

COMMENTS ON THE REPORT
ON SMOKING AND HEALTH
BY A COMMITTEE
of
THE ROYAL COLLEGE OF PHYSICIANS
by
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Addendum to A. 317

In January 1964, the Report of the Surgeon General's Advisory Committee on Smoking and Health was published in the United States. This was a much more detailed report than that of the Royal College of Physicians. It concluded that "cigarette smoking contributes substantially to mortality from certain specific diseases and to the overall death rate"; and that it "is a health hazard of sufficient importance in the U.S. to warrant appropriate remedial action." (It was outside the Committee's terms of reference to recommend the nature of such action). Apart from reference to minor diseases, the report stated that cigarette smoking was causally related to lung cancer; related to chronic bronchitis and emphysema, but not necessarily causally, and related to coronary heart disease to a degree which made it prudent to assume that the association had "causative meaning". This report attracted little attention in Britain, but it and the R.C.P. report remain the two most important general documents. A second R.C.P. report, dealing primarily with air pollution but bringing the previous report on smoking and health up to date, is being prepared but its publication is not imminent.

In Britain, the most important published research during the last three years has been Doll and Hill's final report (1964) on their survey of British doctors, which showed, in particular, a diminished risk of lung cancer in those who had stopped smoking.

Political pressure here has been largely concentrated on cigarette advertising. In consequence it was banned on television from August 1965; a voluntary limitation in other media was adopted, at the instigation of the Minister of Health, for six months from June 1966; and a permanent formula, which is likely also to cover coupon promotion, is now under discussion.

There have been no new major pronouncements on health hazards, though the Chief Medical Officer of the Ministry of Health, in his report for 1965 (published on 30th September 1966) used unusually strong language in referring to "the melancholy toll of cigarette smoking" and to "undoubted causes of death and illness sold to a gullible public", and in expressing the hope that cigarette smoking "will come to an end in Britain." He also stated as a fact that cigars and pipes "are certainly less harmful to the user." In scientific circles smoking and health has for the most part ceased to be a controversial issue, since the association at least of cigarette smoking with lung cancer and bronchitis is taken for granted. By comparison with America, there has been little discussion of the possible role of smoking in heart disease.

The Prime Minister had stated in the House of Commons on 30th January 1963 that "I do not think that there is any excuse for anyone not to know the connection between cigarette smoking and cancer". A paper by Dr. A.C. McKennal, of the Government's Social Survey, delivered at the International Cancer Conference at Tokyo in October 1966, reporting the results of two surveys covering a total of 4,200 people, stated "It should be stressed that there is no lack of information about lung cancer and smoking among the public. All but three per cent of informants said they had heard or read about the connection. This level is near the limit that can be expected among the public on any topic."

In America, there have been other developments, some of which may have a persuasive effect in this country. A systematic and large-scale public education campaign, launched after the Surgeon General's report, has concentrated increasingly on overall mortality among cigarette smokers rather than on particular diseases. From the beginning of 1966, all cigarette packets must bear the notice: "Warning: cigarette smoking may be hazardous to your health", though this seems to have had little effect on consumption. The industry successfully resisted the incorporation of a similar notice in advertisements. The Federal Trade Commission, which since 1960 had refused to permit statements of tar and nicotine yields on packets or in advertising, on the ground that the information would be misleading, has since March 1966 not only allowed but encouraged such statements and is setting up its own testing laboratories. A Bill (S.365) was introduced in July by Senator Magnuson to make such statements mandatory. Actions for damages against cigarette companies by smokers who have contracted lung cancer and some other diseases (or by their widows) continue to be brought, though not in such numbers as in previous years, since no case has yet been finally decided in a plaintiff's favour.

Meanwhile, T.R.C.'s research programme has continued on the same broad lines as indicated at the end of A.317. The Harrogate Laboratories have been more than doubled in extent to provide room for new series of experiments and the use of new techniques which have been developed there. The paper by Dr. T.D. Day gives the results of the first main experiment for which the Laboratories were originally set up in October 1962. The time-lag is due to the fact that the last of the 8000 mice in the experiment did not die until this spring and to the time needed for statistical analysis. No other papers on the biological work at Harrogate have been published, though there have been some on pharmacological research carried out at Harrogate and several reports on epidemiological surveys financed by T.R.C. According to the statistics in two Research Papers published by T.R.C. (Nos. 8 and 9) heavy cigarette smokers had the highest lung cancer rates.

