

# CONTENTS

## 1. THE FIELD OF PEDIATRICS

The Field of Pediatrics.....	1
<i>Victor C. Vaughan, III, and R. James McKay</i>	

## 2. DEVELOPMENTAL PEDIATRICS

<b>Growth and Development</b> .....	13
Some Aspects of Growth and Development .....	13
Fetal Growth and Development .....	17
The Newborn Infant .....	19
Growth and Development of the Infant Born Prematurely .....	21
Growth During the First Year .....	22
Growth and Development in the Second Year .....	24
Growth and Development During the Preschool Years .....	26
Growth and Development During the Early School Years.....	26
Growth and Development in Adolescence .....	27
Special Aspects of Growth .....	29
Assessment of Physical Growth and Development .....	38
Assessment of Neurologic and Psychologic Development .....	50

*Victor C. Vaughan, III*

<b>Psychologic Development</b> .....	52
Biologic Factors .....	52
Environmental Factors .....	54
Psychologic Factors.....	55
General Principles Governing Child Development .....	57
Aims in Child Development.....	65
Stages of Psychologic Development.....	65

*Calvin F. Settlage*

<b>Psychologic Assessment of the Child</b> .....	66
--	----

*J. M. Dunn*

<b>Prevention of Psychologic Disorders</b> .....	68
--	----

<b>Role of the Physician in Prevention of Psychologic Disorders in the Well Child</b> ...	68
General Developmental Issues .....	68

*Esther L. Cava*

Critical Developmental Issues.....	70
------------------------------------	----

*Marc A. Forman and William H. Hetznecker*

<b>Role of the Physician in Prevention of Psychologic Disorders in the Sick Child</b> ...	80
---	----

*J. M. Dunn*

<b>Psychologic Disorders</b> .....	83
Psychopathology .....	83
General Considerations in Diagnosis and Treatment.....	86
Categories of Psychologic Disorders.....	88

*Calvin F. Settlage*

<b>Role of the Physician in Management of Established Psychologic Disorders</b> .....	104
---	-----

*J. M. Dunn*

<b>Neglect and Abuse of Children</b> .....	107
The Spectrum of Child Abuse and Neglect .....	107

*Barton D. Schmitt and C. Henry Kempe*

<b>Drug Abuse by Adolescents</b> .....	112
--	-----

*Robert A. Kramer*

<b>Disorders of Communication</b> .....	117
Hearing Disorders .....	117

*Richard W. Olmsted*

Speech and Language Development and Disorders .....	120
---	-----

*Herold Lillywhite*

Reading Disabilities .....	123
----------------------------	-----

*John B. Isom*

<b>Cerebral Dysfunction (Learning Disorders)</b> .....	127
--	-----

*John B. Bartram*

<b>Mental Retardation</b> .....	130
Phenylketonuria .....	132

**2. DEVELOPMENTAL PEDIATRICS—Continued**

**Mental Retardation—Continued**

Down Syndrome (Mongolism) ..... 134  
 Differential Diagnosis of Mental Retardation ..... 136  
*John B. Bartram*

**The Physician and the Child with a Permanent Handicap** ..... 139  
*John B. Bartram*

**The Care of the Child with a Fatal Illness**... 142  
*Victor C. Vaughan, III*

**Difficult Decisions in Pediatrics** ..... 144  
*Victor C. Vaughan, III*

**3. NUTRITION AND NUTRITIONAL DISORDERS**

**Nutritional Requirements** ..... 146  
 Water ..... 146  
 Calories ..... 147  
 Proteins ..... 148  
 Carbohydrates ..... 149  
 Fats ..... 149  
 Minerals ..... 151  
 Vitamins ..... 155  
 Miscellaneous Factors ..... 158  
 Evaluation of Diet ..... 160  
*William E. Laupus*

**Feeding of Infants** ..... 162  
 Breast Feeding ..... 163  
 Formula Feeding ..... 169  
 Other Foods ..... 177  
 First-Year Feeding Problems ..... 179  
 Feeding During the Second Year of Life ..... 181  
*William E. Laupus*

**Nutritional Disorders** ..... 183  
 Malnutrition ..... 183  
 Obesity ..... 187  
 Vitamin A Deficiency ..... 188  
 Vitamin B Complex Deficiency ..... 191  
 Thiamine Deficiency (Beriberi) ..... 191  
 Riboflavin Deficiency (Ariboflavinosis) ..... 192  
 Niacin Deficiency (Pellagra) ..... 192  
 Pantoic Acid (Vitamin B<sub>6</sub>) Deficiency ..... 194  
 Selenium ..... 195  
 Risks of Vitamin D Deficiency ..... 198  
 Tetany of Vitamin D Deficiency (Infantile Tetany) ..... 204  
 Hypervitaminosis D ..... 205  
 Vitamin E Deficiency ..... 205  
 Vitamin K Deficiency ..... 205  
*Lewis A. Barness*

**4. PREVENTIVE PEDIATRICS AND HYGIENE**

**Preventive Pediatrics** ..... 207  
 Conduct of Preventive Child Health Services ..... 207  
 Preventive Measures at Different Age Periods ..... 210  
 Prevention in the Future ..... 215  
*Robert J. Haggerty*

**Hygiene** ..... 216  
*William E. Laupus*

**5. GENERAL CONSIDERATIONS IN THE CARE OF SICK CHILDREN**

**Clinical Evaluation of Infants and Children** ..... 219  
 Initial Contact ..... 220  
 History ..... 220  
 Physical Examination ..... 221  
*R. James McKay*

**The Problem-Oriented Medical Record** ..... 221  
*R. James McKay*

**The Pathophysiology of Body Fluids** ..... 234  
 Water ..... 234  
 Sodium ..... 238  
 Potassium ..... 240  
 Calcium ..... 242  
 Magnesium ..... 242  
 Hydrogen Ion (Acid-Base Balance) ..... 243  
 Chloride ..... 247  
 Phosphorus ..... 249  
*Alan M. Robson*

**Parenteral Fluid Therapy** ..... 250  
 Maintenance Therapy ..... 250  
 Deficit Therapy ..... 254  
 Therapy in Specific Disease States ..... 261  
 Parenteral Solutions ..... 270  
*Alan M. Robson*

**Preoperative and Postoperative Care and Cardiopulmonary Resuscitation** ..... 270  
 Preoperative Evaluation ..... 271  
 Preoperative Preparation and Sedation ..... 271  
 Intraoperative Management ..... 272  
 Postanesthetic Recovery ..... 273  
*John J. Downes and Russell C. Raphaely*

**Drowning and Near-Drowning** ..... 276  
*Shirley A. Graves*

**Burns** ..... 279  
*Hugo F. Carvajal and Armond S. Goldman*

**Drug Therapy**  
 General  
 Adverse  
 Types of  
 Initiation  
 Choice of  
 Therape  
 Admini  
 The Dos  
*Harry C. Sh*

