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June 1962

Reader's Digest

ARTICLES OF LASTING INTEREST

41ST YEAR The Reader's Digest JUNE 1962

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Lung Cancer and Cigarettes

Here Are the Latest Findings

Britain's Royal College of Physicians examines the effect of smoking on health and issues a clear and stern warning

By Lois Mattox Miller

Out of London last March came a chill blast which sobered cigarette smokers and jolted the tobacco industry on both sides of the Atlantic. The venerable 444-year-old Royal College of Physicians, which never deals with trivia or sensationalism, completed an exhaustive study and published a fact-filled report, *Smoking and Health,* "intended to give to doctors and others, evidence on the hazards of smoking so that they may decide what should be done."

The Royal College report stated unequivocally:

- "Cigarette smoking is a cause of lung cancer and bronchitis, and probably contributes to the development of coronary heart disease and various less common diseases."
- "Cigarette smokers have the greatest risk of dying from these diseases, and the risk is greater for the heavier smokers."
- "The many deaths from these diseases present a challenge to medicine; insofar as they are due to smoking they should be preventable."
- "The harmful effects of cigarette smoking might be reduced by efficient filters, by leaving longer

cigarette stubs, or by changing from cigarette to pipe or cigar smoking."

The report had immediate repercussions in Parliament. It also stirred some nervous activity in Washington, where bureaucrats and Congressmen have dodged or pigeonholed the smoking-health issue for the past ten years. Tobacco-industry spokesmen issued the standard rejoinder that the evidence was merely "old data without new research findings," but the statement sounded weaker and more pathetic than ever.

Sir Robert Platt, president of the Royal College of Physicians, commented: "Naturally every possible opposition has been raised to the idea that these diseases are due to cigarette smoking. But not one of the opposing theories will hold water, whereas everything confirms the evidence against cigarettes."

Smoker's Lungs. "During the past 45 years," the report explained, "lung cancer has changed from an infrequent to a major cause of death in many countries. To account for this increase, it is necessary to postulate some causative agent to which human lungs have been newly and increasingly exposed during the present century. Cigarette smoke is such an agent and there is now a great deal of evidence that it is an important cause of this disease."

Since 1953 at least 23 investigations in nine different countries have reported on the relationship between lung cancer and smoking. "All these studies," the report states, "have shown that death rates from lung cancer increase steeply with increasing consumption of cigarettes. Heavy cigarette smokers may have 30 times the death rate of non-smokers. They also have shown that cigarette smokers are much more affected than pipe or cigar smokers (who do not inhale) and that the group which had given up smoking at the start of the survey had a lower death rate than those who had continued to smoke."

This strong statistical association between cigarette smoking and lung cancer "is supported by compatible, though not conclusive, laboratory and pathological evidence." Some 16 substances capable of initiating cancer in animals have been identified in tobacco smoke. In addition to these carcinogens, the smoke contains a variety of irritants which cause "pre-cancerous" changes. These have been noted in the lungs and bronchial tissues of smokers who have died of causes other than lung cancer.

Addressed to Doubters. The Royal College report devotes a full section to the theories advanced by those who doubt the cause-and-effect relationship. "None of these explana-

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tions fits all the facts as well as the obvious one that smoking is a cause of lung cancer."

How about air pollution, onto which the tobacco propagandists try desperately to shift the blame? In *Smoking and Health,* the investigators point to the lung-cancer death rates of smokers and non-smokers who live in cities, in rural areas and even in countries where air pollution is virtually unknown.

Finland, for example, which has the second highest lung-cancer death rate in Europe is essentially a rural country which has little air pollution but a population of heavy smokers. "This suggests that smoking is more important than air pollution," the report concludes. Moreover, "it is clear that at all levels of air pollution cigarette smokers suffer a risk of lung cancer which increases with the number of cigarettes smoked, and even in the most rural areas of the United Kingdom heavy cigarette smokers develop lung cancer 15 to 20 times as frequently as non-smokers."

