



occupational health studies

NEWS LETTER

University of North Carolina at Chapel Hill

School of Public Health

Vol. 5, No. 4

September, 1978

INTRODUCTION

This issue of the Newsletter discusses certain aspects of the Goodyear Gadsden Dermatitis study which is now underway within the Joint Occupational Health Program, and describes a recent visit by OHSG to the Goodyear Akron plant. Also included in this issue is a summary of OHSG's computing equipment and its capabilities.

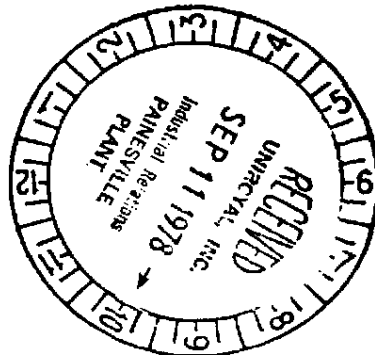
OHSG participated in two recent meetings; summaries of these activities appear in this issue.

The remaining section reports on OHSG personnel.

GOODYEAR GADSDEN DERMATITIS STUDY

Some specific analyses for accelerators in samples collected for the dermatitis study are underway in our laboratory. The initial analysis of these field samples has focused on the beginning of the processes of stock formulation for tires, tubes, flaps and bladders. This data will assist in determining relative degrees of exposure of workers to these chemicals. Ms. Bey Bey Chu, graduate student and laboratory assistant, has been helpful in field data collection as well as in the laboratory analysis of these chemicals.

Special thanks go to the Goodyear Analytical Research Laboratory for assisting in the study; it has collaborated with OHSG laboratory in adapting analytic methods for these accelerators.



URL 21511

STUDIES OF PAST SOLVENTS EXPOSURES

Research Assistants Edward Hunt and Yoko Sakuma visited the Akron Goodyear plant in early August for a two-week period. The purpose of the visit was to obtain copies of job descriptions in previous departments of Plants I and II, and current departments in the Industrial Products Division. Current job descriptions for Plants I and II were obtained during a June visit.

Each document describes the tasks and working conditions for a particular job classification. The time period of documentation extends from the mid-1930's to present. These records will be used in conjunction with additional company historical records in an effort to determine the degree and kind of solvent exposures which workers in these plants have had in past years.

Special thanks are due Mr. Jim Culler and his staff for their assistance and patience in the course of this work.

LOCAL AND REGIONAL COMPUTER SYSTEMS AVAILABLE TO OHSG

The computer analysis of the environmental and epidemiologic data generated by the Joint Occupational Health Program at the University of North Carolina at Chapel Hill (UNC) requires the use of a large and modern computer system. The OHSG has access to one of the most modern, advanced, and powerful computer networks in the country.

URL 21512

In the late 1960's, officials from North Carolina State government, State supported universities, and private universities within the State, designed and installed a computer network which connected most of the educational institutions within the State. The idea was to create a centralized computer facility which would make available more advanced technology and computing power than any single institution could afford. Communication between the centralized facility and the universities is by microwave or telephone lines. Thus, the Triangle Universities Computer Center (TUCC) was formed; it is located at an approximate mid-point between Raleigh, N.C. (where N.C. State University is located), Durham, N.C. (where Duke University is located), and Chapel Hill, N.C. (where UNC is located). TUCC has two IBM System/370 Model 165 computers. One computer has four million bytes of high-speed main storage and the other computer has two million bytes of high-speed main storage.

In addition to the TUCC facility some of the educational institutions needed more computing capability on their own campuses. Due to heavy use by students in the Computer Science Department, and the immediate acceptance and utilization of computer facilities by faculty in most other departments on campus, UNC developed a very powerful supplementary system. It consists of an IBM System/370 Model 155 II computer with two million bytes of Advanced-Memory-Systems processor storage, and an IBM System/360 Model 75 computer with five-hundred and twelve bytes of high-

speed main storage, and two million bytes of Ampex-Extended-Core memory. OHSO is connected to this local and regional computer network through a medium-speed-terminal system which consists of a video terminal, card reader, and printer. The OHSO user submitting a computer job can designate where the job is to be executed within the network. Although jobs can be executed at more locations, OHSO has directed its computer activity to only TUCC and UNC computer centers. Additionally and of significant importance to OHSO is the availability of high caliber software such as file maintenance programs and statistical packages which the TUCC and UNC systems provide.