**6. PREVENTIVE DISTURBANCES**

**Prenatal Factors in Children**

**Genetic**  
 Dominant  
 Recessive  
 X-Link  
 Pathol  
 Mult  
 Lethal  
*Josef Wark*

**Chromosomes**  
 The Auto  
 Metho  
 The N  
 Abnor  
 Nome  
 Derm  
 Clinic  
 Spont  
 Genet  
 Dis  
*Irene A. U*

**Intrauterine**

**Congenital**

**Genetic**

**7. THE NEUROLOGIC**

**The Fetus**

**High-Risk**

**The Newborn**

**Drug Therapy** ..... 284  
 General Considerations ..... 284  
 Adverse Drug Reactions ..... 284  
 Types of Drug Therapy ..... 285  
 Initiation of Drug Therapy ..... 286  
 Choice of Drug ..... 286  
 Therapeutic Orphans ..... 286  
 Administration of Drugs ..... 286  
 The Dose of Drugs ..... 287  
*Harry C. Shirkey*

**6. PRENATAL DISTURBANCES**

**Prenatal Factors in Diseases of Children** ..... 289  
**Genetic Factors** ..... 289  
 Dominant Pathologic Traits ..... 291  
 Recessive Pathologic Traits ..... 293  
 X-Linked Recessive Pathologic Traits ... 294  
 Pathologic Traits Which Depend on  
 Multiple Genetic Factors ..... 296  
 Lethal Traits ..... 296  
*Josef Warkany and F. Clarke Fraser*

**Chromosomal Abnormalities in Man: The Autosomes** ..... 296  
 Methodology ..... 296  
 The Normal Karyotype ..... 297  
 Abnormal Karyotypes ..... 299  
 Nomenclature ..... 300  
 Dermatoglyphics ..... 300  
 Clinical Abnormalities ..... 302  
 Spontaneous Abortions ..... 311  
 Genetic Counseling in Chromosomal Disorders ..... 312  
*Irene A. Uchida*

**Intrauterine and Environmental Factors** ... 313  
*Josef Warkany and F. Clarke Fraser*

**Congenital Malformations** ..... 314  
*Josef Warkany and F. Clarke Fraser*

**Genetic Counseling** ..... 317  
*Josef Warkany and F. Clarke Fraser*

**7. THE FETUS AND THE NEWBORN INFANT**

**The Fetus** ..... 322  
*Richard E. Behrman*  
**High-Risk Pregnancies** ..... 327  
*Richard E. Behrman*  
**The Newborn Infant** ..... 329  
 The History in Neonatal Pediatrics ..... 329

Physical Examination of the Newborn Infant ..... 330  
 Ordinary Care of the Newborn Infant ..... 333  
*Richard E. Behrman*

**The High-Risk Infant** ..... 336  
 Multiple Pregnancies ..... 338  
 Prematurity and Low Birth Weight ..... 341  
 Post-term Infants ..... 349  
 Placental Dysfunction Syndrome ..... 349  
 High Birth Weight ..... 350  
*Richard E. Behrman*

**Diseases of the Newborn Infant: Premature and Full Term** ..... 351  
 Clinical Manifestations of Disease During the Neonatal Period ..... 351  
 Congenital Anomalies ..... 352  
 Birth Injury ..... 352  
 Anoxia ..... 357  
 Pediatric Emergencies in the Delivery Room ..... 358  
*Richard E. Behrman*

**Disturbances of Organ Systems** ..... 361  
 Disturbances of the Respiratory Tract... 361  
 Disturbances of the Digestive System ... 373  
 Disturbances of the Blood ..... 381  
 Disturbances of the Genitourinary System ..... 389  
 Disturbances of the Cranium ..... 390  
 Disorders of the Skin ..... 390  
 The Umbilicus ..... 390  
 Metabolic Disturbances ..... 392  
 Disturbances of the Endocrine System ... 395  
 Infants of Diabetic Mothers ..... 395  
 Hypoglycemia ..... 396  
*Richard E. Behrman*

**Infections of Newborn** ..... 398  
 Staphylococcal Infections ..... 400  
 Pseudomonas Infections ..... 402  
 Diarrhea in the Newborn ..... 402  
 Infection Due to Listeria Monocytogenes 403  
 Group B Streptococcal Infection ..... 404  
 Vibrio Fetus Infection ..... 404  
 Viral Infections ..... 404  
*Richard E. Behrman*

**8. INBORN ERRORS OF METABOLISM**

**Introduction** ..... 407  
 Table of Inborn Errors ..... 409  
*Victor H. Auerbach and Angelo M. DiGeorge*

**Defects in Metabolism of Amino Acids** ..... 412  
 Phenylalanine ..... 412  
 Tyrosine ..... 414  
 Methionine ..... 416  
 Cystine ..... 418  
 Tryptophan ..... 418

<b>8. INBORN ERRORS OF METABOLISM—Continued</b>	<b>The Immunologic System</b> .....	474
<b>Defects in Metabolism of Amino Acids—Continued</b>	Components of the Immunologic System	474
Valine, Leucine, Isoleucine.....	Immunologic Responses .....	477
Glycine.....	Maturation of Immunologic Function.....	479
Proline and Hydroxyproline.....	<i>Charles A. Janeway</i>	
Glutamic Acid.....	<b>Immunologic Deficiency Diseases</b> .....	480
Urea Cycle.....	Deficiencies of the Phagocytes.....	480
Histidine.....	Immunodeficiency States.....	482
Beta Amino Acids.....	<i>Charles A. Janeway</i>	
Lysine.....	<b>Allergic Disorders</b> .....	492
<i>Victor H. Auerbach and Angelo M. DiGeorge</i>	Immunologic Basis of Atopic Disease .....	493
<b>Defects in Metabolism of Carbohydrates</b> ... 432	Chemical Mediators of Allergic Injury... 494	
Defects in Absorption of Carbohydrates 432	General and Specific Methods of	
Defects in Monosaccharide Metabolism 433	Diagnosis.....	496
Galactose.....	Principles of Treatment of Allergic	
Miscellaneous Aspects of Carbohydrate	Disorders .....	498
Metabolism .....	Respiratory Allergy.....	502
437	Atopic Dermatitis.....	509
Glycogenoses: Disorders of Glycogen	Urticaria (Hives).....	512
Metabolism (Glycogen Storage	Anaphylaxis.....	513
Diseases).....	Serum Sickness.....	514
439	Adverse Reactions to Drugs.....	515
Double Enzymatic Defects.....	Insect Allergy.....	516
447	Ocular Allergies.....	518
<i>Victor H. Auerbach and Angelo M. DiGeorge</i>	Adverse Reactions to Foods .....	518
<b>Defects of Metabolism of Pyrimidines</b>	<i>Elliot F. Ellis</i>	
<b>and Purines</b> .....	<b>Rheumatic Diseases</b> .....	522
447	Juvenile Rheumatoid Arthritis .....	522
<i>Victor H. Auerbach and Angelo M. DiGeorge</i>	Ankylosing Spondylitis.....	531
<b>Other Defects of Enzymes and Proteins</b> ..... 450	Systemic Lupus Erythematosus.....	533
<b>Defects in Plasma Proteins</b> .....	Vasculitis Syndromes .....	535
451	Dermatomyositis.....	539
<b>Defects in Plasma Enzymes</b> .....	Scleroderma .....	541
452	Erythema Multiforme Exudativum	
<b>Defects of Proteins of Other Tissues</b> .....	(Stevens-Johnson Syndrome) .....	542
453	Erythema Nodosum.....	542
<i>Victor H. Auerbach and Angelo M. DiGeorge</i>	Goodpasture Syndrome .....	543
<b>Epilogue</b> .....	Relapsing Nodular Nonsuppurative	
455	Panniculitis (Weber-Christian	
<i>Victor H. Auerbach and Angelo M. DiGeorge</i>	Syndrome).....	543
<b>The Lipidoses</b> .....	"Rheumatoid" Nodules Without	
Gaucher's Disease .....	Rheumatic Disease.....	544
Niemann-Pick Disease.....	<i>Jane Green Schaller and Ralph J. Wedgwood</i>	
Tay-Sachs Disease.....	<b>Rheumatic Fever</b> .....	546
Recently Described Syndromes.....	<i>Lewis W. Wannamaker</i>	
461		
Syndromes with Increased Blood Fat .....		
461		
Skin Xanthomas .....		
462		
<i>Allen C. Crocker</i>		
<b>Defects in Pigment Metabolism</b> .....		
The Porphyrrias .....		
464		
Hereditary Methemoglobinemias.....		
470		
Hemochromatosis.....		
471		
<i>J. Julian Chisolm, Jr.</i>		
<b>9. THE IMMUNOLOGIC SYSTEM, ALLERGY AND RELATED DISEASES</b>		
<b>Immunity and Allergy</b> .....		473
<i>Charles A. Janeway</i>		
	<b>10. INFECTIOUS DISEASES</b>	
	<b>Clinical Use of the Microbiology</b>	
	<b>Laboratory</b> .....	558
	Bacterial Infections .....	558
	Spirochetes.....	561
	Mycoplasma and L-Forms .....	561
	Fungi .....	561
	Rickettsiae .....	561
	Protozoa.....	561
	Helminths.....	562
	Viruses .....	562

