a White Paper, *Smoking kills*, outlining plans to reduce tobacco smoking in the UK. The minimum objectives to be achieved by 2010 are to reduce:

    - the smoking rates amongst children from 13% to 9%
    - the proportion of adults who smoke from 28% to 24%
    - the proportion of women who smoke during pregnancy from 23% to 15%.

The measures described in the White Paper include:

    - banning of tobacco advertising
    - taxation
    - discouraging sale of tobacco to young people
    - promoting smoke-free working and public areas
    - provision of NHS smoking cessation services.

The government does not, however, expect smoking cessation advice to be confined to these specialist services. The White Paper suggests that all health professionals have an important role to play in giving the kind of smoking cessation advice which a modern health service ought to provide.

### Key Points

- Assess the smoking status of patients at every opportunity. Records must be kept up to date
- At every reasonable opportunity advise all smokers to stop. Use phrases like 'As your doctor, I think it is important that you stop smoking' or 'Quitting smoking is the most important thing you can do for your current and future health'
- Assist all smokers who wish to stop. Help them set up a firm quit date and recommend methods and products that will help, including use of nicotine replacement therapy unless contraindicated (during pregnancy and breastfeeding). Refer to a specialist smokers' clinic if appropriate
- Arrange a follow-up appointment for those smokers who make a quit attempt without clinic support. To check on progress and to offer further advice and support

### Smoking cessation guidelines for health professionals

The smoking cessation role which health professionals are expected to fulfil is described in greater detail in *Smoking cessation guidelines for health professionals*. These guidelines have been endorsed by 19 professional and other bodies including the Royal Colleges of Physicians, General Practitioners and Nursing, the British Dental Association, the Royal Pharmaceutical Society and the British Medical Association.

The guidelines are based on published research, and make extensive...
use of systematic reviews conducted by the Cochrane Tobacco Addiction Review Group and by the Agency for Health Care Policy and Research in the USA. They recommend that physicians should:

- assess the smoking status of patients at every opportunity
- advise all smokers to stop
- assist those interested in stopping smoking
- offer follow up
- refer to a specialist cessation service if necessary
- recommend smokers who want to stop to use nicotine replacement therapy (NRT)
- provide accurate information and advice on NRT.

Smoking cessation: products, services and techniques

- **Self-quitting**
  Fifty-one percent of quit attempts involve will-power alone, but less than 5% of them will succeed for at least a year. Smokers attempting to quit need to use, and be encouraged to use, the methods and techniques known to be effective.

- **Physician advice**
  The giving of brief anti-smoking advice in routine consultations by GPs increases patients' smoking cessation rates to a small but significant extent. At present, an estimated 25% of smokers are advised to stop by their GP each year. If this figure were to rise to 75%, it is estimated that it would create an additional 75,000 ex-smokers each year in Britain.

  The brief advice need comprise only asking patients about smoking at every reasonable opportunity, advising all known smokers to stop and on the use of nicotine replacement therapy (NRT). If there is a specialist smokers' clinic in the area, smokers who want further help should be referred there. As a result of funds provided by the government, every health action zone in the country should currently have at least one specialist clinic, and after April 2000 every health authority in the country should have them. It will be the responsibility of a smoking cessation coordinator in the health authority to ensure that clinicians are aware of this service.

- **Nicotine replacement therapy**
  Rigorous investigation of NRT has shown that it approximately doubles a motivated smoker's chances of quitting. In the first few weeks or months of abstinence, NRT replaces some of the nicotine that smokers obtained from cigarettes and reduces the severity of withdrawal symptoms. Absorption of nicotine is much slower than from cigarettes, and the dose is typically lower than that obtained from smoking – which is probably why there is little problem of continued dependence on NRT products among ex-smokers.

  **Nicotine gum** comes in 2 mg and 4 mg strengths. Nicotine is released from the gum over about 30 minutes of intermittent chewing, and the drug is mainly absorbed into the bloodstream through the buccal mucosa. Smokers are recommended to start with 8–12 pieces of 2 mg strength daily, with a maximum dose of 15 pieces of 4 mg strength.

  **Nicotine patches** come in 5 mg, 10 mg and 15 mg strengths to be worn for 16 hours, or 7 mg, 14 mg and 21 mg strengths to be worn for 24 hours.

