



occupational health studies

NEWS LETTER

University of North Carolina at Chapel Hill

School of Public Health

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INTRODUCTION

A conference sponsored by the Occupational Health Studies Group was held on October tenth and eleventh in Chapel Hill to discuss with participating companies and the United Rubber Workers (URW) International Union the status and prospects of our occupational health research projects. All four companies and the URW were represented. This issue of the newsletter is primarily concerned with the events of the conference. A general report on the conference with the names of participants and the topics of discussion is presented along with some special thoughts on the importance of this study by our Vice Chancellor for Health Sciences, Dr. Cecil C. Sheps.

While vacationing this summer in Great Britain, Dr. David Fraser, the Director of Occupational Health Studies, decided to spend much of his time working. In London he visited Dr. H. G. Parkes, who is studying the health of rubber workers in Great Britain and is author of the publication Health In The Rubber Industry. Dr. Fraser also visited the Pneumoconiosis Research Unit in Wales and the Institute of Occupational Medicine in Edinburgh, Scotland. A brief report of Dr. Fraser's trip appears in this newsletter. In addition, a description of the project's research library is included in this issue.

OCCUPATIONAL HEALTH STUDIES CONFERENCE - October 10-11, 1973

The Occupational Health Studies Conference, held at the Carolina Inn in



Tyroler

Smith

McMichael

Maile

Beliczky

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Chapel Hill, was attended by members of the University study group, officials from the Firestone, General, Goodyear, and Uniroyal companies and the URW. Mr. Lou Beliczky, Mr. Francis Maile, and Mr. Jake Miller represented the URW. Representing Goodyear were Mr. Clyde Boose and Dr. Clifford Johnson. Mr. Dan Dudrow, Dr. Dexter Forbes, and Dr. Walter Harris came from Uniroyal, and Mr. Robert Hassmiller and Mr. George Wilson were from Firestone. Mr. Hank Smith and Mr. George Burkhardt represented General Tire and Rubber Company.

Dr. David Fraser opened the conference on October tenth with introductions and a statement concerning the structure of our organization and the status of current research. The Dean of the School of Public Health, Dr. Bernard Greenberg, welcomed the visitors. Dr. Herman Tyroler, physician-epidemiologist, explained the methodology being used in different epidemiologic studies. Mortality studies have been undertaken to discover the mortality experience of workers in the rubber industry. These studies are designed to find if there are increased risks of dying from certain causes or specific diseases. There is a further attempt to see if there is a difference in mortality among workers in different companies or among workers who have had different jobs. Mortality studies are now retrospective, but an ongoing surveillance of a prospective nature is one of the project's long range goals. In addition to mortality studies, morbidity studies are also taking place. Morbidity or sickness studies are concerned with any health status deviation other than death - for example absenteeism. The study group is concerned with toxic substances in the environment of a rubber plant that may lead to sickness.

Dr. Robert Harris, the Deputy Director of Occupational Health Studies, spoke on the environmental surveys taking place at the plants. Comprehensive walk-through industrial hygiene surveys for all of the plants are planned with the compilation of a basic environmental file for each plant. There will be environmental investigations examining the various operations of each plant as well as investigations for comparing the same types of operations in different plants.

Dr. James Grizzle and Dr. Lawrence Kupper, biostatisticians, outlined the function of statistics in analyzing the data from the various studies that are underway. The importance of statistical concepts and practices in the design of research projects such as those in which we are engaged was also stressed. Next on the agenda, Mr. Bill Compton, Director of the Laboratory, discussed the analytical techniques used by the laboratory in identifying individual components from rubber products manufacturing processes. Dr. Robert Harris outlined the occupational classifications of the workers. It is necessary, he stated, in a study such as this to classify workers both by common environmental exposures and by similar jobs or functions. This type of classification allows for more precise recommendations for environmental controls and medical surveillance. A session on curing fume emissions was presented by Mr. Stephen Rappaport, a doctoral candidate in the Department of Environmental Sciences and Engineering. Dr. Dragana Andjelkovic, physician epidemiologist, discussed health testing of workers. Health testing of the workers in the Goodyear plant in Gadsden, Alabama has been taking place both by means of a questionnaire administered to the workers and by actual medical examinations. Dr. Mars Longley and Mr. John Gamble, industrial hygienists, reviewed the potential hazards of talc in the rubber industry.

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from l. to r. - 1st row - Dan
Dudrow, Walter Harris, George
Wilson, Lou Beliczky; 2nd row -
Robert Hassmiller, George
Burkhardt, Clifford Johnson,
Clyde Boose; 3rd row - Jake
Miller, Francis Maile, Hank Smith

Dr. David Fraser (left) with
Mr. Jake Miller



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Dr. Clifford Johnson (left) and
Mr. George Wilson

The morning and afternoon sessions were followed by a reception and dinner. The dinner speaker, Dr. Cecil Sheps, the University's Vice Chancellor for Health Sciences, spoke on the importance of this study. He pointed out that it is a unique opportunity for a comprehensive long term prospective study of health hazards in an industrial environment. A study such as this allows one to determine the number of new illnesses that appear over time, the risk of a particular job, and the causal relationship between environmental exposure and disease.

