

MEETING AT ROYAL MARSDEN HOSPITAL, ADDRESSED BY DR. E. WYNDER  
ON JULY 6TH, 1959.

The meeting, convened by Prof. A. Haddow F.R.S., brought together a number of English workers concerned with the problem of smoking and health to listen to Dr. Ernst Wynder and recalled a similar meeting some two years ago.

Wynder's theme was very much the same as that he gave to the 7th International Cancer Congress in London in July 1958, and which he has published on numerous occasions. His indictment of smoking was based on a five-point justification.

1. Presumptive - the relationship between cigarette consumption and incidence of lung cancer and other bronchial diseases.

2. Statistical - the retrospective and prospective studies of Hammond and Horn and of Doll and Hill. These findings have now been confirmed in some 20 countries. Wynder's own study of Seventh Day Adventists was also described.

3. Pathological - the concept of "Carcinoma in situ" and the work of Auerbach et al.

4. Biological - painting experiments with several strains of mice, rabbits and Blacklock's work with rats described. Passey's failure to reproduce Wynder's results was ascribed to the use of too low a dosage rate.

5. Chemical - the isolation from smoke of carcinogenic hydrocarbons. Wynder and his collaborator (Hofmann) described the isolation of two new polycyclic carcinogens, e.g. 3:4-benzfluoranthene and 10:11-benzfluoranthene= which are quite potent, producing 100% tumours in 8 months with CAF<sub>1</sub> mice when tested in 0.5% solution. Nevertheless, Wynder conceded that the summation of all the activities found individually did not approach that

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required of whole smoke. His conclusion was that tobacco smoke is a very weak carcinogen, on the limits of detection which is why he uses such large doses.

His collaborator, Hofmann, described the chemical fractionation and showed a fluorescent photograph of a crystal of 3:4-benzpyrene, allegedly isolated from cigarette smoke condensate. By radio-isotope dilution studies the amount of 3:4-benzpyrene was calculated to be  $1.2 \pm 0.1$  ppm of smoke condensate.

Wynder summarised the remedial measures he proposed.

- (a) Stop smoking
- (b) Reduce smoking habits
- (c) Discard cigarette stubs while they are still long
- (d) Do not inhale deeply
- (e) Choose a brand low in tar and nicotine. The effect of filter tips was touched upon here.

(f) Reduction of carcinogens, i.e. polycyclic hydrocarbons, by means of catalysts. Wynder has tested the effects of 20 catalysts chemically and 12 have been evaluated by biological test using 50,000 cigarettes per test.

Throughout Wynder was confident and indeed arrogant and aimed several shafts at the U.S. and British Tobacco Industries. He appeared very anxious not to miss anything and countered every suggestion of a sensible nature from the floor with the remark that he had the investigation in hand or that he proposed to do work on that subject.

*D. G. J.*

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