

Third Edition

**DISEASES OF MEDICAL PROGRESS:
A STUDY OF IATROGENIC DISEASE**

*A Contemporary Analysis
of Illness Produced by
Drugs and Other Therapeutic
Procedures*

/ Edited by

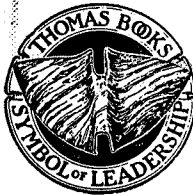
ROBERT H. MOSER, M.D., F.A.C.P.

*Colonel, MC USA
Chief, Department of Medicine
Brooke General Hospital
San Antonio, Texas*

With a Foreword by

F. DENNETTE ADAMS, M.D.

*Massachusetts General Hospital
Boston, Massachusetts*



CHARLES C THOMAS • PUBLISHER
Springfield • Illinois • U. S. A.

CONTENTS

	<i>Page</i>
<i>Foreword, F. Dennette Adams</i>	ix
<i>Preface to Third Edition</i>	xiii
<i>Preface to Second Edition</i>	xxv
<i>Preface to First Edition</i>	xxxi
 <i>Chapter</i>	
I. ANTIBIOTIC-INDUCED DISEASES, <i>Robert C. Zurek</i>	3
Introduction	3
Hypersensitivity Reactions	6
The Problem of Resistant Bacteria	7
Infections of Medical Progress	9
Chemoprophylaxis	11
Unsuccessful Antimicrobial Therapy	14
The Antimicrobials	16
Agents Interfering with Cell Wall Synthesis	16
Antimicrobial Agents Affecting Cell Membranes	25
Antimicrobials Affecting Protein Synthesis	29
Agents Affecting Intermediary Cellular Metabolism	41
Drugs Interfering with Nucleic Acid Synthesis	48
Other Antimicrobial Compounds	50
Concluding Remarks	51
II. CARDIOVASCULAR DISEASES, <i>Robert North</i>	83
Introduction	83
Digitalis	84
General	84
Major Clinical Patterns in Digitalis Intoxication	84

<i>Chapter</i>	<i>Page</i>
Minor Clinical Patterns of Digitalis Toxicity	90
Some Factors Predisposing to Digitalis Toxicity	91
Tests for Digitalis Effect of Toxicity	97
Antiarrhythmic Agents	99
Quinidine	101
Procainamide (Pronestyl) Lidocaine (Xylocaine), Other Local Anesthetics	105
Miscellaneous Antiarrhythmic Agents	107
Sympathomimetic Amines	108
Synthetic Alpha Receptor Stimulators	110
Synthetic Beta Receptor Stimulators	111
Adrenergic Receptor Blockade	112
Phenoxybenzamine (Dibenzylamine)	112
Phentolamine (Regitine)	112
Beta-Adrenergic Blocking Agents	112
Antihypertensive Drugs	113
Hydralazine (Apresoline)	114
Ganglionic Blocking Agents	115
Rauwolfia Derivatives	115
Guanethidine (Ismelin)	116
Alpha-Methyldopa (Aldomet)	117
Pargyline (Eutonyl)	119
Diazoxide (Metabase, Hyperstat)	120
Diuretics	121
Mercurial Diuretics	121
Thiazide Diuretics and	122
Triamterene (Dyrenium)	124
Spironolactone (Aldactone)	125
Furosemide (Lasix)	125
Ethacrynic Acid (Edecrin)	125
Electrical Currents	127
Defibrillators	127
Pacemakers	128
Paired or Coupled Pulse Pacemaking	131

<i>Chapter</i>	<i>Page</i>
III. CONGENITAL DISEASES, <i>William Hall</i>	163
Introduction	163
Fetal Death	166
Stunting and Prematurity	166
Adverse Reactions without Malformation	168
Congenital Malformations	171
Thalidomide	171
Cancer Chemotherapeutic Agents	173
Androgenic Steroids	175
Drugs of Uncertain Human Teratogenicity	176
Corticosteroids	176
Tetracycline	176
Meclizine (Bonine)	177
Phenmetrazine	178
Hypoglycemic Agents	178
Vitamin D	180
Anticonvulsants	180
The Deliberate Risk	182
IV. DERMATOLOGIC DISEASES, <i>William C. Fisher</i>	191
Introduction	191
Mechanisms of Drug Eruptions	191
Diagnostic Tests	192
Morphology of Drug Eruptions	193
Drug-Induced Photosensitivity	195
Fixed Drug Eruptions	198
Purpura and Vasculitis	198
Hair Changes Induced by Drugs	200
Organization of Drug Groupings	201
Anti-Infective Agents	201
Analgesics and Central Nervous System Agents	207
Analgesic Agents	207
Skeletal Muscle Relaxants	208
Barbiturates	208

