

taken a more proactive stance.”<sup>22</sup> Given that most knowledge comes “in dribs and drabs,” why should information not be given out in this way: or should the department always wait until each issue is completely clarified? I often mix my metaphors, but not I hope to the level of a “proactive stance.” But if, as I believe, the committee was harsh in its criticism, it was soon outpaced by the media. The political correspondent of *Today* began his article on 30 June with the sentence, “Twenty six babies died because bungling health chiefs delayed a warning over deadly listeria for two years.” One

would scarcely suspect from that statement that listeria is commonly found in food, that many of us are carriers, and that there is much still to be learnt about the problems posed by this organism.

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1 Kerr DNS. Costs of safe medicine. *J R Coll Physicians Lond* 1980;14:153-6.

2 House of Commons Social Services Committee. *Sixth report. Food poisoning: listeria and listeriosis.* London: HMSO, 1989.

## The search for safer cigarettes

### *Stopping smoking is still the answer*

Cigarette smoking remains one of the most pressing health issues in the industrially developed countries. It contributes annually to more premature deaths than any other single cause.<sup>1</sup> The public health policy in these countries is to encourage smokers to stop the habit and to discourage non-smokers from starting. In Britain this has been relatively successful: compared with many other countries there has been a more rapid fall in the prevalence of smoking.<sup>2</sup> Among men over the age of 20, for example, the proportion smoking fell from 52% in 1974 to 35% in 1987. Similar rates of decline in prevalence have been seen in women and in the 20-44 year olds—the important group for future health.

Most current smokers, however, find stopping very difficult.<sup>3</sup> Some 80% of those who stop may be expected to develop a withdrawal syndrome.<sup>4</sup> While stopping should remain the target, might it be possible to lessen the health hazards of smoking for those who continue to smoke?<sup>5</sup>

The composition of tobacco smoke has altered greatly over the past 40 years as a result of changes in the manufacture of cigarettes. These changes have added impetus to the quest for less hazardous smoking. Firstly, filters were introduced, becoming popular in the 1950s. Few people now smoke plain cigarettes.<sup>6</sup> Filters remove particles, the so called tar, from the smoke together with some of the nicotine, which is found within the tar fraction.<sup>7</sup> Further reductions in tar and nicotine yields have occurred as a result of a wide range of techniques called “cigarette engineering,” which have also altered carbon monoxide yields.<sup>8</sup>

The health consequences of changes in the manufacture of cigarettes have been difficult to predict. This reflects both the chemical complexity of tobacco smoke, which contains over 4000 constituents,<sup>9</sup> and the lack of knowledge of the factors that cause and promote disease. A lot of research has been done, however, on the effects of past reductions in tar, nicotine, and carbon monoxide yields of cigarettes on the prevalence of disease among smokers. Even this approach has not been without problems.<sup>10</sup>

Cigarette smokers are able to regulate their smoking behaviour so as to maintain their body nicotine concentrations within close limits.<sup>11</sup> In general, a reduction in the tar yield of a cigarette is associated with a fall in its nicotine yield.<sup>12</sup> Not surprisingly, therefore, when smokers switch from high to low yield cigarettes they often compensate by smoking more.<sup>13-15</sup> They may simply smoke more cigarettes a day<sup>16</sup>; but—unlike laboratory analytical smoking machines—smokers may also vary the frequency and volume of puffing and so increase the yield from each cigarette. Alterations in the depth of inhalation may also influence the uptake of constituents of cigarette smoke.<sup>17</sup> Nevertheless, the average

smoker's compensation for reduced nicotine yields seems incomplete. Indices of exposure to tar<sup>14</sup> and gaseous components of smoke<sup>18</sup> seem to be lower when smokers switch from high to low yield cigarettes.

The effects of changes in cigarettes on disease are in line with these observations. Smokers of old style low tar (<22 mg) filter cigarettes have a lower risk of lung cancer than smokers of old style high tar (>29 mg) non-filter cigarettes.<sup>19-21</sup> The differences in risk are, however, small when compared with the effect of stopping—after 10-15 years former smokers have a similar risk of lung cancer to that of lifelong non-smokers.<sup>22</sup> The benefit of switching from non-filter to filter cigarettes is lost if smokers compensate by increasing daily cigarette consumption.<sup>23</sup> There are no substantial data that compare modern low tar (<10 mg) cigarettes with the old fashioned cigarettes. The risk of developing lung cancer depends on the smoking history 15-20 years earlier, when few people used such cigarettes.<sup>6</sup> So we do not yet know whether the recent reductions in yield will further reduce the risk of lung cancer.

