

STUDY GUIDELINES FOR
ORTHOPAEDIC SURGERY RESIDENTS
AT UNIVERSITY OF CHILD HEALTH SCIENCES

Course Overview

- Duration: 2 years
- Eligibility: MBBS degree from a recognized medical college plus MS/ FCPS Orthopaedics
- Admission: Through entrance exams (Central Induction policy)

Study Materials

Key Resources for a Fellowship in Pediatric Orthopedic Surgery

1. Textbooks

1. "Pediatric Orthopaedics: A Handbook for Primary Care Physicians" by Lynn T. Staheli
 - A concise guide focusing on common pediatric orthopedic issues, ideal for quick reference.
2. "Lovell and Winter's Pediatric Orthopaedics" by Stuart L. Weinstein and John M. Flynn
 - Comprehensive coverage of pediatric orthopedic disorders and surgical techniques.
3. "Tachdjian's Pediatric Orthopaedics: From the Texas Scottish Rite Hospital for Children" by John A. Herring
 - A detailed and authoritative textbook widely used in fellowship programs.
4. "Pediatric Orthopedic Deformities" by Frederic Shapiro
 - Focuses on diagnosis and treatment of congenital and developmental deformities.
5. "Rockwood and Wilkins' Fractures in Children" by James H. Beaty and James R. Kasser
 - The go-to text for understanding pediatric fracture management.

2. Journals

1. Journal of Pediatric Orthopaedics (JPO)

- A leading journal covering a wide range of clinical and research topics in pediatric orthopedics.

2. The Bone & Joint Journal (BJJ)

- Publishes high-quality research articles relevant to orthopedic surgery, including pediatric specialties.

3. Clinical Orthopaedics and Related Research (CORR)

- Includes articles on pediatric orthopedic disorders, trauma, and deformities.

4. Journal of Orthopaedic Research (JOR)

- Focuses on advancements in musculoskeletal research, including pediatric studies.

5. Spine Journal

- Offers insights into spinal deformities in children, including scoliosis and kyphosis.

3. Online Resources

1. POSNA (Pediatric Orthopaedic Society of North America)

- [POSNA.org](<https://www.posna.org>)

- Provides clinical guidelines, case discussions, and educational videos specific to pediatric orthopedics.

2. Orthobullets (Pediatrics Section)

- [orthobullets.com](<https://www.orthobullets.com/pediatrics>)

- A comprehensive platform for reviewing pediatric orthopedic conditions and preparing for board exams.

3. AO Foundation (Pediatric Trauma Section)

- [aofoundation.org](<https://www.aofoundation.org>)

- Resources for surgical techniques and management of pediatric fractures.

4. Medscape Pediatrics: Orthopedics

- [medscape.com](https://www.medscape.com)
- Offers evidence-based articles, case reviews, and clinical updates.

5. Pediatrics Orthopedic Research and Education Foundation (POREF)

- [poref.org](https://www.poref.org)
- A resource hub for research and academic material in pediatric orthopedic surgery.

Year-Wise Topics for a Two-Year Fellowship Program in Pediatric Orthopedic Surgery

Year 1: Foundation and Core Competencies

The first year focuses on building a strong foundation in pediatric orthopedic principles, clinical decision-making, and basic surgical techniques.

1. Core Pediatric Orthopedics:

- Developmental dysplasia of the hip (DDH): Diagnosis, management, and surgical approaches.
- Congenital deformities: Clubfoot (Ponseti method, surgical corrections), congenital limb deficiencies.
- Pediatric fractures: Epidemiology, growth plate injuries, and unique healing patterns.
- Pediatric spine: Early-onset scoliosis, Scheuermann's disease, and kyphosis management.

2. General Musculoskeletal Disorders:

- Leg length discrepancies: Etiology, imaging, and treatment strategies.
- Gait abnormalities: Evaluation and treatment of common conditions like intoeing, out-toeing, and limping.
- Flatfoot and cavus foot: Conservative vs. surgical management.

3. Basic Surgical Training:

- Hands-on training in common procedures: Closed reductions, osteotomies, and soft tissue releases.
- Introduction to hardware placement: Plates, screws, and external fixators.
- Arthroscopy basics for pediatric conditions.

4. Trauma and Emergency Care:

- Management of pediatric fractures: Supracondylar fractures, femoral shaft fractures.
- Acute dislocations: Hip, knee, and elbow.
- Complications of trauma: Malunions, nonunions, and infection management.

5. Research Basics:

- Training in research methodology, literature review, and statistical analysis.
- Initiating a fellowship research project related to pediatric orthopedics.

Year 2: Advanced and Specialized Training

The second year focuses on advanced techniques, subspecialties, and independent management of complex cases.

1. Advanced Pediatric Orthopedics:

- Spinal deformities: Advanced management of scoliosis (early-onset, adolescent idiopathic).
- Neuromuscular disorders: Cerebral palsy (spasticity management, contracture release, gait analysis).
- Skeletal dysplasias: Diagnosis and treatment of rare congenital disorders.

2. Sports Medicine:

- Ligament injuries and overuse syndromes in young athletes.
- Management of osteochondritis dissecans, cartilage injuries, and tendon ruptures.

3. Tumor and Oncology Orthopedics:

- Bone tumors in children: Osteosarcoma, Ewing's sarcoma, benign bone lesions.
- Surgical techniques: Limb-sparing surgeries, biopsies, and resection procedures.

4. Complex Surgical Training:

- Mastering advanced techniques like spinal instrumentation, pelvic osteotomies, and limb lengthening procedures.
- Exposure to minimally invasive techniques: Pediatric arthroscopy for hip and knee conditions.
- Use of modern implants and biomaterials in surgery.

5. Multidisciplinary Collaboration:

- Coordinating care for syndromic children with geneticists and neurologists.
- Pediatric oncology team integration for tumor cases.
- Rehabilitation strategies with physiotherapy and occupational therapy teams.

6. Teaching and Leadership:

- Mentoring junior trainees and conducting teaching rounds.
- Participating in academic presentations and case discussions.
- Presenting research findings at conferences.

7. Final Research and Publication:

- Completion of the research project started in Year 1.

- Writing and submission of papers to peer-reviewed journals.

Exam Preparation

1. Exit Exam:

- Pattern: MCQs and Clinical Cases followed by OSCE, Short cases, long cases and viva
- Syllabus: Entire MS PaediatricOrthopaedic Surgery curriculum

Tips

1. Create a study group
2. Set realistic goals and deadlines
3. Practice with sample questions
4. Attend workshops and conferences
5. Stay updated with recent advancements

Rotations:

Total: 6 months

Pediatric Surgery (2 months)

Paediatrics developmental medicine (1 month)

Paediatric medicine emergency (1 month)

Paediatric surgery ICU (1 month)

Physiotherapy and rehab (1 month)

Assessments:

Total Marks: 500

All candidates admitted in FELLOWSHIP IN Paediatric Orthopedic Surgery course shall appear in final examination at the end of 2nd calendar year.

There shall be:

One written paper MCQs based	=	200 Marks
Oral & Practical/Clinical examination OSCE	=	200 Marks,
Log book assessment	=	50 Marks
One original accepted research paper	=	50 Marks.

Additional Requirements:

1. Attend conferences and workshops like micro course, paps annual conference, hand surgery conference.
2. Participate in journal clubs and academic discussions
4. Present cases at national/international meetings

Certification:

1. Write two research papers
2. Pass exit exam (theory and practical)
3. Acquire degree from university