Application of Microbiology to Diagnostic Problems.....	564	Measles (Rubeola).....	653
<i>Stanley A. Plotkin</i>		German Measles (Rubella, Three-Day Measles).....	659
<b>General Considerations in Bacterial Infections</b> .....	565	Exanthem Subitum (Roseola Infantum).....	662
<i>Vincent A. Fulginiti</i>		<i>Russell J. Blattner</i>	
<b>Isolation Measures for Infectious Diseases</b> .....	566	Erythema Infectiosum (Fifth Disease)...	663
<i>Victor C. Vaughan, III</i>		Herpes Simplex.....	664
<b>Bacterial Infections</b> .....	569	Varicella and Herpes Zoster.....	669
Streptococcal Infections.....	569	Smallpox (Variola).....	672
Pneumococcal Infections.....	573	Vaccination Against Smallpox.....	675
Staphylococcal Infections.....	575	Mumps (Epidemic Parotitis).....	678
Infections Due to Neisseriae.....	578	<i>Carol F. Phillips</i>	
<i>Otto F. Sieber, Jr., and Vincent A. Fulginiti</i>		Epidemic Influenza.....	682
Infections Due to Hemophilus		Rabies (Hydrophobia).....	685
Influenzae.....	581	Yellow Fever.....	688
Hemophilus Aphrophilus.....	583	Lymphogranuloma Venereum.....	690
<i>Sarah H. W. Sell</i>		Infectious Mononucleosis.....	691
Acute Bacterial Meningitis.....	583	Acute Infectious Lymphocytosis.....	693
Pertussis.....	589	Cat-Scratch Disease.....	694
<i>Vincent A. Fulginiti and Otto F. Sieber, Jr.</i>		Cytomegalic Inclusion Disease.....	696
Enteropathogenic Escherichia Coli.....	590	Infectious Neuritis.....	697
Salmonella Infections.....	594	<i>Russell J. Blattner</i>	
Shigellosis (Bacillary Dysentery).....	602	Dengue Fever and Dengue-Like Disease	698
<i>David H. Smith</i>		Other Viral Hemorrhagic Fevers.....	702
Cholera.....	606	<i>Scott B. Halstead</i>	
<i>R. James McKay</i>		Infections by Enteroviruses.....	705
Pseudomonas Infections.....	608	<i>E. C. Curnen</i>	
<i>Warren E. Wheeler</i>		Poliomyelitis.....	713
Yersinia Infections.....	610	<i>Alex J. Steigman</i>	
Brucellosis.....	611	Acute Aseptic Meningitis Syndrome.....	721
Tularemia.....	612	Encephalitis.....	723
Diphtheria.....	613	<i>Alex J. Steigman</i>	
Listeriosis.....	617	<b>Rickettsial Diseases</b> .....	729
Tetanus (Lockjaw).....	619	Typhus Fever.....	731
Infection Due to Clostridial Species.....	622	Murine Typhus.....	732
Other Anaerobic Infections.....	622	Brill's Disease.....	733
<i>Vincent A. Fulginiti and Otto F. Sieber, Jr.</i>		Scrub Typhus.....	733
Tuberculosis.....	625	Rocky Mountain Spotted Fever.....	733
Infections with Unclassified		Fièvre Boutonneuse.....	735
Mycobacteria (Atypical or Anomymous		Rickettsialpox.....	735
Mycobacteria).....	641	Q Fever.....	735
<i>Robert H. High</i>		<i>Eli Gold and Frederick C. Robbins</i>	
Leprosy (Hansen's Disease).....	642	<b>Mycotic Infections</b> .....	736
<i>Alex J. Steigman</i>		Actinomycosis.....	736
<b>Spirochetal Infections</b> .....	644	North American Blastomycosis.....	737
Syph.....	644	Cryptococcosis (Torulosis).....	738
Yaws.....	650	Phycomycosis (Mucormycosis).....	739
Pinta.....	650	Nocardiosis.....	740
Leptos.....	651	Sporotrichosis.....	740
Rat-Bite Fever.....	652	Aspergillosis.....	741
Relapsing Fever.....	652	Therapy with Amphotericin B.....	741
<i>Alex J. Steigman</i>		<i>Jerome S. Harris</i>	
<b>Viral Infections and Those Presumed to Be Caused by Viruses</b> .....	653	Histoplasmosis.....	743
		<i>Amos Christie</i>	
		Coccidioidomycosis.....	747
		<i>Demosthenes Pappagianis</i>	
		<b>Parasitic Infections</b> .....	749

**10. INFECTIOUS DISEASES—Continued**

**Helminthic Diseases** ..... 749

    Infections Produced by Roundworms  
    (Nematoda) ..... 749

*Ernest Carroll Faust and Paul C. Beaver*

    Tropical Eosinophilia ..... 761

*Paul C. Beaver*

    Dracunculosis (Guinea Worm Infection)  
    Infections Produced by Tapeworms  
    (Cestoda) ..... 761

