

Introduction to Pediatric Physiotherapy

Introduction to Pediatric Physiotherapy

(Key concepts, scope, and practical considerations for clinicians working with children)

1. What Is Pediatric Physiotherapy?

Aspect	Description
Definition	A specialized branch of physiotherapy that evaluates, treats, and prevents movement-related problems in infants, children, and adolescents.
Goal	Optimize functional abilities, promote normal development, and improve quality of life for children with congenital, acquired, or developmental conditions.
Population	Newborns ? adolescents (0?18?yr) with: • Neuromuscular disorders (e.g., cerebral palsy, muscular dystrophy) • Orthopedic conditions (e.g., developmental dysplasia of the hip, scoliosis) • Developmental delays (e.g., motor, sensory) • Cardiorespiratory issues (e.g., bronchopulmonary dysplasia) • Trauma or post-surgical rehabilitation

2. Core Principles Guiding Practice

1. Development-Centric Approach

- Align interventions with age-appropriate motor milestones.
- Use the *developmental sequence* (prone ? sit ? crawl ? stand ? walk) as a framework.

2. Family-Centered Care

- Parents/caregivers are partners in assessment, goal-setting, and home program design.
- Provide clear education, realistic expectations, and emotional support.

3. Play-Based Intervention

- Integrate therapeutic activities into games and everyday routines to increase motivation and adherence.

Introduction to Pediatric Physiotherapy

4. Holistic & Interdisciplinary Collaboration

- Work alongside physicians, occupational therapists, speech?language pathologists, educators, and social workers.

5. Evidence?Based & Outcome?Driven

- Apply validated assessment tools and track progress with measurable outcomes (e.g., GMFM?88, PEDI).

3. Typical Assessment Process

Step	What It Involves	Common Tools
History & Referral Review	Medical diagnosis, birth history, developmental milestones, functional concerns.	Structured interview, parental questionnaire.
Observation	Watch the child in natural play, observe posture, movement quality, and interaction.	Video analysis, functional task observation. • Gross Motor Function Measure (GMFM)
Standardized Tests	Quantify motor function, balance, strength, and endurance.	• Pediatric Evaluation of Disability Inventory (PEDI) • Peabody Developmental Motor Scales (PDMS?2)
Physical Examination	Muscle tone, range of motion, strength, gait analysis, respiratory function.	Manual muscle testing, goniometry, palpation.
Goal Setting	SMART goals (Specific, Measurable, Achievable, Relevant, Time?bound) co?created with family.	Goal?Attainment Scaling (GAS).

4. Common Conditions & Typical Interventions

Condition	Primary Motor Challenges	Typical Intervention Strategies
-----------	--------------------------	---------------------------------

Introduction to Pediatric Physiotherapy

- Stretching & tone management (e.g., serial casting, botulinum toxin adjuncts)
- Task-specific gait training (treadmill, body weight support)
- Strengthening of antagonist muscles
- Functional mobility drills (stairs, transfers).

Cerebral Palsy (CP) Spasticity, poor selective control, gait deviations.

Developmental Delay (Motor) Missed milestones, poor balance, low