On October eleventh, the visitors proposed topics for discussion and asked questions on various phases of the study. It was brought to the attention of the group that more direct communication between the study group and the local union presidents and the union policy committees is needed. Dr. Tyroler emphasized the importance of direct communication by study group members with the local unions concerning the site visits and the need for some two-way feedback between the study group and the local union representatives. The matter of publishing was raised. It was pointed out that, consistent with the agreement between the University and the companies, material related to the rubber industry studies would be sent for review by the appropriate company and the URW before publication. Dr. Harris opened for discussion the matter of a mechanism for reporting any emergency situation that might be discovered on a site visit. It was agreed that any eminent hazard which might be observed would be reported immediately to the local plant manager and to the local safety committee (and/or local union president). The hazard would also be reported to the international union health committee member and the corporate medical director or other appropriate company official.

DR. FRASER'S TRIP TO GREAT BRITAIN

In Birmingham, England, Dr. Fraser met with Dr. H. G. Parkes, who is the medical director for the British Rubber Manufacturer's Association and is conducting an epidemiological study on the prevalence of lung cancer among British rubber workers. In addition to Dr. Parkes, Dr. Fraser also talked with other advisors on the study. He conferred with Dr. Waterhouse, a physician on the staff of Queen Elizabeth's Hospital in Birmingham; Dr. Kipling, an associate of Her Majesty's Factory Inspectorate in Birmingham; and Dr. C. A. Veys, the medical director of Michelin Tire Company. Dr. Fraser, Dr. Parkes, and the other members of the British study exchanged designs and objectives of the two respective studies and looked forward to collaboration in the future.

After visiting London, Dr. Fraser traveled to Wales where he met with Dr. J. C. Gilson and Dr. Vernon Timbrell in Parnarth, Glamorgan. Dr. Gilson is director of the Pneumoconiosis Research Unit at Llandough Hospital which is an organization of the Medical Research Council of Great Britain. The Pneumoconiosis Research Unit has been very interested in coal mines and the health of coal miners, asbestosis, and the production of lung cancer from the inhalation of dusts. Since Dr. Fraser's visit to Wales, Dr. Timbrell has visited Chapel Hill to get a first hand view of the occupational health activities here and to discuss possible collaborative projects between the two laboratories.

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Dr. Fraser later traveled to Edinburgh, Scotland where he conferred with Mr. W. H. Walton at the Institute of Occupational Medicine. The Institute is the official government agency for occupational health research in the United Kingdom and is concerned with all kinds of occupational health problems. Mr. Walton and other members of the Institute were greatly interested in the study we are conducting and volunteered their full cooperation. Many of the analytical methods that are used by the Institute and some of the experimental work that it is doing are directly applicable to our study. Some of the projects that are underway in the Institute's laboratories involve sampling and analysis of airborne dusts, research on heat stress, and fiber counting and determination.

Dr. Fraser's trip proved to be very informative and worthwhile in providing the members of our study group with knowledge of similar operations and research being conducted in the field of occupational health.

OCCUPATIONAL HEALTH STUDIES RESEARCH LIBRARY

The Occupational Health Studies Group has its own research library which is maintained under the direction of a Research Librarian. Facilities include a reading room area in addition to book shelves and reprint files sufficient for current as well as future needs. The library is easily accessible to all members of the study and to anyone desiring information on occupational health.

Library holdings include books, journals, and reprints of journal articles covering occupational disease, industrial medicine, epidemiology, toxicology, industrial hygiene, chemistry, and rubber technology. Presently, the acquisitions consist of approximately six hundred reprints which are indexed according to the keyword system of indexing (a modified subject index with additional access by author) and one hundred and thirty books which are indexed by author and title. The library has numerous pamphlets published by the United States Government and currently subscribes to eight journals and two abstracting services. The resources of the University of North Carolina Health Sciences Library, the Graduate School Library, and the departmental libraries are utilized for searching the literature. The American Chemical Society's Division of Rubber Chemistry Library at the University of Akron has also been an important source for obtaining information. In addition, the computer searchable resources of the National Library of Medicine, Chemical Abstracts, and the Environmental Protection Agency are available and have been used extensively.

In searching the literature, the emphasis is on current awareness with continual updating in progress. The availability of computer searchable resources facilitates rapid retrieval of the most recent information. The following computer searches have been utilized to obtain information on chemicals, occupational disease, and other areas related to the study.

- (1) Medline Search - immediate retrieval of references from the National Library of Medicine covering over 1,250 journals dating from 1970 to the present.
- (2) Medlars Search - retrieval of references from the National Library of Medicine covering over 2,300 journals dating from 1966 to the present.

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Harris



Hassmiller

The members of the Occupational Health Studies Group pose with the visitors from the companies and the URW.



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- (3) Chemical Abstracts Condensates Search - retrieval of references from Chemical Abstracts covering approximately 13,000 journals, in addition to extensive patent coverage, dating from 1960 to the present.
- (4) Environmental Protection Agency Search - retrieval of references from air pollution literature covering 47,000 documents and dating from 1967 to the present.

A continuous review and evaluation of the physical, chemical, and biological properties of the chemicals used by the rubber industry has been undertaken by project personnel. The information obtained on the chemicals from the scientific literature is summarized and arranged in a form that can be readily retrieved to evaluate the toxicity, health effects, and sampling methods for the chemicals.

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The Occupational Health Studies Newsletter is published and distributed by the Occupational Health Studies Group. We welcome your suggestions and response. All correspondence should be addressed to:

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