    Infections Produced by Flukes  
    (Trematodes) ..... 765

*Ernest Carroll Faust and Paul C. Beaver*

**Arthropods** ..... 769

    Venenating Arthropods ..... 769

    Tissue-Invading Arthropods ..... 771

    Arthropods As Transmitting Agents of  
    Disease ..... 771

*Ernest Carroll Faust and Albert Miller*

**Systemic Protozoan Infections** ..... 772

    Malaria ..... 772

*David F. Clyde*

    Kala-azar in Children ..... 777

*P. M. Udani*

    Toxoplasmosis ..... 780

*Harry A. Feldman*

    Primary Amebic Meningoencephalitis... 782

*Paul C. Beaver*

**Intestinal Protozoa** ..... 783

    Amebiasis ..... 784

    Giardiasis ..... 786

    Balantidiasis ..... 786

*Paul C. Beaver*

**11. THE DIGESTIVE SYSTEM**

**The Oral Cavity** ..... 787

    Abnormalities in Growth and  
    Development of the Jaws and Teeth... 787

    Abnormalities of Development of the  
    Palate and Soft Tissues of the Mouth... 796

    The Lips ..... 800

    The Tongue ..... 800

    Salivary Glands ..... 802

*Frederick M. Parkins and Giulio J. Barbero*

**The Esophagus** ..... 803

    Congenital Anomalies ..... 803

    Acquired Diseases ..... 806

    Foreign Bodies in the Esophagus ..... 808

*Paul H. Holinger*

**The Gastrointestinal Tract** ..... 809

**Gastrointestinal Symptomatology** ..... 809

        Poor Appetitite ..... 809

    Abdominal Pain ..... 810

    Gastrointestinal Bleeding ..... 812

    Vomiting ..... 813

    Fecal Elimination ..... 814

    Diarrhea ..... 818

*Giulio J. Barbero*

**Congenital Anomalies of the Gastrointestinal Tract and Intestinal Obstruction** 820

    Congenital Hypertrophic Pyloric  
    Stenosis ..... 821

    Congenital Intestinal Obstruction ..... 823

    Acquired Intestinal Obstruction ..... 829

*Giulio J. Barbero*

**Diseases of the Gastrointestinal Tract**... 831

    Peptic Ulcer ..... 833

    Mesenteric Lymphadenitis ..... 834

    Necrotizing Enterocolitis ..... 834

    Irritable Colon Syndrome ..... 834

    Inflammatory Disease of the Intestine... 835

    Pneumatosis Cystoides Intestinalis ..... 839

*Giulio J. Barbero*

**Intestinal Malabsorption** ..... 840

**Evaluation of Infant or Child for  
    Malabsorption** ..... 840

    Evaluation of Absorption of  
    Carbohydrates ..... 841

    Evaluation of Fat Absorption ..... 843

    Evaluation of Protein Absorption ..... 844

    Test for Protein-Losing Enteropathy ..... 844

    Tests of Pancreatic Function ..... 844

    Tests to Locate Abnormalities ..... 845

    Roentgenographic Studies in  
    Malabsorption ..... 845

    Peroral Biopsy of the Mucosa of the  
    Intestine ..... 845

*M. E. Ament*

**Malabsorption Syndromes** ..... 846

        Congenital, Developmental and  
        Secondary Lactase Deficiency ..... 846

        Sucrase-Isomaltase Deficiency ..... 847

        Congenital Glucose-Galactose  
        Malabsorption ..... 847

        Primary Immune Defects ..... 848

        Congenital Chloridorrhea ..... 848

        Enterokinase Deficiency ..... 848

        Cow's Milk Protein Sensitivity and  
        Intractable Diarrhea of Infancy ..... 848

        Malabsorption Due to Parasites ..... 849

        Cystic Fibrosis ..... 850

        Pancreatic Insufficiency and Bone  
        Marrow Failure ..... 850

        Celiac Sprue ..... 851

        Short Bowel Syndrome ..... 853

        Abetalipoproteinemia ..... 853

        Intestinal Lymphangiectasia ..... 854

        Whipple's Disease ..... 855

        Wolman's Disease ..... 856

        Tropical Sprue ..... 856

        Malabsorption Due to Small Intestinal  
        Stasis ..... 856

Mala  
Ob  
Acro  
Prim  
Amir  
Vitar  
Cong  
Ac  
M. E. Am  
Anus, Re  
Malfi  
Fissu  
Prur  
Prola  
Re  
Anor  
Fistu  
Hem  
Cong  
Re  
Appe  
Robert J.  
Lawrence  
Peritone  
Malfi  
Asci  
Perit  
Herr  
Robert J.  
Lawrence  
The Live  
Bioche  
Functi  
Bilin  
Robert K  
Disord  
Unc  
Phot  
Pers  
Co  
Con  
Robert K  
Infect  
Neo  
Infe  
Live  
Robert K  
Acute  
Acu  
al  
Hep  
Robert K  
Chron  
Acq  
Her  
Met

Malabsorption in Biliary Tract		The Liver in Inflammatory Bowel	
Obstruction .....	857	Disease .....	895
Acrodermatitis Enteropathica (AE) .....	857	Nutritional Liver Diseases .....	895
Primary Hypomagnesemia .....	857	<i>Robert Kaye and Philip G. Holtzapple</i>	
Amino Acid Malabsorption .....	857	Indian Childhood Cirrhosis.....	895
Vitamin B <sub>12</sub> Malabsorption.....	857	<i>V. Balagopal Raju</i>	
Congenital Malabsorption of Folic		Fatty Infiltration.....	896
Acid .....	858	Portal Hypertension .....	897
<i>M. E. Ament</i>		Esophageal and Gastric Varices.....	898
<b>Anus, Rectum and Sigmoid</b> .....	860	Cysts of the Liver.....	899
Malformations of the Anus and Rectum	860	<i>Robert Kaye and Philip G. Holtzapple</i>	
Fissure in Ano .....	862	<b>The Gallbladder</b> .....	899
Pruritus Ani.....	862	<i>Robert Kaye and Philip G. Holtzapple</i>	
Prolapse and Procidentia of the		<b>The Bile Ducts</b> .....	900
Rectum and Sigmoid.....	862	Cystic Dilatation and Perforation.....	900
Anorectal Abscess .....	863	Atresia of the Extrahepatic Bile Ducts...	900
Fistula.....	863	Atresia of the Intrahepatic Bile Ducts...	901
Hemorrhoids.....	863	<i>Robert Kaye and Philip G. Holtzapple</i>	
Congenital Defects of the Sacrococcygeal		<b>The Pancreas</b> .....	903
Region .....	863	Physiology of the Exocrine Glands of	
Appendicitis .....	864	the Pancreas.....	903
<i>Robert J. Touloukian, John H. Seashore, and</i>		Tests of Pancreatic Function.....	904
<i>Laurence K. Pickett</i>		Differences Between Steatorrheas Due	
<b>Peritoneum and Allied Structures</b> .....	866	to Pancreatic Maldigestion and Those	
Malformations of the Peritoneum .....	866	Secondary to Failure of Absorption ....	904
Ascites.....	866	Sweat Tests for Cystic Fibrosis .....	904
Peritonitis.....	866	Anomalies of the Pancreas .....	905
Hernia and Hydrocele.....	868	Cystic Fibrosis.....	905
<i>Robert J. Touloukian, John H. Seashore, and</i>		Genetic Pancreatic Deficiencies Not	
<i>Laurence K. Pickett</i>		Due to Cystic Fibrosis.....	919
<b>The Liver</b> .....	872	Pancreatitis.....	920
<b>Biochemistry of Liver Disease and Liver</b>		Cysts and Pseudocysts of the Pancreas...	921
<b>Function Tests</b> .....	873	Involvement of the Pancreas in	
Bilirubin Metabolism.....	874	Systemic Disease.....	921
<i>Robert Kaye and Philip G. Holtzapple</i>		Neoplasms of the Pancreas .....	921
<b>Disorders Affecting Excretion of Bilirubin</b>	877	<i>Paul A. di Sant'Agnese</i>	
Unconjugated Hyperbilirubinemias .....	877	<b>12. THE RESPIRATORY</b>	
Phototherapy .....	880	<b>SYSTEM</b>	
Persistent Jaundice with Defective		<b>Respiratory Physiology and Its Application</b>	
Conjugation.....	880	<b>to Pulmonary Disease</b> .....	923
Conjugated Hyperbilirubinemias.....	881	Development of the Respiratory System	
<i>Robert Kaye and Philip G. Holtzapple</i>		and Initiation of Respiration.....	923
<b>Infections of the Liver</b> .....	882	Control of Respiration.....	924
Neonatal Hepatitis .....	882	Muscles of Respiration .....	925
Infectious Hepatitis .....	884	Lung Volumes .....	925
Liver Abscess .....	887	Mechanics of Respiration.....	926
<i>Robert Kaye and Philip G. Holtzapple</i>		Ventilation.....	927
<b>Acute Liver Disease</b> .....	888	Diffusion .....	928
Acute Encephalopathy and Hepatomeg-		Pulmonary Vasculature .....	929
aly with Fatty Infiltration.....	888	Ventilation-Perfusion Relations .....	929
Hepatic Drug Reactions .....	889	Ciliary Activity.....	929
<i>Robert Kaye and Philip G. Holtzapple</i>		Methods of Assessing Ventilatory	
<b>Chronic Liver Disease</b> .....	889	Function .....	930
Acquired Hepatic Disease.....	890	Artificial Respiration.....	932
Hereditary Hepatic Disease.....	892	Inhalation Therapy.....	933
Metabolic Disorders.....	892	<i>Charles Davenport Cook</i>	