"Smoker's Cough." Chronic bronchitis is a frequent cause of death, particularly among middle-aged and elderly men, as well as a common disabling disease. The disease usually starts with persistent coughing and the production of phlegm (productive cough). Then the bronchial tubes become infected and, eventually, persistent breathlessness may develop. In many cases the infection and breathlessness bring on heart failure and death.

"Smoking causes cough and expectoration," the report states. "Most people with smoker's cough lose this symptom when they stop smoking. Many studies have shown that the lungs of smokers are, on the average, impaired compared to those of non-smokers, particularly with respect to bronchial air-flow. Among British researchers, Dr. W. Richard Doll and Professor (Sir Austin) Bradford Hill found a steady increase of bronchitis deaths among heavy smokers. Those who smoked more than 25 cigarettes a day had a death rate from bronchitis six times greater than that of non-smokers. In the United States, Dr. Harold F. Dorn found that death from bronchitis and emphysema was three times as frequent in regular cigarette smokers as in non-smokers."

Cigarettes may not be the sole or chief cause of bronchitis, the report emphasizes; other factors, chiefly air pollution, probably play a part. But "cigarette smoking often causes productive cough which predisposes to the disabling and fatal forms of bronchitis under the influence of other factors. Cigarette smoking should be regarded as an important contributing factor rendering many men and women liable to a disease which they might have escaped had they not smoked."

Smoker's Heart. Coronary heart disease is a more frequent cause of death among cigarette smokers than among non-smokers. But the British report does not find evidence that cigarette smoking is a *cause* of coro-

nary heart disease. Non-smokers, too, commonly have coronaries although "those who give up smoking have a reduced death rate."

"The association of coronaries with smoking," the Royal College finds, "is clearest in middle age; and then various other factors such as mental strain, sedentary occupation and indulgence in fatty foods, which are thought to increase liability to coronary thrombosis, are also commonly associated with heavy smoking. It seems reasonable at present to agree with the recent statement of the committee on smoking and cardiovascular disease of the American Heart Association, that present evidence 'strongly suggests that heavy cigarette smoking may contribute to or accelerate the development of coronary disease or its complications,' at least in men under the age of 55."

Smoker's Ulcer. Tobacco smoke has demonstrable reactions in the stomach and intestines. Gastric hunger contractions, for example, cease after a few puffs on a cigarette. Non-smokers seem to have better appetites than smokers; and ex-smokers commonly put on weight as soon as they quit the habit. While there is no evidence that smoking *causes* gastric or duodenal ulcers, "most physicians have seen an adverse effect of heavy smoking" on patients who already have stomach ulcers.

The Royal College report states that the "effect of smoking on the healing of gastric ulcers has been carefully recorded in a controlled study in Britain." Hospital patients with gastric ulcers (all smokers) were divided into two groups. Group A was told to quit smoking, Group B was not; otherwise, both received the same medical treatment. "It was noticeable that in patients who continued to smoke, the ulcer actually increased in size while this deterioration was not observed in any of those who gave up smoking." The conclusion: "Smoking does not appear to be a cause of ulcers in the stomach and duodenum but probably exacerbates and perpetuates them."

The Word to Doctors. "Patients with bronchitis, peptic ulcer and arterial disease should be advised to stop smoking," the Royal College suggests to doctors. "Even a smoker's cough may be an indication that the habit should be given up."

The report observed that the proportion of non-smoking British doctors has doubled in recent years from 24 percent in 1951 to 50 percent in 1961. "The doctor who smokes cigarettes must, like any other individual, balance these risks against the pleasures he derives from smoking and make his choice. But the doctor who smokes will lessen the effect of public education concerning the consequences of the habit and will find it harder to help his patients who need to stop smoking."

Preventive Measures. The Royal College report is not the first comprehensive analysis to be made of the smoking-health problem. But it is probably the best factual statement,

buttressed by over 200 citations of scientific sources, to be written in the plain English which the average layman can understand. (Besides being widely summarized in the British press, the first 15,000 copies of *Smoking and Health* were sold out on publication day and it since has become a paperback best-seller.)