<i>Chapter</i>	<i>Page</i>
Anorexigenic Agents	208
Tranquilizers	208
Phenothiazine Drugs	210
Anticonvulsant Drugs	211
Anticoagulant Drugs	211
Cardiovascular Agents	213
Diuretic Agents	215
Endocrine Agents	216
Androgenic and Estrogenic Hormones	217
Thyroid	218
Oral Hypoglycemic Agents	218
Antineoplastic Agents	219
Immunologic Agents	220
Metals and Their Salts	221
Antigout Agents	221
Antihistamine Agents	221
Vitamins	222
Cholesterol-Lowering Agents	222
Gastrointestinal Agents	223
Miscellaneous Individual Drugs	223
V. GASTROINTESTINAL DISEASES; <i>Norman M. Scott, Jr.</i>	235
Hepatic Diseases	235
Hypersensitivity Reactions	236
Direct Hepatotoxicity	247
The Oral Contraceptives	250
Hepatic Coma	251
Serum Hepatitis	252
Kernicterus	254
Acute Pancreatitis	255
Peptic Ulcer and Gastrointestinal Hemorrhage	259
Small Bowel Ulceration and Potassium Chloride	263
Other Gastrointestinal Syndromes	263

<i>Chapter</i>	<i>Page</i>
VI. HEMATOLOGIC DISEASES, <i>O'Neill Barrett, Jr.</i>	298
Introduction	298
Total Bone Marrow Suppression (Pancytopenia, Bone Marrow Hypoplasia, Aplastic Anemia)	300
Agents Which Usually Produce Bone Marrow Suppression if Sufficient Dose is Given	301
Agents Which Occasionally Produce Bone Marrow Suppression	301
Erythrocyte Abnormalities	308
Anemia	308
Abnormal Hemoglobin Formation	317
Leukocyte Abnormalities	318
Leukopenia	318
Platelet Abnormalities and Thrombocytopenic Purpura	322
Coagulation Abnormalities and Nonthrombocytopenia Purpura	326
Complications Secondary to Use of Anticoagulant Drugs	326
Hemorrhage and Nonthrombocytopenic Purpura Due to Drugs Other Than Anticoagulants	328
Complications of Blood Transfusion Therapy	331
Miscellaneous Conditions Relating to the Hemopoietic System	335
VII. HORMONE-INDUCED DISEASES, <i>Stanley Newman</i>	361
Introduction	361
Glucocorticoids	361
Cushing-Like Syndrome (Hypercortisonism)	362
Diabetogenic Effect	362
Negative Nitrogen Balance	363
Osteoporosis	363
Aseptic Necrosis and Joint Changes	364

<i>Chapter</i>	<i>Page</i>
Septic Arthritis	364
Myopathy	365
Pseudorheumatism	365
Vasculitis and Vascular Occlusion	365
Peptic Ulcer	366
Other Gastrointestinal Effects	368
Infection	368
Tuberculosis	369
Virus Infections	369
Fungus Infections	370
Disorders of the Eye	370
Emotional Disturbances	371
Adrenal Suppression and Corticoid Withdrawal Syndrome	372
Miscellaneous Untoward Effects	374
Other Adrenal Hormones	376
Mineralocorticoids	376
Catecholamines and Angiotensin	376
Gonadal Hormones	378
Estrogens	378
Androgens	379
Progestational Agents	381
Thyroid Gland	384
Thyroid Hormones	384
Medications and Procedures Which Alter Thyroid Function	385
Parathyroid Hormone and Vitamin D	390
Pituitary Gland	390
Vasopressin (Pitressin, Antidiuretic Hormone, ADH) and Oxytocin	391
Growth Hormone (Somatotropin, STH)	

<i>Chapter</i>	<i>Page</i>
VIII. HYPERSENSITIVITY AND CONNECTIVE TISSUE DISORDERS,	
<i>Stanley Newman and James F. Wallace</i>	418
Hypersensitivity Reactions	418
Anaphylactic Reactions	419
Serum Sickness	420
Arteritis	420
Dermatologic Manifestations	421
Hematologic Reactions	422
Fever As An Isolated Manifestation	
of Drug Allergy	423
Specific Organ Involvement	423
Lupus Erythematosus-Like Syndromes (SLE)	424
4 Aminoquinoline Complications	426
Other Anti-Inflammatory Agent Complications	427
IX. METABOLIC DISEASES, <i>Stanley Newman</i>	436
Introduction	436
Abnormalities of Carbohydrate Metabolism	436
Hypoglycemia	436
Hyperglycemia and Aggravation of	
Diabetes Mellitus	440
Gout and Uric Acid Calculi	442
Fluid and Electrolyte Syndromes	444
Potassium Depletion	444
Potassium Therapy	444
Hyponatremia	445
Hypernatremia	446
Magnesium	446
Calcium and Phosphorus	446
Fluoride	447
Vitamins	448
Miscellaneous	448
Oxygen Toxicity	450