**12. THE RESPIRATORY SYSTEM—Continued**

**Respiratory Disturbances** ..... 935  
*Heinz F. Eichenwald and  
 George H. McCracken, Jr.*

**The Upper Respiratory Tract** ..... 935  
 The Nose ..... 935  
 Elongated Uvula ..... 937  
*Heinz F. Eichenwald and  
 George H. McCracken, Jr.*

**Infections of the Upper Respiratory Tract** ..... 937  
 Acute Nasopharyngitis (The Common Cold) ..... 939  
 Acute Pharyngitis ..... 942  
 Retropharyngeal Abscess ..... 944  
 Lateral Pharyngeal Abscess ..... 944  
 Peritonsillar and Retrotonsillar Abscesses ..... 945  
 Sinusitis ..... 945  
 General Considerations of Chronic Infections of the Upper Respiratory Tract ..... 946  
 Tonsils and Adenoids ..... 947  
*Heinz F. Eichenwald and  
 George H. McCracken, Jr.*

**The Ear** ..... 950  
 External Auditory Canal ..... 951  
 The Tympanic Membrane ..... 952  
 Otitis Media ..... 952  
*John D. Nelson*

**The Larynx** ..... 955  
 Congenital Malformations ..... 955  
 Trauma of the Larynx ..... 956  
 Laryngeal Stenosis ..... 956  
 Neoplasms of the Larynx ..... 957  
 Foreign Bodies in the Larynx, Trachea and Bronchi ..... 958  
*Charles M. Norris*

**Acute Infections of the Larynx and the Trachea** ..... 961  
 Acute Nondiphtheritic Infections (Infectious Croup) ..... 961  
*George H. McCracken, Jr., and  
 Heinz F. Eichenwald*

**The Thoracic Cavity** ..... 965  
 Malformations of the Trachea, Bronchi and Lungs ..... 965  
 Bronchitis ..... 967  
 Pneumonia ..... 968  
*George H. McCracken, Jr., and  
 Heinz F. Eichenwald*

Atelectasis ..... 986  
 Emphysema ..... 988  
 Pulmonary Edema ..... 991  
 Pulmonary Embolism and Infarction ..... 991  
 Pulmonary Suppuration ..... 992  
*Heinz F. Eichenwald and  
 George H. McCracken, Jr.*

**Diseases of the Pleura** ..... 9  
 Pleurisy ..... 9  
 Pneumothorax ..... 9  
 Hydrothorax ..... 9  
 Hemothorax ..... 9  
 Chylothorax ..... 9  
*Heinz F. Eichenwald and  
 George H. McCracken, Jr.*

**13. THE CARDIOVASCULAR SYSTEM**

**Evaluation of the Heart and Circulation in Health and Disease** ..... 100  
*Samuel Kaplan*

**Congenital Heart Disease** ..... 101  
**Congenital Cardiac Disease with Cyanosis (Dominant Right-to-Left Shunt)** 102  
 Tetralogy of Fallot ..... 102  
 Origin of Both Great Vessels from the Right Ventricle, with Pulmonary Stenosis ..... 102  
 Pulmonary Atresia ..... 102  
 Tricuspid Atresia ..... 102  
 Eisenmenger Syndrome ..... 103  
 Transposition of the Great Vessels (Arteries) ..... 103  
 Ebstein's Disease ..... 103  
 Truncus Arteriosus ..... 103  
 Single Ventricle ..... 103  
 Hypoplastic Left Heart Syndrome ..... 103  
 Abnormal Positions of the Heart:  
     Dextrocardia and Levocardia ..... 103  
 Pulmonary Arteriovenous Fistula ..... 104  
 Ectopia Cordis ..... 104  
 Diverticulum of the Left Ventricle ..... 104  
*Samuel Kaplan*

**Congenital Heart Disease with Little or No Cyanosis (Dominant Left-to-Right Shunt or No Shunt)** ..... 104  
 Ventricular Septal Defect ..... 104  
 Atrial Septal Defect ..... 104  
 Patent Ductus Arteriosus ..... 105  
 Aorticopulmonary Septal Defect ..... 105  
 Fistula of a Coronary Artery ..... 105  
 Ruptured Sinus of Valsalva ..... 105  
 Pulmonic Stenosis (with Normal Aortic Root) ..... 105  
 Pulmonary Arterial Branch Stenosis ..... 105  
 Pulmonary Valvular Insufficiency ..... 105  
 Coarctation of the Aorta ..... 105  
 Anomalous Pulmonary Venous Return ..... 106  
 Congenital Aortic Stenosis ..... 106  
 Congenital Mitral Stenosis ..... 106  
 Congenital Mitral Insufficiency ..... 106  
 Late Systolic Mitral Regurgitation ..... 106  
 Pulmonary Venous Hypertension ..... 106  
 Anomalies of the Aortic Arch ..... 106  
 Anomalous Origin of Coronary Arteries ..... 106

Primary Pulmonary Hypertension ..... 9  
 Marfan's Syndrome ..... 9  
 Manifestations ..... 9  
*Samuel Kaplan*