NIOSH STUDIES ON NITROSAMINES

In special studies in recent months the National Institute for Occupational Safety and Health has detected low levels of nitrosamines in the air of some industrial plants. Included among these plants were one tire manufacturing plant, one industrial products plant, and one rubber chemicals plant. Nitrosamines are chemical compounds of particular interest because they have been shown to cause tumors when injected or fed to some types of laboratory animals.

At the invitation of the National Institute for Occupational Safety and Health, medical and industrial hygiene representatives of the United Rubber Workers and the major rubber products manufacturers met in Cleveland, Ohio, on August 8 to discuss findings of the preliminary study with NIOSH scientists. Drs. Dragana Andjelkovich and Robert Harris of OHSO participated in the discussions. Little is known about the health effects on humans from breathing low levels of nitrosamines, or how the compounds are formed in the manufacturing processes. NIOSH environmental studies are continuing. As the studies progress it appears that the epidemiologic files of the Joint Occupational Health Program may be of great value in determining whether levels of exposure such as may occur in the industry can affect the health of rubber workers.

URL 21513

AMERICAN STATISTICAL ASSOCIATION MEETINGS

Drs. Michael J. Symons and John D. Taulbee of the Department of Biostatistics and the Occupational Health Studies Group, University of North Carolina, presented papers at the joint statistical meetings of the American Statistical Association, Biometric Society, and Institute of Mathematical Statistics in San Diego on August 14-17.

Dr. Symons' paper, with co-authors Dr. D.B. Gillings and M.M. Donelan of the Department of Biostatistics, is entitled "A Practical Comparison for Some Multivariate Analysis Strategies for Clinical Trials with Missing Data". Dr. Taulbee's paper entitled "A General Model for the Hazard Rate with Covariables", deals with estimation of survival probabilities for an individual based on characteristics of that individual.

While neither paper deals specifically with OHSG data, both discuss aspects of statistical analysis techniques which will be useful in analyzing data pertinent to the Joint Occupational Health Program.

PERSONNEL NOTES

The Occupational Health Studies Group would like to congratulate Dr. John D. Taulbee, OHSG Biostatistician, who recently completed his doctoral program and received his Ph.D. degree in Biostatistics. We also welcome back Ms. Yoko Sakuma, who recently returned to us from the University of Cincinnati where she completed her Masters degree in Industrial Hygiene.

OHSG is pleased to announce that Ms. Pamela Scriven has joined our data processing staff, and Mr. Edward Hunt is now employed full-time as a research assistant with OHSG.

We regret to announce the departure of several of our staff members. Ms. Sylvia Berman will be entering school at Wayne State University; Mr. Jonathan Wendel has been accepted into the graduate program in the Department of Botany here at the University of North Carolina; Ms. Debra Winn completed her oral examination for the doctorate in Epidemiology and will reside in Chapel Hill to complete her dissertation; Dr. Pamela Wolf has completed her Ph.D. program in biostatistics and has accepted a faculty position at Georgetown University Medical School in Washington, D.C.; and Dr. Steve Blum is now employed as an Epidemiologist at Mount Sinai Medical College in New York. Dr. Allan Smith has returned to his native country of New Zealand where he has accepted a senior faculty position at the Wellington Clinical School of Medicine, Wellington 2, New Zealand, and Mr. Earl Arp has accepted a faculty position at Clemson University in South Carolina. We feel fortunate that Mr. Arp will be associated with the OHSG in a part-time capacity as a consultant. The OHSG extends their appreciation for the various contributions that these people have given to the Joint Occupational Health Program; we wish all of them continued success.

URL 21514