Smoking and Health is also the first report to spell out a practical program of preventive measures for the individual and the government. Some specific recommendations:

- More public education, and especially of schoolchildren, concerning the hazards of smoking. "The Central Council for Health Education and local authorities spent less than £5000 ($14,000) in 1956-60, while the Tobacco Manufacturers spent £38 million ($107 million) on advertising their goods during this period. Such public education might advise safer smoking habits (filter-tips, longer stubs, preference for pipes or cigars) for those whose addiction is too strong to be broken."
- More effective restrictions on the sale of tobacco to children ("cigarettes are freely available in slot machines"). Wider restrictions on smoking in public places.
- Raise the tax on cigarettes, and perhaps lower taxes on pipe tobacco and cigars. ("Pipe smokers incur a considerably smaller risk than cigarette smokers. The risk in those who smoke only cigars is even smaller and may be no greater than that for non-smokers.")
- "Since filters vary in efficiency, it would be desirable to have them tested by some official agency and have the results indicated on the packet."

THE Royal College report was immediately subjected to full Parliamentary discussion, and Enoch Powell, the Minister of Health, informed the House of Commons: "The government certainly does accept that this demonstrates authoritatively and unquestionably the causal connection between smoking and lung cancer and the more general hazards to health of smoking." The report's recommendations, he said, "are under consideration by the government."

Whither Washington? The forthright British approach was in sharp contrast to the timidity with which the health services, regulatory agencies and legislators in Washington, D.C., have shied away from the clearly defined issue of smoking and health. In 1959 the Surgeon General of the U.S. Public Health Service published in the *Journal of the American Medical Association* a lengthy report which covered much the same ground as the current Royal College report, and accepted the causative role of cigarettes in lung cancer. But, unfortunately, some of the Surgeon General's colleagues had written into the report a brief paragraph which downgraded and dismissed filter-tips even as partial health protection, and the Federal Trade Commission seized upon this convenient excuse to

sweep the whole issue of the tar and nicotine content of American cigarettes under the carpet.*

There have been, however, a few faint but encouraging signs of a change of heart. Dr. Michael B. Shimkin of the National Cancer Institute has come out publicly in support of the American Cancer Society's proposal for a federal regulation requiring that all packages be clearly labeled with the tar and nicotine content of the cigarettes.

Following the publication of the Royal College report (but only then), it was disclosed that a House Appropriations subcommittee had heard the testimony, in closed sessions a month earlier, of physicians from the National Institutes of Health. They stressed the overwhelming evidence linking cigarette smoking with lung cancer and other diseases, and urged an educational campaign on the hazards of smoking.

The FTC, apparently, has been holding its own closed-door meetings to find some way out of its quandary. The trade paper, *Advertising Age,* quoted Byron H. Jacques, head of the FTC bureau of trade practice conferences and industry guides, as admitting: "If there is really a significant difference in the health hazards involved in filter-tips compared with nonfilters, some change in our attitude might be necessary."

The FTC has long argued that it needs scientific authority and new legislation to handle the job properly. But many well-informed Washington lawyers maintain that the federal government (Food and Drug Administration, FTC, or USPHS) has all the authority it needs under present laws, including the broad Federal Hazardous Substances Act, which went into effect in July 1960. Many cigarette manufacturers state, privately, that they would welcome package labeling and standardized testing—but (for sound legal reasons) only if the government takes the initiative and tells them what to do.

So the question is: Who will take the initiative? Perhaps we shall have to wait until (as seems likely) the British set the precedent and shame us into following their lead. Meanwhile, this observation in a well-known British medical journal, *The Lancet,* should be pondered in Washington: "Future historians will have views on our failure to find even a partial solution to the problem of smoking during the first ten years after its dangers were revealed. The enormous and increasing number of deaths from smoker's cancer may go down in history as a strong indictment of our political and economic ways of life."

Copies of the U.S. edition of "Smoking and Health," with a foreword by Dr. E. Cuyler Hammond of the American Cancer Society, may now be obtained for $1 from bookstores or from the publisher: Pitman Publishing Corp., 2 West 45th Street, New York 36, N.Y.

*See "Facts We're Not Told About Filter-Tips," The Reader's Digest, July '61.