**Principles of Treatment of Heart Disease** ..... 9  
*Samuel Kaplan*

**Disturbances of Heart Rhythm** ..... 9  
 Sinus Arrhythmia ..... 9  
 Extrasystoles ..... 9  
 Paroxysmal Tachycardia ..... 9  
 Atrial Flutter ..... 9  
 Atrial Fibrillation ..... 9  
 Ventricular Tachycardia ..... 9  
 Bradycardia ..... 9  
 Heart Block ..... 9  
*Samuel Kaplan*

**Diseases of the Heart** ..... 9  
 Acute or Subacute Bacterial Endocarditis ..... 9  
 Rheumatic Heart Disease ..... 9  
*Samuel Kaplan*

**Diseases of the Heart Muscle** ..... 9  
 Conditions ..... 9  
 Congenital ..... 9  
 Cardiomyopathy ..... 9  
 Other Myocardial Diseases ..... 9  
 Congestive Heart Failure ..... 9  
*Samuel Kaplan*

**Diseases of the Pericardium** ..... 9  
 Pericarditis ..... 9  
*Samuel Kaplan*

**Diseases of the Blood Vessels** ..... 9  
 Aneurysms ..... 9  
 Cold Injury ..... 9  
 Embolism ..... 9  
 Thrombosis ..... 9  
*Samuel Kaplan*

**Atherosclerosis** ..... 9  
*Mary Jane Johnson*

**Hypertension** ..... 9  
*Jennifer M. E...*

**14. DISEASES OF THE BLOOD**

**Developmental** ..... 9  
 The Red Blood Cells ..... 9  
 Hemoglobin ..... 9  
 Metabolism ..... 9  
*Howard A. ...*



## 14. DISEASES OF THE BLOOD—Continued

<b>Inherited Abnormalities of the Leukocytes</b> .....	1142
<i>Howard A. Pearson</i>	
<b>The Leukemias</b> .....	1143
Central Nervous System Leukemia.....	1147
Counseling the Family of the Child with Leukemia.....	1147
Acute Leukemia in the Newborn.....	1148
Chronic Granulocytic Leukemia.....	1148
<i>Howard A. Pearson</i>	
<b>Hemorrhagic Diseases</b> .....	1148
Schema of Coagulation.....	1149
Tests for Evaluation of the Hemostatic Mechanism.....	1149
<i>Howard A. Pearson</i>	
<b>Coagulation Disorders</b> .....	1151
Phase I Disorders—The Hemophilias.....	1151
Phase II Disorders.....	1153
Phase III Disorders.....	1154
<i>Howard A. Pearson</i>	
<b>The Purpuras</b> .....	1155
Nonthrombocytopenic Purpuras.....	1155
Thrombocytopenic Purpuras.....	1156
Thrombocytosis.....	1158
<i>Howard A. Pearson</i>	
<b>Consumption Coagulopathies and Fibrinolytic States</b> .....	1158
The Fibrinolytic Mechanism.....	1158
Hemolytic-Uremic Syndrome.....	1159
Thrombotic Thrombocytopenic Purpura.....	1159
Purpura Fulminans.....	1159
<i>Howard A. Pearson</i>	
<b>The Spleen</b> .....	1160
Congestive Splenomegaly.....	1161
Anomalies and Trauma.....	1161
Splenuctomy.....	1162
<i>Howard A. Pearson</i>	
<b>The Lymphatic System</b> .....	1163
Diseases of the Lymph Vessels.....	1163
Diseases of the Lymph Nodes.....	1163
<i>Howard A. Pearson</i>	

## 15. THE URINARY SYSTEM

<b>The Kidney</b> .....	1166
<i>Keith N. Drummond</i>	
<b>Renal Anatomy</b> .....	1166
<i>Keith N. Drummond</i>	
<b>Renal Physiology</b> .....	1169
Glomerular Filtration.....	1169
Tubular Reabsorption and Secretion.....	1170

Renal Clearance of Plasma Solutes.....	1170
Renal Control of Concentration of Electrolytes in Plasma.....	1170
Developmental Aspects of Renal Function.....	1170

*Keith N. Drummond*

**Diagnostic Assessment of Structure and Function**..... 1170

History.....	1170
Physical Examination.....	1170
Diagnostic Evaluation of Urine and Its Formation.....	1170
Clearance and Reabsorption Studies.....	1180
Radiologic Examination of the Urinary Tract.....	1180
Renal Biopsy.....	1180

*Keith N. Drummond*

**Diseases of the Glomerulus**..... 1180

<b>The Nephrotic Syndrome</b> .....	1190
Minimal Lesion Form of the Nephrotic Syndrome.....	1190
Focal Glomerulosclerosis.....	1190
Idiopathic Membranous Glomerulopathy.....	1190
Membranoproliferative Glomerulonephritis.....	1190
The Nephrotic Syndrome in the First Year of Life.....	1190
Other Causes of the Nephrotic Syndrome in Childhood.....	1190

*Keith N. Drummond*

<b>Acute Glomerulonephritis</b> .....	1190
Acute Poststreptococcal Glomerulonephritis.....	1190
The Nephritis of Anaphylactoid Purpura.....	1200
Hemolytic-Uremic Syndrome.....	1200
Recurrent Macroscopic Hematuria with Focal Glomerulonephritis.....	1200
Nephritis in Systemic Lupus Erythematosus.....	1200
Glomerulonephritis Associated with Sepsis, Infected Shunts for Hydrocephalus or Subacute Bacterial Endocarditis.....	1210

*Keith N. Drummond*

<b>Tubular Disorders</b> .....	1210
Renal Tubular Acidosis.....	1210
Fanconi Syndrome.....	1210
Nephrogenic Diabetes Insipidus (Vasopressin-Resistant Diabetes Insipidus).....	1210
Renal Glycosuria (Renal Glucosuria).....	1210
Cystinuria.....	1210
Tubular Disorders Due to Electrolyte Disturbances.....	1210

*Keith N. Drummond*

**Hereditary or Familial Diseases**..... 1220

Hereditary Nephritis with Deafness and Ocular Abnormalities.....	1220
--	------

Benign Familial Hematuria..... 1223  
 Nephronophthisis..... 1223  
 Nail-Patella Syndrome..... 1225  
 Lipodystrophy..... 1225  
 Familial Nephrotic Syndrome..... 1226  
 Sickle Cell Anemia and the Kidney..... 1226  
 Oxalosis..... 1226  
 Hereditary Disorders with Renal Cysts... 1227  
 Acute Renal Failure..... 1228  
 Chronic Renal Failure..... 1232  
 Infection of the Urinary Tract..... 1238

*Keith N. Drummond*

**Developmental Abnormalities**..... 1244  
 Renal Agenesis..... 1244  
 Renal Hypoplasia..... 1245  
 Supernumerary Kidney..... 1245  
 Renal Ectopia..... 1245  
 Horseshoe Kidney..... 1246  
 Renal Dysplasia..... 1246  
 Congenital Renal Tumors..... 1246  
 Multisystem Disorders or Syndromes..... 1246  
 Bilateral Renal Enlargement in the  
 Newborn Infant..... 1247