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Outline History of Major Developments Relating to
Smoking and Health in the United Kingdom.

When the smoking and health problem first became prominent in the U.K., lung cancer was the disease with which smoking was mainly associated. The association between smoking and lung cancer first came to public attention in September 1950, when a preliminary report by Dr. R. Doll and Professor (later Sir Austin) Bradford Hill on an enquiry into lung cancer, that they were carrying out on behalf of the Medical Research Council, was published in the British Medical Journal. Doll and Hill concluded that "there is a real association between carcinoma of the lung and smoking" and "that smoking is a factor, and an important factor, in the production of carcinoma of the lung."

Two years later, in December 1952, the final report of this enquiry was published in the British Medical Journal, and Doll and Hill claimed that the results confirmed their earlier conclusion "that the association between smoking and carcinoma of the lung is real."

Certain criticisms were made of the Doll and Hill report by Mr. G.F. Todd, Assistant Manager of the Statistical Department of the Imperial Tobacco Co. Ltd., and these were submitted to the Ministry of Health. In the Spring of 1953, the Chief Medical Officer of the Ministry of Health set up a Statistical Panel with the Government Actuary as its Chairman, "To examine the arguments used and the conclusions reached in the 'Study of the Aetiology of Carcinoma of the Lung' by Dr. Richard Doll and Professor A. Bradford Hill, and to comment on the validity of the criticisms of these arguments and conclusions contained in the 'Statistical Study of Tobacco Smoking in relation to the Aetiology of Carcinoma of the Lung' by Mr. G.F. Todd, Assistant Manager of the Statistical Department of the Imperial Tobacco Co. Ltd."

The Panel reported in November 1953 "that the main conclusion reached by Doll and Hill, that there is a real association between smoking and cancer of the lung, is firmly established." The Panel added that "in saying that there is a real association between smoking and cancer of the

lung, we do not necessarily imply that the relationship is causal. No statistical enquiry such as those considered in this report can establish causation ... Nevertheless in the present instance, all the other possible explanations we can think of are ruled out by the careful matching of lung cancer cases and controls. There is therefore a strong presumption, until some positive evidence to the contrary is found, that the connection between smoking and lung cancer is causal." At the same time the Panel considered that "the relationship between smoking and the incidence of lung cancer is not a simple one" and that "it is not possible to make quantitative estimates of the effect of smoking on the incidence of the disease with sufficient precision for the results to be useful ... Whether or not a reduction in the lung cancer death rate of the order suggested by Doll's calculations would occur in practice if everyone gave up smoking, is a question which cannot be given a firm answer."

The report by the Statistical Panel was not published, but its findings were submitted to the Standing Advisory Committee on Cancer and Radiotherapy of the Ministry of Health. As a result of the advice that the Minister received from this Committee, he made a statement in the House of Commons on 12th February 1954. He reported that the Standing Advisory Committee on Cancer and Radiotherapy had considered the report of the Statistical Panel and themselves came to the conclusion "that there is a relationship between smoking and cancer of the lung" and "a strong presumption that the relationship is causal". The Minister added: "I accept the Committee's view that the statistical evidence points to smoking as a factor in lung cancer, but I would draw attention to the fact that there is so far no firm evidence of the way in which smoking may cause lung cancer or of the extent to which it does so."

Towards the end of 1953, the tobacco manufacturers had agreed that it was desirable to give financial support to research into the causes of lung cancer. They discussed this proposal with the Minister of Health, and the Minister of Health stated in his statement to the House of Commons on 12th February that, before the recommendations of the Standing Advisory Committee on Cancer and Radiotherapy "were considered by H.M. Government, the tobacco companies had offered to give £250,000 for research.

They have, on my advice, agreed to offer this money to the Medical Research Council." This offer was accepted by the Medical Research Council and the tobacco manufacturers made available over the next seven years a fund of £250,000 for research "to ascertain the true cause or causes" of lung cancer. In the event, the M.R.C. used the fund for slightly wider purposes. An announcement made by the tobacco manufacturers at the time of the donation included the statement that "there is no proof that smoking is a cause of lung cancer."

