

Now in its fourth edition, Diving and Subaquatic Medicine remains the leading text on diving medicine. This completely revised edition covers the newly described diseases of diving medicine, the modern types of diving and diving equipment, free and indigenous diving, as well as updating the previous edition's coverage of the established diving disorders. Each medical disorder is discussed from an historical, aetiological, clinical, pathological, preventative and therapeutic perspective in the accessible but informative style that has made the previous editions so popular.

## Key features include:

- Clinically-based text, designed to assist in diagnosis, investigations, first aid and treatment, with the major problems highlighted and indexed
- Introductory chapters on physics, physiology and equipment for those new to the field
- Unique and plentiful illustrations, case reports and discussions
- Highlighted key points for rapid reference
- Ideal for instruction of divers and diving physicians
- Text prepared by some of the world's most experienced diving physicians

The principal disciplines addressed — diving medicine, occupational medicine and aquatic medicine — mean that the volume is vital reading for physicians, paramedics, navies, diving organizations and medical students at all levels. Those who know the book will waste no time in acquiring this update; those new to the text will soon find it a must for the personal bookshelf.

CARL EDMONDS is Director of the Diving Medical Centre in Sydney, Australia; CHRISTOPHER LOWRY is Visiting Anaesthetist at Lismore Base Hospital, and Consultant in Diving Medicine, NSW, Australia; JOHN PENNEFATHER and ROBYN WALKER are Scientific Officer and former Officer in Charge respectively at the Royal Australian Navy Submarine and Underwater Medicine Unit.

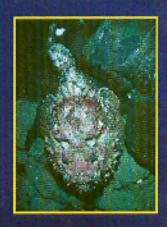


Distributed in the United States of America by Oxford University Press Inc., New York

www.arnoldpublishers.com









## **Contents**

Preface Preface (Excerpts from earlier Editions) Acknowledgments		ix x xi
DIVI	NG	
1	History of diving	1
_	J. Pennefather	44
2	Physics and physiology	11
3	J. Pennefather  Free diving	23
3	C. Lowry	23
4	Diving equipment	33
-	J. Pennefather	
5	Undersea environments	47
	C. Edmonds	
DYSI	BARIC DISEASES	
	BAROTRAUMAS	
6	Pulmonary barotrauma	55
	R. Walker	
7	Ear barotrauma	73
	C. Edmonds	
8	Sinus barotrauma	93
	C. Edmonds	403
9	Other barotrauma C. Edmonds	103
	* - <b>-</b> · · · · · · · · · · · · · · · · · · ·	
	DECOMPRESSION SICKNESS	
10	Decompression sickness: history and physiology	111
	R. Walker	
11	Decompression sickness: pathophysiology	131
12	R. Walker	137
12	Decompression sickness: clinical R. Walker	137

13	Decompression sickness: treatment	151
	R. Walker	
14	Dysbaric osteonecrosis	167
	C. Lowry	
ABN	IORMAL GAS PRESSURES	
15	Inert gas narcosis	183
40	C. Lowry	
16	Hypoxia	195
47	C. Edmonds	
17	Oxygen toxicity	207
18	C. Lowry  Carbon dioxide toxicity	
10	C. Edmonds	223
19	Breathing gas contamination	
.,	J. Pennefather	233
20	High-pressure neurological syndrome	
	C. Lowry	243
AQU	ATIC DISORDERS	
	THE DROWNING SYNDROMES	
21	Drowning syndromes: drowning	249
	C. Edmonds	
22	Drowning syndromes: near-drowning	257
	C. Edmonds	
23	Drowning syndromes: the management of near-drowning C. Lowry	263
24	Drowning syndromes: saltwater aspiration syndrome	273
	C. Edmonds	
25	Drowning syndromes: why divers drown C. Edmonds	277
26	Seasickness (motion sickness)	285
	J. Pennefather	
27	Thermal problems and solutions	289
	J. Pennefather	
28	Cold and hypothermia	293
	J. Pennefather	
29	Local infections	305
20	C. Lowry short street and short street a	
30	General infections C. Lowry	317
31	Trauma from marine creatures COMMON ZERTA PRODUCTION	325
٠,	C. Edmonds spoteit : expendit : expendit noisengenase)	343
32	Venomous marine animals	335
	C. Edmonds	17

		Contents vii
SPEC	CIFIC DIVING DISEASES	
	THE EAR AND DIVING	
35	The ear and diving: anatomy and physiology C. Edmonds	365
36	The ear and diving: investigations C. Edmonds	371
37	The ear and diving: hearing loss C. Edmonds	379
38	The ear and diving: vertigo and disorientation  C. Edmonds	385
39	Cardiac problems and sudden death C. Lowry	399
40	Neurological disorders of diving  R. Walker	409
41	Psychological and neuropsychological disorders C. Edmonds	417
42	Miscellaneous Disorders	433
	C. Edmonds	
	Carotid sinus syndrome	
	Caustic cocktail	
	Cold urticaria	
	Dental disorders	
	Hyperthermia	
	Musculoskeletal problems	
	Ocular disorders Pulmonary oedema and dyspnoea	
	Skin reactions to equipment	
	Trauma	
43	Drugs and diving	445
	C. Lowry	445
44	Long-term effects of diving	457
	R. Walker and C. Edmonds	437
THE	DIVING ACCIDENT	

Investigation of diving accidents: equipment of an associated CEPGS Enoblet years as we wrong the content of th

465

473

491

497

503

511

Giving Medical Library Diving Medical Training

## 45 Stress responses, panic and fatigue C. Edmonds 46 Why divers die: the facts and figures

47

48

C. Edmonds

C. Edmonds

R. Walker Oxygen therapy

C. Edmonds

J. Pennefather

Unconsciousness

First aid and emergency treatment

MEDI	CAL STANDARDS FOR DIVING	==.4
52	Medical standards for snorkel divers C. Edmonds	531
53	Medical standards for recreational divers	533
23	R. Walker	
54	Medical standards for commercial divers	553
	R. Walker	
55	Asthma	559
	C. Edmonds	
56	Cardiac disease	575
	R. Walker	581
57	Insulin-dependent diabetes mellitus	301
	The pros – C. Edge and P. Bryson	
	The cons – C. Edmonds, C. Lowry and R. Walker	597
58	Age and diving	*
	C. Edmonds	603
59	Diver selection  R. Walker	
	K. Walkel	
SPECI	ALIZED DIVING AND ITS PROBLEMS	
60	Female divers	607
	R. Walker	C4=
61	Breath-hold diving	615
	C. Edmonds	619
62	Technical diving	013
	J. Pennefather	625
63	Technical diving problems	02.7
	C. Edmonds	635
64	Handicapped divers R. Walker	
65	Occupational groups	639
00	C. Edmonds and J. Pennefather	
66	Diving in contaminated water	645
••	j. Pennefather	
67	Deep and saturation diving	647
	J. Pennefather	cea
68	Deep and saturation diving problems	653
	J. Pennefather	657
69	Hyperbaric equipment	03/
	J. Pennefather	665
70	Submarine medicine	
	R. Walker	
APPI	ENDICES	
Α	Decompression Tables. BSAC (UK), US Navy, NOAA, DCIEM (Canadian)	671
В	Recompression Therapy Tables, US Navy	687
c	Recompression Therapy Options, COMEX, Australian, Duke	695
D	Diving Medical Library	699
_	Diving Medical Training	70°
E F	Diving Medical Organizations, Contacts and Internet	70