*Keith N. Drummond*

**Congenital Malformations of the  
 Urinary Collecting System, Bladder  
 and Urethra**..... 1247  
 Hydronephrosis Resulting from  
 Pelviureteric Obstruction..... 1247  
 Hydroureter and Megaureter..... 1248  
 Vesicoureteral Reflux..... 1248  
 Ureterocele..... 1249  
 Duplication of the Kidney and  
 Collecting System..... 1249  
 Ectopic Ureteral Insertion..... 1250  
 Epispadias and Exstrophy of the  
 Bladder..... 1250  
 Posterior Urethral Valves..... 1251  
 Other Anomalies of the Urethra..... 1251

*Keith N. Drummond*

**Miscellaneous Conditions**..... 1252  
 Nephrolithiasis..... 1252  
 Renal Vein Thrombosis..... 1253  
 Viral Cystitis..... 1255  
 Trauma to the Urinary Tract..... 1255  
 Neurogenic Bladder..... 1256  
 Enuresis..... 1256  
 Renovascular Hypertension..... 1256  
 Toxic Nephropathy..... 1258

*Keith N. Drummond*

**16. METABOLIC DISORDERS**

**Diabetes Mellitus**..... 1259  
 The Diabetes Mellitus Syndrome in  
 the Newborn Infant..... 1270

*Allan Drash*

**Hypoglycemia**..... 1271  
 Causes of Hypoglycemia..... 1272  
*Angelo M. DiGeorge and Victor H. Auerbach*

**17. THE ENDOCRINE SYSTEM**

**Disorders of the Hypothalamus and  
 Pituitary Gland**..... 1283  
 Hypopituitarism..... 1285  
 Hyperpituitarism..... 1291  
 Precocious Puberty..... 1293

*Angelo M. DiGeorge*

**Disorders of the Thyroid Gland**..... 1301  
 General Considerations..... 1301  
 Thyroid Hormone Studies..... 1302  
 Hypothyroidism..... 1303  
 Goiter..... 1309  
 Hyperthyroidism..... 1313  
 Carcinoma of the Thyroid..... 1315

*Angelo M. DiGeorge*

**Disorders of the Parathyroid Glands**..... 1318  
 Hypoparathyroidism..... 1320  
 Pseudohypoparathyroidism..... 1323  
 Hyperparathyroidism..... 1324

*Angelo M. DiGeorge*

**Disorders of the Adrenal Glands**..... 1326  
 General Considerations..... 1326  
 Adrenocortical Insufficiency..... 1329  
 Adrenocortical Hyperfunction..... 1334  
 Excess Mineralocorticoid Secretion..... 1342  
 Feminizing Adrenal Tumors..... 1343  
 Excessive Secretion of Catecholamines... 1343  
 Calcification Within the Adrenal..... 1345

*Angelo M. DiGeorge*

**Disorders of the Gonads**..... 1347  
**Hypofunction of the Testes**..... 1349  
 Hypergonadotropic Hypogonadism..... 1349  
 Hypogonadotropic Hypogonadism..... 1352

*Angelo M. DiGeorge*

**Pseudoprecocity Resulting from Tumors  
 of the Testes**..... 1354

*Angelo M. DiGeorge*

**Gynecomastia**..... 1354  
*Angelo M. DiGeorge*

**Hypofunction of the Ovaries**..... 1355  
 Hypergonadotropic Hypogonadism..... 1355  
 Hypogonadotropic Hypogonadism..... 1357  
 Polycystic Ovaries..... 1358  
 Sex Chromosome Abnormalities  
 Without Gonadal Defects..... 1358

*Angelo M. DiGeorge*

<b>17. THE ENDOCRINE SYSTEM—Continued</b>	
<b>Pseudoprecocity Due to Lesions of the Ovary</b> .....	1358
Estrogenic Lesions of the Ovary .....	1358
Androgenic Lesions of the Ovary .....	1359
<i>Angelo M. DiGeorge</i>	
<b>Hermaphroditism</b> .....	1359
Female Pseudohermaphroditism .....	1360
Male Pseudohermaphroditism .....	1360
True Hermaphroditism .....	1363
<i>Angelo M. DiGeorge</i>	
<b>18. THE GENITAL ORGANS</b>	
<b>Male Genital Organs</b> .....	1367
Examination of the External Genital Organs .....	1367
Anomalies of the Penis .....	1367
Abnormalities of the Testes .....	1368
Acquired Disease .....	1369
Circumcision .....	1370
<i>Angelo M. DiGeorge</i>	
<b>Female Genital Organs</b> .....	1370
Method of Examination .....	1371
Doubtful Sex and Anomalies of the External Genitalia .....	1371
Vulvovaginitis .....	1372
Lichen Sclerosus et Atrophicus .....	1373
Vaginal Bleeding .....	1373
Menstrual Disorders in Adolescence .....	1373
Adenosis and Adenocarcinoma of the Vagina .....	1374
Medicosocial Problems of Adolescence .....	1375
<i>Elsie R. Carrington</i>	
<b>19. CONVULSIVE DISORDERS</b>	
<b>Acute or Nonrecurrent Convulsions</b> .....	1377
<i>Henry W. Baird</i>	
<b>Chronic or Recurrent Convulsions</b> .....	1380
Epilepsy .....	1380
Disorders Simulating Epilepsy .....	1390
<i>Henry W. Baird</i>	
<b>Tetany</b> .....	1391
<i>Harold E. Harrison</i>	
<b>20. THE NERVOUS SYSTEM</b>	
<b>Evaluation of the Child with Neurologic Disease</b> .....	1396
History—The Symptomatology of Neurologic Disorders .....	1396
The Neurologic Examination .....	1397
Neurologic Examination of the Infant ...	1403
Neurologic Evaluation of the Child with Psychiatric Disease .....	1405
Special Diagnostic Procedures .....	1406
<i>Peter R. Huttenlocher</i>	
<b>The Comatose Child</b> .....	1408
<i>Peter R. Huttenlocher</i>	
<b>Diseases of the Nervous System</b> .....	1411
Static and Developmental Lesions .....	1411
Perinatally Acquired Cerebral Lesions .....	1423
Cerebral Palsy .....	1423
Headache and Vertigo .....	1425
The Neurocutaneous Syndromes .....	1427
Degenerative Brain Diseases .....	1430
Neoplasms of the Brain .....	1440
Intracranial Mass Lesions Secondary to Infection .....	1444
Acute Toxic Encephalopathy and Reye Syndrome .....	1445
Cerebral Vascular Diseases .....	1446
Head Injury .....	1448
Diseases of the Spinal Cord .....	1451
Disorders of the Autonomic Nervous System .....	1453
<i>Peter R. Huttenlocher</i>	
<b>21. NEUROMUSCULAR DISEASES</b>	
<b>Neuropathies and Muscular Disorders</b> .....	1457
Anterior Horn Cell Diseases .....	1458
Polyneuropathies .....	1459
Mononeuropathies .....	1461
Diseases of the Neuromuscular Junction .....	1462
Diseases of Muscle .....	1463
<i>Peter R. Huttenlocher</i>	
<b>22. THE BONES AND JOINTS</b>	
<b>Skeletal Defects</b> .....	1470
<b>Defects in Ossification of the Skull</b> .....	1470
Craniosynostosis .....	1470
Basilar Impression .....	1471
Hypertelorism .....	1471
Parietal Foramina .....	1472
Lacunar Skull .....	1472
<i>Josef Warkany and John A. Kirkpatrick, Jr.</i>	
<b>Deformities of the Vertebrae, Scapulae and Sternum</b> .....	1473
<i>Josef Warkany and John A. Kirkpatrick, Jr.</i>	