While the M.R.C. enquiry into lung cancer, carried out by Doll and Hill, was confined to the U.K., enquiries in this field had also been carried out in other countries. The results of five enquiries in this field in U.S.A. had also been published in 1950 and an enquiry in Germany had been published as early as 1939. All these enquiries were "retrospective" enquiries in that they were based upon interviews with people who had already developed lung cancer. Consequently, in October 1951 the Medical Research Council started to carry out a "prospective" type of enquiry, in which a group of people without lung cancer were interviewed, and the subsequent incidence of lung cancer among this group in relation to smoking habits was later analysed. This enquiry was carried out amongst those on the medical register in the United Kingdom.

In June 1954, Doll and Hill published in the British Medical Journal some preliminary results of this prospective study of "The Mortality of Doctors in Relation to their Smoking Habits". Although the numbers of deaths so far available in the enquiry were small, the resulting rates revealed "a significant and steadily rising mortality from deaths due to cancer of the lung as the amount of tobacco smoked increases." There was also a rise in the mortality from deaths attributed to coronary thrombosis as the amount smoked increased, but the gradient was much less steep than that revealed by cancer of the lung.

In the annual report of the Chief Medical Officer of the Ministry of Health for 1954, published in December 1955, it was stated, "Despite the fact that research into the causes of cancer of the lung has been intensified not only in this country but also abroad such further evidence as has been published, while generally strengthening the presumption of a causal connection between cancer of the lung and smoking does not yet permit of any more definite conclusion than that contained in the

statement made on 12th February, 1954 by the Minister in the House of Commons."

The Minister of Health made a further announcement in the House of Commons in March 1956, on the advice of the Standing Medical Advisory Committee and the Central Health Services Council that action should be taken to inform the public about the connection between smoking and cancer of the lungs and of the risks involved in heavy smoking. The Minister said he would consider what action would be appropriate. On 7th May he made a further statement and said: "Since my predecessor made a statement in February 1954, investigations into the possible connection of smoking and cancer of the lung have been proceeding in this and other countries. Two known cancer-producing agents have been identified in tobacco smoke, but whether they have a direct role in producing lung cancer, and if so what, has not been proved ... The Chairman of the Committee of the Medical Research Council which has been investigating the subject considers that the fact that a causal agent has not yet been recognised should not be allowed to obscure the fact that there is, statistically, an incontrovertible association between cigarette smoking and the incidence of lung cancer. The statistical evidence from this and other countries to which he refers tends to show that mortality from cancer of the lung is twenty times greater amongst heavy smokers than amongst non-smokers. The Government will take such steps as are necessary to ensure that the public are kept informed of all the relevant information as and when it becomes available."

On the same day and in reply to this, the tobacco industry made a statement "with a full sense of our duty to the public." In this statement they stated that "the evidence on the possible relationship of lung cancer and smoking is conflicting and very incomplete; much more research is necessary before firm conclusions can be drawn."

The Tobacco Manufacturers' Standing Committee was set up in June 1956. All the U.K. home and export tobacco manufacturers were directly or indirectly represented on the Committee. Its function was to assist research into smoking and health questions, to keep in touch with scientists and others working on this subject in the U.K. and abroad, and

to make information available to scientific workers and the public. In January 1963, because of the greatly increased scale of its activities, the Committee changed its name to the Tobacco Research Council. Its objectives and constitution were unaffected.

In July 1956, the Postmaster General declined to prohibit tobacco advertisements near children's programmes on Commercial Television. He added, however, that the programme companies themselves had decided not to include tobacco advertisements in children's programmes.

A second report by Doll and Hill on their enquiry into the mortality of British doctors was published in the British Medical Journal in November 1956. The analysis showed that "there has been a marked and steady increase in the death rate from lung cancer as the amount smoked increases." "The death rate of the heavy smokers is approximately twenty times the death rate of the non-smokers." The mortality from lung cancer was "substantially and significantly greater in cigarette smokers than in pipe smokers" at each level of consumption. There was "a progressive and significant reduction in mortality" amongst ex-smokers with the increase in time over which smoking had been given up. Study of deaths from cancer in sites other than the lung revealed no association with smoking. Mortality from coronary thrombosis revealed a "slight but significant relationship with smoking" and three other causes of death showed a "steady increase in mortality from non-smokers to heavy smokers - chronic bronchitis, peptic ulcer, and pulmonary tuberculosis." Only with chronic bronchitis was the gradient statistically significant.