  **Nicotine nasal spray** consists of 10 ml of a 10 mg/ml nicotine solution in a small bottle with a mechanical spray device which delivers 0.5 mg of nicotine per shot. The nicotine is rapidly absorbed, mostly through the lining of the nose, and peak plasma nicotine concentrations are reached after about 10–15 minutes. One spray in each nostril, as required, should be used to a maximum of twice an hour for 16 hours in every 24 hours, and for not more than three months.

  **Nicotine inhalator** consists of a mouthpiece and a replaceable nicotine cartridge. Smokers suck on the inhalator, and nicotine vapour is drawn into the mouth where it is absorbed through the buccal mucosa. The maximal dose of nicotine is achieved after about 20 minutes of intensive use. Smokers are recommended to use 6–12 cartridges a day for the first eight weeks, reducing to zero over the next four weeks. Each cartridge provides up to three 20 minute sessions of use.

  **Nicotine sublingual tablets** (Microtab) are held under the tongue and allowed to dissolve over about 30 minutes. A tablet releases 2 mg of nicotine, 1 mg of which is then absorbed through the buccal mucosa. Smokers are recommended to use 1-2 tablets per hour, depending on cigarette consumption, but no more than 40 per day.

- **Bupropion (Zyban)**
  Bupropion (Glaxo-Wellcome) has been licensed as a prescription-only smoking cessation aid in the US, and may soon be licensed in the UK and other European countries. It was originally developed as an antidepressant. Clinical trials have shown it to be effective in increasing abstinence rates among smokers who want to stop.

- **Cutting down and smoking low tar cigarettes**
  It is unclear whether cutting down on the number of cigarettes smoked conveys any significant health benefits. The evidence indicates that smokers find reduced cigarette consumption difficult to sustain, and to compensate they increase the amount they take in from each cigarette. Similarly, there is little evidence that switching to a low tar cigarette ameliorates the health risks from smoking – again, smokers increase the intensity of smoking to compensate. It has been argued that there may be some health benefits because of a lower tar-to-nicotine ratio in such cigarettes, but this is controversial. Up to 20% of smokers try to change to a lower tar brand of cigarettes each year, although about 70% then return to smoking their previous cigarettes.

- **Specialist smokers' clinics**
  Specialist smokers' clinics can considerably increase smokers' chances of stopping. The success rates of routine
clinics outside research settings are not well-known, but studies show an increase in long-term abstinence rates of about 16% if used together with NRT\(^2\). In most clinics, smokers are seen in groups. There is as yet little evidence on whether groups are more or less effective than individual counselling, but they are potentially more cost-effective\(^3\). Clinics normally involve smokers attending once a week for four or five weeks, and sessions typically last 1-2 hours during which smokers receive:

- advice on the appropriate use of NRT
- information on what to expect during the withdrawal process
- advice on coping with or avoiding urges to smoke.

Where groups are used, clinics often use techniques to enhance group cohesion to provide an additional motivation to avoid relapse\(^3\).

**Hypnotherapy and acupuncture**

Alternative therapies are popular among patients when conventional medicine appears to have failed or for conditions that seem to be on the periphery of medical practice\(^4\). Although about 14% of GPs refer patients to hypnotherapists and 9% to acupuncturists\(^5\), systematic reviews of the research literature do not show any specific benefit from these treatments\(^6,7\).

**Conclusions**

Most smokers want to stop and are actively seeking ways of stopping. Physicians have a vital role to play in encouraging and supporting quit attempts. New national smoking cessation guidelines endorsed by the Royal College of Physicians recommend that at every opportunity physicians advise smokers to stop and to provide assistance where appropriate.