Chapter	Page
X. NEUROLOGIC AND PSYCHIATRIC DISEASES,	
<i>Darrell Buchanan</i>	463
Introduction	463
Disorders of Affect, Mood, Thought and Behavior	464
Convulsions and Disorders of Consciousness	468
Other Encephalopathies	472
Myelopathy	474
Motor System Disorders	475
Disorders of Special Senses	477
Autonomic Disorders	481
Peripheral Neuropathies	482
Specific Agents and Procedures Affecting the Nervous	
System	485
Diagnostic Procedures	485
Radiation	485
Anesthesia and Surgery	485
Immunization	486
Anticoagulants	486
Psychotherapeutic Agents	487
XI. PULMONARY DISEASES, <i>Frank L. Miller</i>	498
Introduction	498
Interstitial Pulmonary Fibrosis	498
Open Negative Syndrome	500
Lipid Pneumonia	500
Apnea and Hypoxia	501
Eosinophilic Pneumonia	504
Miscellaneous	504
XII. RADIATION-INDUCED DISEASES, <i>Carl Boyer</i>	515
Introduction	515
Radiobiological Background	516
Generalized Effects of Radiation; Immediate	518
The Acute Radiation Syndrome	518
Embryo and Fetus	522

<i>Chapter</i>	<i>Page</i>
Generalized Effects of Radiation; Delayed	524
Genetic Effects	524
Somatic Effects; Life Span Shortening	530
Somatic Effects; Leukemia	531
Somatic Effects; Neoplasia	536
Localized Effects of Radiation	539
Kidney	539
Gastrointestinal Tract	544
Skin, Subcutaneous Tissue	546
Bone	546
Central Nervous System	548
Lens	549
Liver	549
Conclusion	550
XIII. RENAL DISEASES, <i>Robert H. Moser</i>	559
Introduction	559
Heavy Metals	561
Mercury	561
Bismuth	564
Uranium	564
Gold	564
Antimony	565
Solvents	565
Diagnostic Agents	566
Cholecystographic Media	566
Excretory Urographic Media	568
Retrograde Pyelographic Media	568
Antimicrobial Agents	569
Sulfonamides	569
Penicillins	572
Streptomycin	574
Kanamycin and Neomycin	574
Vancomycin	575
Bacitracin	575

*Chapter**Page*

Polymyxin B and Colistimethate (Coly-Mycin Injectable)	576
Tetracyclines	577
Amphotericin B (Fungizone)	579
Nitrofurantoin (Furadantin)	580
Antibiotics and Uremic Patients	580
Analgesic Agents	582
Salicylates	582
Phenylbutazone (Butazolidin)	583
Analgesic Abuse	583
Phenindione	590
Nephrotic Syndrome	591
Trimethadione (Tridione) and Paramethadione (Paradione)	591
Miscellaneous Renal and Urinary Tract Disorders	592
 XIV. SURGICALLY INDUCED DISEASES, <i>Lester F. Williams, Jr.</i>	 608
Introduction	608
Gastrointestinal Surgery	609
Stomach and Duodenum	609
Small Bowel	634
Large Bowel	645
Gallbladder	645
Pancreas	646
Liver	647
Cardiovascular System	651
Cardiac Arrest	652
Shock	653
Peripheral Arterial Disease	655
Venous Disease	661
Thromboembolism	662
Lungs	663
Kidneys	666

Chapter

Page

Parathyroid	668
Metabolic Response to Surgical Stress	669
Fluid and Electrolyte Changes	669
Postoperative Nutrition	670
Blood	671
Incisions and Wound Healing	673
Infection	675
Miscellaneous	681
Anticoagulants	681
Surgical Use of Plastics	681
Cancer	682
Gastric Atony and Dysphagia	682

XV. DISEASES OF DIAGNOSTIC PROCEDURES, *Richard J. Hess*

and Herbert B. McDonald

Introduction	709
Centesis	711
Lumbar Puncture	711
Paracentesis	712
Pericardiocentesis	713
Thoracentesis	713
Biopsy	714
Percutaneous Bone Marrow Biopsy	714
Peroral Intestinal Biopsy	714
Percutaneous Kidney Biopsy	715
Percutaneous Liver Biopsy	719
Percutaneous Lung Biopsy	722
Myocardial Biopsy	723
Percutaneous Peritoneal Biopsy	724
Percutaneous Pleural Biopsy	724
Thyroid Biopsy	725
Endoscopy	725
Esophagoscopy	725

<i>Chapter</i>	<i>Page</i>
Gastroscopy	726
Peritoneoscopy	727
Proctosigmoidoscopy	727
Radiographic Procedures	728
Contrast Media as Pathogens	728
Barium Enema	759
Cholegraphy as a Pathogen	760
Lymphangiography	778
Conclusions	780
XVI. PSYCHOSEMANTICS (On Speaking to Patients), <i>Robert H. Moser</i>	809
Epilogue	819
<i>Drug Index</i>	823
<i>Index</i>	843