In his annual report for 1955, published in December 1956, the Chief Medical Officer of the Ministry of Health again referred to the increase in lung cancer. "Two conditions seem to be associated with its occurrence; air pollution and excessive cigarette smoking, though other factors at present unknown may also be operative."

In June 1957, the Medical Research Council issued a statement on "Tobacco Smoking and Cancer of the Lung", which came to the following conclusions:-

- "(1) A very great increase has occurred during the past 25 years in the death rate from lung cancer in Great Britain and other countries.

- (2) A relatively small number of the total cases can be attributed to specific industrial hazards.
- (3) A proportion of cases, the exact extent of which cannot yet be defined, may be due to atmospheric pollution.
- (4) Evidence from many investigations in different countries indicates that a major part of the increase is associated with tobacco smoking, particularly in the form of cigarettes. In the opinion of the Council, the most reasonable interpretation of this evidence is that the relationship is one of direct cause and effect.
- (5) The identification of several carcinogenic substances in tobacco smoke provides a rational basis for such a causal relationship."

At the same time as this statement was published, the Minister of Health made an announcement that the Government considered that the facts should be made known to the public and all those with responsibility for health education. Copies of both these statements were sent out to all local authorities and their Medical Officers of Health.

Immediately following the announcement by the Minister of Health, the Tobacco Manufacturers' Standing Committee issued a statement in which they expressed the view that "it has not been established with any certainty whether and to what extent there may be a causal connection between smoking and cancer of the lung. At this stage any conclusions are a matter of opinion." A more detailed statement, amplifying the views expressed in this earlier statement, was published by T.M.S.C. on 3rd July.

In June 1957 T.M.S.C. also issued their first Annual Report. This included the statement that "a number of authorities working in this field with whom we have had discussions are concerned with what they feel is a tendency in some quarters to overlook the complexities of cancer and to adopt an unduly simplified approach to the causation and prevention of lung cancer."

In a statement issued in October 1957, the National Association for the Prevention of Tuberculosis endorsed the statement of the Minister

of Health that smoking, especially heavy cigarette smoking, was a very important element in the cause of lung cancer and urged the Minister to review existing regulations for the control of smoking in public places.

In December 1957, T.M.S.C. issued an "Interim Report", in which it was stated that "some authorities in this country and in the U.S.A. have, however, expressed serious doubts as to whether smoking is a significant factor in lung cancer." T.M.S.C. also published a document entitled "The Conflict of Opinion", summarising the views of a number of medical and scientific authorities about the possible causes of lung cancer.

In his Annual Report for 1956, published in December 1957, the Chief Medical Officer of the Ministry of Health wrote that "recent work on the relationship of cigarette smoking to lung cancer has merely served to confirm earlier inferences that there is an association between the two though its precise nature has not yet been determined."

In the next two-and-a-half years there was a comparative lull in developments in the U.K. On 23rd June 1958, T.M.S.C. issued its second Annual Report. The Seventh International Cancer Congress was held in London in September 1958. This resulted in an increase in the publicity being given to the subject, which had continued at a steady level, but there were no further official pronouncements. The subject also remained quiet during 1959, but in August 1960 a report was published by the General Tuberculosis Council of Great Britain, giving the findings of a special Committee on Smoking and Chest Disease, set up by the Council. The conclusions of the report included the following:- "Cigarette smoking is a major factor accounting for the increased incidence of cancer of the lung; it may possibly act in association with other factors such as air pollution. There is a strong association between chronic bronchitis and cigarette smoking, though other factors such as air pollution have an important aetiological influence on this disease also. Cigarette smoking is possibly a cause of the breakdown of healed or quiescent respiratory tuberculosis."

In April 1959, the Royal College of Physicians set up a Committee to report on Smoking and Atmospheric Pollution in relation to

carcinoma of the lung and other illnesses, and on 7th March 1962 their report on "Smoking and Health" was published. This Report was approved by a General Meeting of the Fellows of the College.

