Medicine for Managers

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Smoking; where are we now?

Half a century ago, the dangers of smoking became manifest although papers published in 1939 made the link between smoking and cancer explicit. Anti-smoking propaganda is having its effect and fewer than one in five adults (17%) smoke. The number of smokers has halved since 1974 but there are still 9.1 million adults who smoke. 24% of 25-34 year olds smoke whilst less than 10% of over 60s do so.

When I wrote about smoking in 2011, I reported that about 115,000 people were dying in the UK annually as a result.

The most recent figures suggest that number is now about 95,000. Figures from Action on Smoking and Health report that smoking accounts for one third of respiratory deaths, one quarter of cancer deaths and a seventh of cardio-vascular deaths.

In England smoking rates are highest in the North-East (18.7%) and lowest in the South-West (15.5%). Smoking rates also vary by country; England 17%, Wales 18%, Scotland and Northern Ireland 19%.

Interestingly, the tax revenue from smoking in 2015-16 was £9.5 billion. The Government spent £5.3 million on media campaigns and £33.2 million on smoking cessation medication.

When smoking a cigarette, a temperature of 700°C is reached resulting in the tobacco being broken down with consequential release of toxins which are then inhaled. Those toxins include nicotine and carbon monoxide but also arsenic, cyanide, formaldehyde, benzene and toluene.

As the cigarette burns down the breakdown products of the tobacco are concentrated towards the butt increasing levels of tar which is carcinogenic and the nicotine which is addictive.

The nicotine also raises cholesterol levels and very importantly constricts arteries.

This is extremely serious when it occurs in the coronary arteries, particularly if they are already narrowed as a result of damage and the accumulation of atheroma.

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The diagrams show a plethysmograph which shows normal blood flow in a hand and how it might diminish after a nicotine challenge.

Smoke-related damage is associated with the number of cigarettes smoked, whether the cigarette has a filter and the type of tobacco in the cigarette.

Smoking rates are higher in poorer people.

In 2015, 12% of people in managerial and professional occupations smoked, whilst it was 28% in manual and other artisan occupations.

Smoking has specific effects on body systems

**Circulation**
- Thickens the blood, making clot formation 2-4 times more likely
- Raises blood pressure and heart rate
- Accelerates arterial hardening

The combination of effects increases the risk of stroke and heart attack.

**Heart**
- Increased risk of arterial disease, heart attack, stroke
- Smoking increases risk of heart attack and death by 2-3 times

**Lungs**
- Lungs are badly damaged by smoking.
- Increased incidence of chest infections including pneumonia, colds, coughs. 80% of emphysema and chronic bronchitis occurs in smokers
- Smoking results in progressive COPD leading to worsening breathing and cough

**Smoking, on average, reduces life expectancy by about 7-8 years**

Women who smoke are more likely to develop lung cancer and it appears that they have a greater susceptibility to the disease.

In the 1950s, six times more men than women developed lung cancer. The ratio is now seven to five and this reflects changes in smoking behaviour.
• 90% of lung cancers occur in smokers. Only one in 200 is found in a patient who has never smoked.
• One in 10 moderate smokers and one in 5 heavy smokers will die of lung cancer.
• Throat and mouth cancer are also linked to smoking
• Over 15-20 years after stopping smoking the risk of developing lung cancer returns to normal

Other systems
• Increased risk of stomach ulcers
• Increase in kidney and pancreatic cancer
• Facial skin shows premature ageing
• Increased rate of osteoporosis
• Increased risk of brain aneurysm and stroke rate increases by 50%
• Cause of male impotence, by damaging penile blood vessels
• During pregnancy smoking can lead to miscarriage.

One of the great problems in reducing the incidence of smoking is that the young still regard it as ‘cool’ and become addicted.

Furthermore every clinician will encounter the patient who, when advised to stop smoking, will say that he or she has a grandparent who smoked forty a day since age 18 and is still fit and well.

Undoubtedly some people are less damaged by smoking and less susceptible to lung cancer in particular. It is thought that smoking damage occurrence is the result of the process being associated with a promoter and an initiator.

In other words, some people have genetic protection (i.e. no initiator) which prevents the process that makes the person as vulnerable as others to the effects of the carcinogens to which they are exposed in smoking.

So the fight goes on. Smoking and its consequences costs the NHS billions every year. Everything possible must be done to minimise and eliminate it.

The message is so simple; stop smoking and be healthier. The nicotine replacements will help together with the desire to succeed.

I finish as I started; smoking related deaths are falling. Not quickly enough, but nonetheless falling. We can all sympathise with Mark Twain:

“Giving up smoking is easy.
I’ve done it hundreds of times”

But perhaps the final thought should be:

“Over two hundred British people stop
smoking every day . . . by dying”

To those of you trying to give up; very best wishes and every success.

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