

Musculoskeletal Physiotherapy

Advances in Musculoskeletal Physiotherapy – (Part I)

(Musculo-skeletal Dysfunctions of the Upper Quadrant)

(Upper Quadrant includes cervical spine, thoracic spine, shoulder girdle and upper extremities)

1. Anatomical, Physiological and Biomechanical basis for assessment of movementdysfunctions of the upper quadrant
2. Patho-physiological and Patho-mechanical basis for management of movementdysfunctions of the upper quadrant
3. Clinical decision making skills in evaluation & management of all pediatric, adult andgeriatric dysfunctions of the upper quadrant
4. Advances in functional diagnostic procedures & various outcome measures relevant tomusculo-skeletal dysfunctions of the upper quadrant
5. Patho-biological mechanisms of pain; Recent advances in pain evaluation andmanagemen
6. Advances in the field of Manual Therapy
7. Principles of musculo-skeletal health and performance related fitnessandPhysiotherapeutic management of musculo-skeletal injuries & dysfunctions in various sports
8. Principles of assessment of industrial fitness and assessment & management ofmusculoskeletal dysfunctions related to various industries.
9. Ergonomics in Musculo-skeletal dysfunction of the upper quadrant.
10. Assistive technology used for stability and mobility to enhance function.
11. Therapeutic application of Yogasanas for musculoskeletal health and fitness (upperquadrant)
12. Evidence based practice to formulate effective assessment and treatment program
13. Evaluation of disability
14. Legislation and social care.
15. Assessment, clinical reasoning and management of Integumentary impairments due tomusculoskeletal dysfunction
16. Pharmacotherapeutics in musculoskeletal conditions and its relevance in physiotherapy
17. Clinical decisions for lower quadrant function in presence of upper quadrant dysfunction

Advances in Musculoskeletal Physiotherapy –(Part II)

(Musculo-skeletal Dysfunctions of the Lower Quadrant)

(Lower Quadrant includes lumbar spine, sacrum, pelvis and lower extremities)

1. Anatomical, Physiological and biomechanical basis for assessment of movement dysfunctions of the lower quadrant
2. Pathophysiological and Pathomechanical basis for management of movement dysfunctions of the lower quadrant
3. Clinical decision making skills in evaluation & management of all pediatric, adult and geriatric dysfunctions of of the lower quadrant
4. Advances in functional diagnostic procedures & various outcome measures relevant to musculo-skeletal dysfunctions of the lower quadrant
5. Pathobiological mechanisms of pain; Recent advances in pain evaluation and management
6. Advances in the field of Manual Therapy
7. Principles of musculo-skeletal health and performance related fitness and Physiotherapeutic management of musculo-skeletal injuries & dysfunctions in various sports
8. Principles of assessment of industrial fitness and assessment & management of musculoskeletal dysfunctions related to various industries.
9. Ergonomics in Musculo-skeletal dysfunction of the lower quadrant
10. Assistive technology used for stability and mobility to enhance function.
11. Therapeutic application of Yogasanas for musculoskeletal health and fitness (lower quadrant)
12. Evidence based practice to formulate effective assessment and treatment program.
13. Evaluation of disability.
14. Legislation and social care.
15. Assessment and management of Integumentary impairments due to musculoskeletal dysfunction.
16. Clinical decisions for upper quadrant function in presence of lower quadrant dysfunction

CLINICAL POSTING

Second year

Acute care & Rehabilitation in Musculoskeletal dysfunctions: Indoor and Outdoor patients

Examination Pattern: All papers to be set and evaluated by speciality teachers. Topics from Applied Physiotherapeutics Paper I & II can be subject to application as per speciality

Theory Examination

- There shall be four theory papers of 100 marks each
- Each paper shall be of three hours duration

Paper I - Applied Physiotherapeutics Paper I (Applied biomechanics & clinical kinesiology, exercise physiology and nutrition, Electrophysiology and Electrodiagnosis)

Paper II - Applied Physiotherapeutics Paper II (Physiotherapy Diagnosis and Clinical

Decision Making, Evidence Based practice and Advanced Physiotherapeutics)

Paper III – Advances in Physiotherapy (Speciality)- I

Paper IV- Advances in Physiotherapy (Speciality)- II

Question paper pattern :

Q. No.	Nature of question	Distribution of marks	Total marks
1.	Long Answer question answer any one	1 x30	30 marks
2.	Long Answer question answer any one	1x30	30 marks
3.	Solve any four out of five SAQ	4x10	40 marks

Practical 400 marks

Long Case I – Speciality – Paper I – 150 marks
Long Case I – Speciality – Paper II – 150 marks
Short Case – Allied – 50 marks
Dissertation & Research Viva- 30 marks
Presentation of Teaching Skills - 20 marks