## References

1. Health Education Authority. Revised mortality estimates from smoking. London: HEA, 1996.
2. Doll R, Crofton J. Tobacco and health. Br Med Bull 1996;52:No. 1.
3. Parrott S, Godfrey C, Raw M, West R, McNeill A. Guidance for commissioners on the cost effectiveness of smoking cessation interventions. Thorax 1998;53 (Suppl 5, Part 2):S1–38.
4. Office for National Statistics. Living in Britain: results from the 1996 General Household Survey. London: The Stationery Office, 1998.
5. West R, McEwen A. Smoking cessation and harm minimisation strategies in the general population. London: Health Education Authority, 1999 (in press).
6. Kviz F, Clark M, Hope H, Davis A. Patients’ perceptions of their physicians’ role in smoking cessation by age and readiness to stop smoking. Preventive Med 1997;26:340–9.
7. Fowler G. Smoking cessation: the role of general practitioners, nurses and pharmacists. In: Bollinger C, Fagerstrom K (eds). *The Tobacco Epidemic*. Basel: Karger, 1997:165–77.
8. Office of Population Censuses and Surveys. General Household Survey 1994. London: The Stationery Office, 1996.
9. Tengs T, Adams M, Piskin J, Safran D, et al. Five hundred life saving interventions and their cost-effectiveness. Risk Anal 1995;15:369–90.
10. Anthonisen NR, Connett JE, Kiley JP, Altose MD, et al. Effects of smoking intervention and use of an inhaled anti-cholinergic bronchodilator on the rate of decline of FEV1. The Lung Health Study. JAMA 1994;272:1497–505.
11. Department of Health. Smoking kills: a White Paper on tobacco. London: The Stationery Office, 1998.
12. Raw M, McNeill A, West R. Smoking cessation guidelines for health professionals: a guide to effective smoking cessation interventions for the health care system. Thorax 1998;53(Suppl 5, Part 1).
13. The Cochrane Library. 1998. Issue 2. Oxford: Update Software (updated quarterly).
14. Fiore MC, Bailey WC, Cohen SJ, Dorfman SF, et al. Smoking cessation. Clinical Practice Guideline No. 18. Publication No. 96–0692. Rockville: Agency for Health Care Policy and Research, US Department of Health and Human Services, 1996.
15. West R. Getting serious about stopping smoking. A review of products, services and techniques. A report for No Smoking Day, 1997.
16. Hughes JR, Gulliver SB, Fenwick JW, Valliere WA, et al. Smoking cessation among self-quitters. Health Psychol 1992;11:331–4.
17. Silagy C, Ketteridge S. The effectiveness of physician advice to aid smoking cessation. The Cochrane Library, 1997, Issue 2. Oxford: Update Software (updated quarterly).
18. Silagy C, Mant D, Fowler G, Lodge M. Meta-analysis on the efficacy of nicotine replacement therapies in smoking cessation. Lancet 1994;343:139–42.
19. Benowitz N, Jacob P, Kozlowski L, Yu L. Influence of smoking fewer cigarettes on exposure to tar, nicotine, and carbon monoxide. N Engl J Med 1986;315:1310–3.
20. Stephens A, Frost C, Thompson S, Wald N. Estimating the extent of compensatory smoking. In: Wald N, Froggatt P (eds). Nicotine and smoking: the low tar programme. Oxford: Oxford University Press, 1989.
21. Royal College of Physicians. *Nicotine addiction*. A report of the Royal College of Physicians. London: RCP, 2000 (in press).
22. West R, McEwen A. Sex and smoking. Comparisons between male and female smokers. A report for No Smoking Day, 1999.
23. Hajek P. Helping smokers to overcome tobacco withdrawal: background and practice of withdrawal-oriented therapy. In: Richmond R (ed). *Interventions for smokers: an international perspective*. Baltimore: Williams and Wilkins, 1994:29–46.
24. Vincent C. Complementary medicine. In: Baum A, Newman S, Weirman J, West R, McManus C (eds). *Cambridge handbook of psychology, health and medicine*. Cambridge: Cambridge University Press, 1997:414–7.
25. West R, McEwen A. Smoking cessation intervention activities, attitudes and knowledge in general practitioners and practice nurses. London: Health Education Authority, 1999 (in press).
26. Abbot N, Stead L, White A, Barnes J, Ernst E. Hypnotherapy for smoking cessation. The Cochrane Library, 1998, Issue 4. Oxford: Update Software (updated quarterly).
27. White A, Ramps H. Acupuncture for smoking cessation. The Cochrane Library, 1998, Issue 4. Oxford: Update Software (updated quarterly).

Address for correspondence: Dr A McEwen, St George’s Hospital Medical School, Cranmer Terrace, London SW17 0RE.