**Deformities of the Extremities**..... 1473  
*Josef Warkany and  
 John A. Kirkpatrick, Jr.*

**Generalized Skeletal Defects** ..... 1475  
 Achondroplasia ..... 1475  
 Other Chondrodysplasias ..... 1477  
 Mucopolysaccharidoses..... 1479  
 Osteopetrosis ..... 1482  
 Pyknodysostosis ..... 1483  
 Osteogenesis Imperfecta..... 1483  
*Josef Warkany and  
 John A. Kirkpatrick, Jr.*

**Miscellaneous Disorders** ..... 1485  
 Cleidal and Cleidocranial  
   Dysostoses..... 1485  
 Arachnodactyly..... 1485  
 Multiple Exostoses ..... 1486  
 Ollier's Disease ..... 1486  
 Melorheostosis ..... 1487  
 Progressive Diaphyseal Dysplasia ..... 1488  
 Fibrous Dysplasia of Bone..... 1488  
 Arthrogryposis..... 1488  
 Hemihypertrophy ..... 1489  
 Hypertrophic Pulmonary  
   Osteoarthropathy ..... 1490  
*Josef Warkany and  
 John A. Kirkpatrick, Jr.*

**Pediatric Orthopedics**..... 1491  
 Response of Bone to Local and  
   General Disturbances ..... 1491  
 Relation of Intrauterine Position to  
   Orthopedic Disturbances ..... 1491  
 The Foot ..... 1492  
 The Leg ..... 1493  
 The Hip ..... 1493  
 The Spine..... 1498  
 Osteochondrosis ..... 1498  
 Subluxation of Head of Radius..... 1499  
 Infections of the Bones and Joints ..... 1499  
 Tuberculous Spondylitis..... 1501  
 Multiple Traumatic Skeletal Lesions  
   in Early Life..... 1502  
*John Lachman*

**Metabolic Disorders with Bone  
 Lesions**..... 1503  
 Refractory Rickets..... 1504  
 Idiopathic Hypercalcemia ..... 1509  
 Osteoporosis in Malnutrition ..... 1510  
 Hypophosphatasia ..... 1511  
 Hyperphosphatasia ..... 1511  
*Willi H. Bergstrom and  
 L. G. Lerner*

**3. THE SKIN**

Development of the Skin and Ap-  
 pendages During Embryonic Life ..... 1514

Diagnostic Methods ..... 1517  
 Skin of the Neonate..... 1518  
*C. F. Burgoon, Jr.*

**Pharmacologic Basis for Local  
 Therapy**..... 1567  
*C. F. Burgoon, Jr.*

**24. PEDIATRIC  
 OPHTHALMOLOGY**

Eyes of the Newborn Infant..... 1569  
 Examination of the Eye ..... 1569  
 Dyslexia..... 1571  
 Refractive Errors ..... 1571  
 Disorders of Eyeball and Adnexa ..... 1572  
 External Disease of the Eye ..... 1573  
 Diseases of the Cornea..... 1574  
 The Pupil..... 1575  
 Disorders of the Lens..... 1575  
 Glaucoma..... 1576  
 Strabismus..... 1576  
 Injuries ..... 1579  
 Internal Diseases of the Eye..... 1580  
 Retina ..... 1580  
 Hygiene of the Eye..... 1583  
 Sight-Saving Classes and Schools  
   for Blind Children..... 1584  
 Medical Ophthalmology ..... 1584  
*Robison D. Harley*

**25. NEOPLASMS AND NEO-  
 PLASTIC-LIKE LESIONS**

Introduction ..... 1600  
 Tumors of the Head and Neck ..... 1602  
 Tumors of the Mediastinum..... 1606  
 Tumors of the Heart..... 1608  
 Tumors of the Larynx..... 1609  
 Tumors of the Trachea, Bronchi and  
   Lungs ..... 1610  
 Tumors of the Gastrointestinal  
   Tract ..... 1611  
 Tumors of the Liver..... 1613  
 Tumors of the Spleen..... 1615  
 Tumors of the Pancreas ..... 1616  
 Tumors of the Kidney..... 1617  
 Tumors of the Adrenal..... 1619  
 Other Retroperitoneal Tumors ..... 1621  
 Tumors of the Bladder and  
   Prostate ..... 1622  
 Tumors of the Testis and  
   Paratesticular Structures..... 1624  
 Tumors of the Ovary ..... 1626  
 Tumors of the Vagina and Uterus ..... 1629  
 Tumors of Vascular Origin..... 1629  
 Tumors of the Skin..... 1631  
 Tumors of Skin Appendage Origin ..... 1633  
 Tumors of the Soft Tissues ..... 1633  
 Neoplasms of Bone ..... 1639  
*James B. Arey*

## 26. UNCLASSIFIED DISEASES

- Sudden Unexpected Death in Infancy  
(Crib Death, Cot Death)..... 1647  
*Marie Valdes-Dapena*
- Amyloidosis..... 1648  
*Sydney S. Gellis*
- Sarcoidosis..... 1649  
*Floyd W. Denny*
- The Histiocytosis Syndromes..... 1650  
*Allen C. Crocker*
- Progeria..... 1652  
*F. L. DeBusk*
- Failure to Thrive..... 1653  
*Giulio J. Barbero and R. James McKay*

## 27. RADIATION INJURY

- Radiation Injury..... 1655  
*Robert W. Miller*

## 28. POISONING FROM FOOD, CHEMICALS, DRUGS AND METALS

- Food Poisoning..... 1658
- Botulism..... 1659
- Staphylococcal and Other Bacterial  
  Poisoning..... 1659
- Mycotoxin Poisoning..... 1660  
*John A. Anderson and  
Mandayam J. Narisimhan, Jr.*
- Chemical and Drug Poisoning..... 1660
- Chemical Poisoning..... 1664
- List of Chemicals..... 1679  
*John A. Anderson and  
Mandayam J. Narisimhan, Jr.*
- Acrodynia..... 1682  
*J. B. Bilderback and John A. Anderson*

- Increased Lead Absorption and Lead  
Poisoning..... 1684  
*J. Julian Chisolm, Jr.*

## 29. MORPHOLOGIC SYNDROMES

- Key to Use of Tabular Listing of  
Syndromes..... 1689
- Alphabetical Listing..... 1690  
*David W. Smith*

## 30. APPENDIX

- Table of Drugs..... 1713  
*Harry C. Shirkey*

- Tables of Normal Laboratory Values..... 1783  
*C. Charlton Mabry*

- Conversion Tables..... 1798

- Milliosmolal and Milliosmolar  
Solutions..... 1800  
*Howard W. Robinson and  
Victor C. Vaughan, III*

- Conversion of Apothecary's Measures  
to Metric Equivalents..... 1801

- Composition of Commonly Used Oral  
and Parenteral Solutions..... 1802

- Food Values..... 1804

- The Denver Developmental Screening  
Test..... 1809

- INDEX..... 1813