BOOKS & JOURNALS OF MUSCULOSKELETAL PHYSIOTHERAPY

- 1) Essentials of Orthopedics for Physiotherapists by John Ebenezer – Jaypee Publications
- 2) Practical Fracture Treatment by Ronald McRae, Max Esser – Churchill Livingston
- 3) Oxford Textbook of Orthopaedic & Trauma by Christopher Bulstrode, Joseph Buckwalter – Oxford University Press
- 4) Campbell's operative orthopedics. - By S. Terry Can ale, James H. Beaty - Mosby
- 5) Fractures & joint injuries By Watson Jones – Churchill Livingston
- 6) Clinical Orthopaedic Examination by Ronald McRae – Churchill Livingstone
- 7) Daniels and Worthingham's muscle testing: Techniques of manual examination By Helen J Hislop, Jacqueline Montgomery Barbara – Elsevier
- 8) Muscles – Testing and Function by Florence Peterson Kendall – Lippincott
- 9) Joint Range of Motion and Muscle length testing By Nancy Berryman Reese - Saunders
- 10) Orthopedic Physical Assessment, By David J. Magee, PhD, BPT - Saunders
- 11) Illustrated Orthopedic Physical Assessment, 3e B y Ronald C. Evans, - Mosby
- 12) Diagnostic Imaging for Physical Therapists by James Swain, Kenneth W. Bush, and Juliette Brosing – Elsevier
- 13) Differential Diagnosis for Physical Therapists: Screening for Referral, By Catherine C. Goodman, and Teresa Kelly Snyder – Saunders
- 14) Gait Analysis : Theory And Application By Rebecca Craik and Carol A Oatis – Mosby
- 15) Skeletal Growth and development: Clinical issues and basic science advances. The Symposium Series by Joseph A Buckwalter – AAOS
- 16) Introduction to Physical Therapy, By Michael A. Pagliarulo - Mosby
- 17) Kinesiology: The mechanics and Pathomechanics of Human Movement by Carol A Oatis - Lippincott 4. Cash Text Book for Orthopedics and rheumatology for physiotherapist by John Elizabeth Cash & Patricia A Downie – Lippincott
- 18) Joint Mobilization / Manipulation: Extremity and Spinal Techniques by Susan L Edmond – Mosby
- 19) Foundations of Chiropractic by Meridel I Gatterman – Mosby
- 20) Grieve's Modern Manual Therapy: The Vertebral Column, By Jeffrey Boyling and Gwendolen

Jull – Churchill Livingstone

- 21) Kinesiology of the Musculoskeletal System: Foundations for Rehabilitation, By Donald A. Neumann, PhD, PT – Mosby
- 22) Maitland's Peripheral Manipulation, By Elly Hengeveld, and Kevin Banks, - Butterworth-Heinemann 10. Maitland's Vertebral Manipulation, By Geoff D. Maitland, - Butterworth-Heinemann
- 23) 11. Hand and Upper Extremity Rehabilitation: A Practical Guide, By Susan L. Burke, - Churchill Livingstone 12. Manual Therapy for the Peripheral Nerves By Jean-Pierre Barral, DO(UK) and Alain Croibier, Osteopathe DO, MRO (F) – Churchill Livingstone
- 24) 13. Neuromuscular Rehabilitation in manual and physical therapies: Principles and Practice by Eyal Lederman – Churchill Livingstone
- 25) Orthopaedic Physical therapy Secrets by Jeffrey D Place - Elsevier
- 26) Principles and Practice of orthopedics and sports medicine by Garret
- 27) A Physiotherapist's Guide to Clinical Measurement by John Edward Fox, and Richard Jasper Day – Elsevier
- 28) Orthotics and Prosthetics in Rehabilitation, By Michelle M. Lusardi, PhD, PT and Caroline C. Nielsen, PhD - Butterworth-Heinemann
- 29) Clinical Application of Neuromuscular Techniques: The Upper Body by Leon Chaitow, and Judith DeLany, - Elsevier
- 30) Handbook of Postsurgical Rehabilitation Guidelines for the Orthopedic Clinician By Hospital for Special Surgery – Mosby
- 31) An Illustrated Guide to Taping Techniques – Principles & Practice By Thomas John Hewetson – Mosby
- 32) Paraplegia & Tetraplegia A Guide for Physiotherapists by Ida Bromley – Churchill Livingstone
- 33) Therapeutic exercises using swiss ball By Caroline Corning Creager – Executive Physical therapy
- 34) Manual Mobilization of the Joints – The Kaltenborn Method Volume I, II By Freddy Kaltenborn
- 35) Treat your own Back by Robin McKenzie
- 36) Treat your own Neck by Robin McKenzie
- 37) Cervical and Thoracic spine : Mechanical Diagnosis & Therapy Vol I & II By Robin McKenzie
- 38) The Lumbar Spine: Mechanical Diagnosis & Therapy Vol I & II By Robin McKenzie
- 39) The Human Extremities: Mechanical Diagnosis & Therapy by Robin McKenzie
- 40) Manual Therapy by Brian R Mulligan
- 41) Documentation for Rehabilitation: A Guide to Clinical Decision Making, By Lori Quinn, and James Gordon - Saunders
- 42) Clinical Orthopaedic Rehabilitation by S Brent Brotzman
- 43) Treatment and rehabilitation fractures by Vasantha L Moorthy & Stanley Hoppenfield - Lippincott 33. Physiotherapy for Amputees: The Roehampton Approach by Barbara Engstrom – Churchill Livingstone
- 44) Textbook of orthopedic medicine Vol I & II by James Cyriax - Bailliere

Journals

- 1) Clinical Kinesiology
- 2) Journal of biomechanics
- 3) Journal of pediatric Orthopedics
- 4) Journal of Orthopaedic & Sports Physical Therapy (JOSPT).
- 5) Journal of Manual Therapy
- 6) Journal of Manual & Manipulative Therapy
- 7) Spine
- 8) Journal of Hand Therapy