For coronary heart disease evidence that filter (old style) cigarettes constitute less of a risk than non-filter cigarettes is less convincing than it is for lung cancer.<sup>10 24 25</sup> Any benefit seems small and may be confined to people who consciously inhale smoke.<sup>19</sup> In contrast to lung cancer, however, it has proved possible to study the health effects of contemporary cigarettes, as the risks of having a myocardial infarction decrease within two years of stopping smoking to a level similar to that in non-smokers.<sup>26</sup> This suggests that current smoking habit is an important determinant of risk of coronary artery disease. Studies in both men and women have shown that contemporary low tar and nicotine cigarettes do not lessen the risks of myocardial infarction.<sup>27 28</sup> These studies confirmed earlier reports<sup>29</sup> in showing no increased risk associated with a raised carbon monoxide yield.

For chronic bronchitis and emphysema again the picture is unclear. Old style non-filter cigarettes are associated with increased production of phlegm<sup>30</sup> and possibly more severe airway obstruction.<sup>30-32</sup> There is no information on contemporary cigarettes, however, as again the development of airway disease seems to depend on smoking habits 10-15 years earlier.<sup>30</sup>

From these recent observations we may perhaps conclude that there are some benefits from smoking filter (old style) rather than non-filter, high tar and nicotine cigarettes. These benefits are much smaller, however, than those of stopping the habit, and they may be negated by increases in daily cigarette consumption. The information on health hazards of contemporary cigarettes remains incomplete, but we are a

long way from being able to label any cigarette as less hazardous. That will be possible only when we have learnt enough about the basic mechanisms of the main smoking related diseases to be able to eliminate the causative factors from cigarette smoke.

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## Women victims of domestic violence

### *Treatment should extend beyond the obvious physical trauma*

Women's health is seen by many as screening for cervical and breast cancer or the provision of hormone replacement therapy.<sup>1</sup> Others have provided a much wider perspective: the Australian government has published its national women's health policy, which embodies the World Health Organisation's definition of health as a state of complete physical, mental, and social wellbeing and not merely the absence of disease and infirmity. Violence against women is identified as a priority along with reproductive health and sexuality, health of aging women, women's emotional and mental health, occupational health and safety, and the health needs of women as carers.<sup>2</sup>

The extent of domestic violence—the preferred term according to a recently published report—remains unknown. That review states that violence is infrequently reported to the police and that in the absence of large population studies only estimates can be given.<sup>3</sup> One such estimate is that each year half a million women are victims of domestic violence in England and Wales.<sup>4</sup> Some kind of physical violence has been said to occur in 20-30% of marriages<sup>5</sup> whereas other studies have concluded that serious violence occurs in 1%<sup>6</sup> to 5%<sup>7</sup> of marriages in Britain. Over 90% of victims are women. Even at the lowest estimate domestic violence affects the health of many women.

Many victims of domestic violence consult their doctors because of their injuries. The presenting complaint may be obviously related to violence—physical injury or depression—or be more obscure, such as pelvic pain following sexual abuse.<sup>8</sup> In one study, though 80% of women victims were examined by doctors, only a quarter disclosed that they had been beaten.<sup>9</sup> Many more hinted at an underlying problem,

but the doctors confined themselves to treating the physical injury.

Doctors can, however, play a crucial part in helping victims by being aware that domestic violence occurs and by being prepared to ask key questions.<sup>10</sup> Information leaflets, such as those produced by Women's Aid, should be readily available in outpatient and casualty departments as well as in general practitioners' surgeries. In the United States the American College of Obstetricians and Gynecologists has taken the lead by producing a leaflet *The Abused Woman*<sup>11</sup> as part of its *Women's Health* series, which defines the problem and gives practical help about escaping from an abusive relationship and obtaining legal advice. Doctors should also be well informed about sources of help such as Women's Aid, social work departments, and community units and be prepared to refer women to these agencies. They should also keep accurate records of injuries sustained—not least for medico-legal purposes. As students they need to be taught in detail about the scale, forms, and consequences of domestic violence. No information is available about whether such teaching is included in the undergraduate training in Britain. In the United States a recent study to determine the curriculum content of adult domestic violence in 143 accredited United States and Canadian medical schools found that no instruction was provided in just over half of the 117 schools that responded. The others provided an average of 1.5 sessions lasting 1.9 hours.<sup>12</sup> New Jersey Medical School has taken the lead and has produced suggested hospital protocols and a training manual for health educators.<sup>13</sup>

An excellent review of domestic violence produced by the Home Office Planning Unit points out that an effective