The Report linked smoking, to a greater or lesser extent, with fourteen different health conditions - lung cancer, chronic bronchitis, productive cough, impaired function of the lungs, pulmonary tuberculosis, coronary heart disease, thromboangiitis obliterans, gastro-intestinal diseases, cancer of the urinary tract, cirrhosis of the liver, tobacco amblyopia, industrial accidents and injuries, under-weight of babies at birth, and impaired athletic performance. The Report recommended that the Government should take action along the following lines:-

- (1) More education of the public and especially school children concerning the hazards of smoking.
- (2) More effective restrictions on the sale of tobacco to children.
- (3) Restriction of tobacco advertising.
- (4) Wider restriction of smoking in public places.
- (5) An increase of the tax on cigarettes, perhaps with adjustment of the tax on pipe and cigar tobaccos.
- (6) Informing purchasers of the tar and nicotine content of the smoke of cigarettes.
- (7) Investigating the value of anti-smoking clinics to help those who find difficulty in giving up smoking.

On the same day as the Report was published, statements were issued by the Tobacco Manufacturers' Standing Committee and by the Tobacco Advisory Committee dealing respectively with the health conclusions and the commercial recommendations by the Committee of the Royal College of Physicians. In the statement on health aspects, T.M.S.C. neither denied nor accepted the claims of the R.C.P. that smoking contributed to certain diseases, but concluded that "the main unspoken lesson of the Report is the need for far more intensive research". The Tobacco Advisory Committee,

in their statement, stated that the tobacco manufacturers would be glad to assist in making the law relating to the sale of tobacco to children more widely known but were opposed to the recommendations of the R.C.P. Committee on restriction of advertising of tobacco goods, on increased taxation on cigarettes, and on printing the amounts of smoke condensate, nicotine and volatile irritants in the smoke on cigarette packets. A more detailed confidential report, commenting on the health aspects of the R.C.P. Report, was prepared by Mr. G.F. Todd, Director of T.M.S.C., and a longer confidential statement was prepared by the Tobacco Advisory Committee. Both these documents were sent to the Minister of Health and a number of other authorities.

Within a week of publication of the R.C.P. Report, the Minister of Health announced: "The Government certainly accept that the Report demonstrates authoritatively and crushingly the connection between smoking and lung cancer and the more general hazards to health of smoking." The Government immediately increased educational anti-smoking measures and said it was looking at the recommendations of the Report.

On 5th April, the manufacturers announced that they were taking steps to remind traders that the law prohibited the sale of cigarettes to those under 16 and that they would not advertise on television before 9.00 p.m.

The Ministry of Health prepared a new series of anti-smoking posters which were made available free of charge to local authorities for use in public places, schools, technical colleges and youth clubs, etc. The Ministry also encouraged the establishment of a small number of clinics to help people give up smoking, and two mobile vans toured the country giving lectures and advising the public on the dangers of smoking.

In the House of Commons on 17th May, the Prime Minister said, in answer to questions about what further action the Government would take to restrict the sale of tobacco, "I think we must accept the broad view of the medical report, but I do not think anyone would doubt that in a free country like this it is a very big question, how far it can be implemented by legislative or any other action."

In June 1962, after discussions with the Advertising Advisory Committee of the Independent Television Authority, the tobacco manufacturers

agreed to modify certain of their advertising themes. The types of advertisements which were considered by I.T.A. to be objectionable were those which appealed to manliness, those which associated smoking with young people's pleasures and those suggesting that smoking was a pleasure associated with modern living.

In October 1962, the Annual Report for 1961 of the Chief Medical Officer of the Ministry of Health was published. It said, "Lung cancer is so closely associated with tobacco smoking, and especially cigarette smoking, that the conclusion that cigarette smoking is a principal cause in inevitable. It is clearly not the only cause but it is certainly the most important."

In January 1963, T.M.S.C. changed its name to the Tobacco Research Council and the Council published a review of its past and present activities. This review contained no expression of opinion about the nature of the association between smoking and various diseases, but summarised the research that was being carried out by the industry in order to learn more about the nature of its products, including the beneficial effects that had been attributed to smoking. In regard to the adverse effects on health attributed to smoking, two main lines of research were being carried out - namely, investigation of the possible carcinogenic and irritating effects of tobacco smoke, and identification of the characteristics of the minorities susceptible to heart and respiratory diseases. The bulk of the research that T.R.C. was carrying out in the first of these fields was being done at their own laboratories at Harrogate, under the direction of Dr. T.D. Day. In the second of these two lines of research, the most important project was the Cardio-respiratory Disease Research Project of the London School of Hygiene and Tropical Medicine, to which T.R.C. had agreed to contribute up to £500,000 over the next ten years.

September, 1963.