Contents

Section 1: Exercise Therapy and Massage

3

56

59

70

79

87

Fractures of Upper Limb 291

1. Exercise Therapy

Warm-Up 3 Cool Down 4 Posture 5 Balance 13 Types and Ranges of Muscle Work 19 Goniometry 21 Classification of Exercises 34 Relaxation 45 Frenkel's Exercise 47 Suspension Therapy 50

2. Hydrotherapy

Principles of Hydrotherapy 56 Objectives of Hydrotherapy 56 Clinical Applications of Hydrotherapy 56 Salient Features of Hydrotherapy Pool 57 Contraindications and Precautions for Hydrotherapy 57

3. Proprioceptive Neuromuscular Facilitation

Definition of Proprioceptive Neuromuscular Facilitation 59 Basic Principles of Proprioceptive Neuromuscular Facilitation 59 Basic Neurophysiologic Principles of Proprioceptive Neuromuscular Facilitation 59

Philosophy of Proprioceptive Neuromuscular Facilitation60Basic Procedures of Proprioceptive Neuromuscular Facilitation60Techniques of Proprioceptive Neuromuscular Facilitation63Clinical Application of Proprioceptive Neuromuscular Facilitation67

4. Normal Human Locomotion, Walking Aids, and

Gait Training

Normal Human Locomotion 70 Gait Analysis 72 Walking Aids 74

5. Massage

Classification of Massage 79 Physiological Effects of Massage 83 Therapeutic Uses of Massage 83 Contraindications of Massage 84 Massage Lubricants 84

Section 2: Physiotherapy for Musculoskeletal Conditions

6. Physiotherapy for Spinal Disorders The Lumbar Spine 87 The Thoracic Spine 88

	The Cervical Spine 88 Disorders of Spine 89 Low Back Pain 105	
7.	Physiotherapy for Hip The Hip Joint 137 Special Tests for Hip Joint 137 Specific Disorders of Hip 139	137
8.	Knee Joint Knee Joint 162 Special Tests for Knee Joint 162	162
9.	Physiotherapy for Ankle and Foot The Ankle Joint 192 Special Tests for Ankle and Foot 193	192
10.	Physiotherapy for Shoulder The Shoulder Joint 209 Special Tests for Shoulder Joint 210 The Common Shoulder Injuries and their Management 215	209
11.	Physiotherapy for Disorders of Elbow The Elbow Joint 232 The Superior and Inferior Radioulnar Joints 232 Factors Contributing to Elbow Pain and Special Tests for Elbow Disorders 233	232
12.	Physiotherapy for Disorders of Wrist and HandDisorders of the Wrist and Hand245Special Tests for Wrist and Hand242	242
13.	Physiotherapy in Scoliosis	256
14.	Physiotherapy for Amputees Incidence of Amputation 264 Causes/Indications of Amputation 264 Phases of Amputee Rehabilitation 266 Role of Physiotherapy in Amputee Rehabilitation 266 Discharge Planning 270	264
15.	Physiotherapy in Arthritis Arthritis 271 Osteoarthritis 271 Rheumatoid Arthritis 276 Psoriatic Arthritis 280 Syphilitic Arthritis 282 Ankylosing Spondylitis 283	271
16.	Physiotherapy in Fractures Fracture 288 Fracture of Spine 288	288

