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Key documents of overall interest were suggested by Drs. Peter Bennett, Brian G. D'Aoust, and J. Vorosmarti, Jr. (United States) and by J. Adolfson, Carl M. Hesser, and H. Ornhagen (Sweden).

The total compilation and arrangement of the five volumes is the result of the effort of Dr. Charles W. Shilling.

The editing was the work of Mrs. Catherine B. Carlston.

DISCLAIMER

Obviously, neither the Undersea Medical Society nor the authors of the various sections claim that the articles, reports or book chapters they have selected are the only ones that have helped to advance the field. They do feel, however, that their selection is a valid sample of the work as it has progressed from the beginning to its present level.

FOREWORD

The Undersea Medical Society, Inc. has an educational mission as part of its charter. This present effort is directed toward this mission. It is always wise to trace the development of a particular idea for better understanding and intelligent progression to the next step. Therefore, medical experts in each of the many fields of diving medicine have selected those articles, reports, or chapters of books which they regard as important to the development and better understanding of their particular fields of interest.

I am pleased to have been president of the Society during the development of this effort since I consider it a major step in recording the progress that has been made in each of the various components of the medical aspects of deep sea diving.

John M. Hallenbeck, M.D.
President
Undersea Medical Society

PREFACE

The original idea for this project came from Dr. William Fife, who pointed out that it was extremely difficult to find some of the old, yet important documents covering the development of our knowledge in hyperbaric medicine and deep-sea diving medicine.

After consultation with numerous research scientists and a presentation to the Executive Committee of the Undersea Medical Society, Inc., it was universally agreed that collection of the seminal or key documents in the many different special areas of diving medicine would be a significant contribution to diving literature.

The National Library of Medicine agreed to support this effort. A proposal was submitted and approved; the present publication is the result.

The following are the special areas selected for in-depth treatment.

Caisson and Tunnel Work
Chronic CO_2 Toxicity
Cold Water Exposure and Thermal Balance
Decompression Theory
Diving Gases (Other Than Hydrogen)
Diving Medicine: The High Pressure Neurologic Syndrome
Drowning and Near-Drowning
Dysbaric Osteonecrosis
Gas Embolism
Hydrogen-Oxygen Diving
Hyperbaric Oxygen Therapy
Inert Gas Narcosis
Otology in Diving (The Ear in Diving)
Oxygen Toxicity
Pathophysiology and Treatment of Decompression Sickness
Pulmonary Function
Saturation Diving
Underwater Performance
Vision

Individuals, expert in each of the above fields, were contacted and a letter written to them with the following explantory paragraphs:

> The UMS has a grant from the National Library of Medicine to collect, annotate and reproduce the "key" or "seminal" documents leading to our present knowledge of the broad field of deep-sea diving.
>
> Would you, in the field of _____ pick five or ten articles that you feel have been the key pieces of research reporting that have led us to our present state of knowledge for this field? All we ask is that you write a short paragraph or running description of why they were selected. "I selected this research report because it was the very first article mentioning this condition." "I selected this article because the pathology of the condition is so well described and illustrated," and so on.
>
> If you will then send us your short write-up telling why the five to ten documents have been selected, we will obtain the originals as best we can, photograph them and reproduce them without further annotation. Translation may be necessary for some of the more difficult languages. Of course, you will be credited with this contribution to the anticipated three-volume set. Although there would be reluctance on the part of most authors to mention their own work, since each person selected is considered to be the leading expert in the field, it is obvious that some of your papers must be included. We are extremely anxious to make this as international as possible; therefore, work from other countries would certainly be desirable.
>
> Each individual, or individuals, is given credit at the beginning of the presentation of the particular subject area.

C. W. Shilling, M.D.
Executive Secretary
Undersea Medical Society, Inc.

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