

University of Cincinnati Medical Center

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A University of Cincinnati Medical Center radiologist has spent three years preparing a handbook which he sincerely hopes will never have to be used.

In Dr. Eugene L. Saenger's "Medical Aspects of Radiation Accidents" he has assembled all pertinent information for physicians, health physicists, and industrial hygienists to use in the event of emergencies involving nuclear power.

The 350-page handbook, first of its kind, has just been published by the U.S. Atomic Energy Commission and is for sale at the U.S. Government Printing House, Washington.

Dr. Saenger wrote it under AEC contract. He is director of the University of Cincinnati's Radioisotope Laboratory in Cincinnati General Hospital and professor of radiology.

Since the degree of damage is the only difference between a major peacetime accident and one of warfare, methods of handling such emergencies will be quite useful for civil defense, according to Dr. Saenger, although the book is not directed specifically toward problems of nuclear warfare.

"If future accidents can be handled in a well-organized manner, the damage, both to humans and environment, can be minimized greatly," Dr. Saenger points out.

"We are interested in minimizing injury to the maximum number of people."

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Before 1945 the probability of radiation accident was judged to be so remote that such an occurrence was of no interest, but this attitude has undergone a drastic change, according to the Cincinnati physician.

"Largely because of the important work of pioneers in medicine and physics, the entire atomic energy field with its great ramifications and implications for industry and science has had a safety record which is unmatched," Dr. Saenger states.

"There have been only six deaths from radiation as compared to over 200 fatalities from all other causes in the vast Atomic Energy Commission program since its inception. Radiation accounts for less than 10 per cent of all injuries.

"The injuries to persons and contamination of the environment from peaceful uses of nuclear power have fortunately failed to increase in proportion to the growth of the industry; in fact the reverse is true.

"Because of the enormous power created and because of the great quantities of radioactive waste products produced, the possibility of serious accidents is always of concern."

In the book Dr. Saenger lists for quick reference a page outline of emergency procedures for radiation accidents.

He gives details of immediate steps to be taken, indicating that careful attention to meticulous techniques at this stage will result in prevention of death, great reductions in injury to people, and savings of thousands to millions of dollars in expense.

(more)

A detailed description of all types of injury and their care follow with plans for hospitals to use in receiving contaminated patients.

Since individuals who believe they might have been injured by radiation might panic, the problem of psychological upset is discussed.

The book also includes descriptions of possible types of accidents from accelerators, x-ray machines, radioisotopes, and reactors; functions of civilian authorities; services of government agencies in helping handle such accidents; legal requirements of people involved; and methods of handling radiation aspects of mass disaster.

"It is hoped that this material will serve as a basis for further investigation of the many problems of diagnosis and therapy which are badly needed in this nuclear age," Dr. Saenger concludes.

Contributors to the volume include, from the University of Cincinnati College of Medicine: Drs. Charles M. Barrett, Alan S. Freemond, Harry Horwitz, and James G. Kereiakes; and Robert C. Gallagher, ^{ok} Applied Health Physics, Inc., Pittsburgh; Dr. George E. Thoma, St. Louis, Mo., University School of Medicine; Edward J. Vallario, U.S. AEC, Washington; Dr. George Voelz, U.S. AEC, ^{ok} Idaho Falls; and Dr. Niel Wald, University of Pittsburgh.