Se	Lower Limb Fractures 298 Fractures around the Ankle and Foot 308 Fractures of Tarsals, Metatarsals, and Phalanges 309 Fracture of Talus/Navicular and Other Tarsal Bones 309 Physiotherapy for Burn Causes of Burn 311 Types of Burn 1311 Percentage of Burn 312 Clinical Features of Burn 312 Management of Burn 313 Rehabilitation of Burn Injury 314		Section 4: Physiotherapy in Obstetrics and Gynecology 28. Physiotherapy in Obstetrics 479 Pregnancy, its Complications, and Management 479 29. Physiotherapy in Gynecological Diseases 492 Physiotherapy after Radical Mastectomy 492 Physiotherapy in Pelvic Inflammatory Disease 496 Section 5: Physiotherapy for Pulmonary and Cardiac Conditions: Pulmonary Rehabilitation and Cardiac Rehabilitation
	Cerebral Palsy	319	
	Stroke/Cerebrovascular Accident	358	30. Pulmonary Rehabilitation 499 Introduction to Respiratory System 499
	Physiotherapy for Spinal Cord Injury Parkinson's Disease Epidemiology and Etiology 412 Pathophysiology 412 Clinical Features 413 Stages of Parkinson's Disease 413 Diagnosis of Parkinson's Disease 414 Treatment 414	388 412	Mechanics of Ventilation/Breathing 499 Respiratory Physiology 500 Benefits of Breathing Exercise 515 Postural Drainage 516 Sarcoidosis 523 Idiopathic Pulmonary Fibrosis 524 Pulmonary Rehabilitation 524
22.	Traumatic Brain Injury	420	31. Cardiac Rehabilitation530
	Physiotherapy in Multiple Sclerosis Epidemiology 427 Etiology 427 Pathophysiology 427 Clinical Features 428 Diagnosis 428 Management 428	427	Indications of Cardiac Rehabilitation 531 Goal of Cardiac Rehabilitation 531 Benefits of Cardiac Rehabilitation 531 Assessment of Patient before Exercise Training for Cardiac Rehabilitation 531 Components of Cardiac Rehabilitation 533 Phases of Cardiac Rehabilitation 534
	Physiotherapy Assessment 429 Prognosis 430		Section 6: Physiotherapy in Abdominal and
24. Physiotherapy for Muscular Dystrophies, Motor Neuron		424	Thoracic Surgeries
	Disease and Spinal Muscular Atrophies A. Muscular Dystrophy 431 B. Motor Neuron Disease 437 C. Spinal Muscular Atrophy 439	431	32. Physiotherapy in Abdominal Surgeries53 Common Abdominal Surgeries539Physiotherapy in Abdominal Surgeries540
25.	Physiotherapy for Peripheral Nerve Injuries Brachial Plexus Injury 443 Obstetrics Brachial Plexus Injuries 448 Ulnar Nerve Injury 452 Median Nerve Injury 457 Radial Nerve Injury 461	442	33. Physiotherapy in Thoracic Surgeries 54. Thoracotomies and its Physiotherapy Management 543 Section 7: Ethics and Management and Special Techniques in Physiotherapy
26.	Sciatic Nerve Injury 463 Physiotherapy in Guillain-Barré Syndrome: Acute		34. Professional Ethics 55' Medicolegal Issues arising during Patient Treatments 551 Ethics in Physiotherapy 554
	Inflammatory Demyelinating Polyneuropathy and Chronic Inflammatory Demyelinating Polyneuropathy	467	Code of Conduct for Physiotherapists 555
	Guillain–Barré Syndrome 467 Chronic Inflammatory Demyelinating Polyneuropathy 470		35. Management for Physiotherapists 55 Definition of Management 557
27.	Physiotherapy in Ataxias (Ataxic Disorders)	471	Functions of Management 557

Contents 37. Manual Therapy 596 McKenzie Method 596 Maitland Approach 599 Cyriax Approach 601 Kaltenborn's Orthopedic Manual Therapy 604 563 Mennel's Approch 605 Muscle Energy Technique 606 Strain/Counter Strain (Positional Release Technique) 606 Myofascial Release 607 Mulligan's Approach 608

Index

611

Theories of Management 560 Management of Physiotherapy Department 560

36. Motor Control, Motor Learning and Special Techniques of Therapy to Improve Function in Neurological Diseases/ Disorders

Motor Control 563 Motor Learning 567 Motor Relearning Program 570 Neurodevelopmental Treatment 585 Rood's Approach 592 Vojta Approach 593 Sensory Integration Therapy 595 Conductive Education Therapy 595