

Chapter 1: Part 1. Introduction to Physiotherapy - History and Evolution of Physiotherapy

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Part 1 • History and Evolution of Physiotherapy

(Development of the field ■ Key milestones ■ Influential figures)

1 Origins: Healing Through Movement and Touch

Era	Corner-stone Practices	Lasting Contribution
Ancient Egypt & Mesopotamia (c. 3000 BCE)	Massage, joint manipulation, hydro-baths in temple “clinics.”	Earliest record of manual therapy and balneotherapy.
Ancient India & China (c. 1500-500 BCE)	<i>Abhyanga</i> massage, <i>Svedana</i> (steam), Yoga asanas (India); Dao-yin exercises, later Tai Chi (China).	Holistic links between movement, breath, diet and longevity—precursors of today’s preventive PT.
Classical Greece & Rome (c. 500 BCE-300 CE)	Hippocrates’ rubbing, traction and “gymnastic medicine”; Galen’s resistance exercises for gladiators.	Formal idea that exercise is medicine ; separation of curative vs. strengthening drills.

Key point: Long before the profession existed, every advanced civilisation used **physical means**—motion, heat, water, manual pressure—to treat pain and dysfunction.

2 Scientific Foundations (Renaissance → 19th Century)

- Renaissance anatomy (14th - 16th c.)**
Andreas Vesalius’ dissections (1543) mapped muscles, joints and nerves—knowledge still cited in kinesiology texts.
- Girolamo Mercuriale** publishes *De Arte Gymnastica* (1569) - the first systematic treatise linking prescribed exercise with disease recovery.
- Enlightenment & Industrial Age (18th c.)**
 - Growing interest in **electricity, heat and water** as therapeutic agents (the ancestors of modern electro- and thermotherapy).
 - Military surgeons begin documenting functional drills for amputee soldiers.
- Per Henrik Ling (1776-1839) & the Royal Central Institute of Gymnastics (Stockholm, 1813)**
 - Codifies “Swedish medical gymnastics,” blending anatomy, fencing and massage.
 - Trains instructors who later seed the practice across Europe and North America.

3 Birth of the Modern Profession (1914 - 1945)

Catalyst	Impact on Physiotherapy
World War I (1914-18) - catastrophic limb injuries and “trench lung.”	U.S. & U.K. armies create Reconstruction Aide Corps —mostly women trained in massage, exercise and electrotherapy.
Poliomyelitis epidemics (1920s-40s)	Need for muscle re-education and mobility devices drives paediatric neuro-physiotherapy.



Catalyst

Professional bodies

Impact on Physiotherapy

1921 • American Women’s Physical Therapeutic Association (Mary McMillan – first president). 1924 • Chartered Society of Physiotherapy gains royal charter in U.K.

Influential Figures

- **Mary McMillan (USA)** – “Mother of PT,” wrote *Massage and Therapeutic Exercise* (1921).
- **Sir Robert Jones (UK)** – orthopaedic surgeon who embedded PT in post-op protocols.
- **Elizabeth Kenny (Australia)** – heat & active movement for polio, challenging splintage dogma.

4 Consolidation & Specialisation (1945 - 1990)

1. **World War II & Korean War** → Rapid scale-up of amputee, burns and cardiopulmonary rehab.
2. **University-based degrees** replace hospital apprenticeships; research methods enter curricula.
3. **Sub-specialties emerge**
 - Orthopaedic Manual Therapy (Maitland, Kaltenborn, Cyriax).
 - Neurodevelopmental Treatment (Bobath, Rood, PNF).
 - Cardiopulmonary Rehabilitation (early 1960s post-MI units).
4. **Technological leaps**
 - Ultrasound therapy (1950s), EMG biofeedback (1960s), isokinetic dynamometry (1970s).
5. **Global spread** – WHO adopts community-based rehabilitation (CBR, 1978), leveraging physios in low-resource settings.

5 Evidence-Based & Autonomous Era (1990 - Present)

Milestone	Significance
Evidence-Based Practice movement (1990s)	Randomised clinical trials and systematic reviews redefine PT decision-making; Cochrane Back & Neck Group founded 1996.
Direct-Access Legislation (e.g., Australia 1976, USA all states by 2014, parts of India 2018)	Patients can consult physiotherapists without physician referral – expands first-contact role.
Technological convergence	Telerehabilitation platforms, wearable inertial sensors, VR balance labs, robotic exoskeletons for SCI and stroke.
Global Health Crises	SARS, COVID-19 highlight PT in ICU early mobilisation and long-COVID rehabilitation.
AI & Precision Rehab (2020-s)	Machine-learning gait analysis, personalised loading algorithms, digital twins for joint-replacement planning.

6 Notable Contemporary Contributors

Name	Contribution
Florence Kendall (USA, 1910-2006)	Manual Muscle Testing scale—still gold standard.
Robin McKenzie (NZ, 1931-2013)	Mechanical Diagnosis & Therapy (MDT) for spinal pain, popularising self-management exercises.
David Sackett (Canada, 1934-2015)	Founder of EBP philosophy adopted by PT educators worldwide.
Dr S. K. Mukherjee (India)	Early architect of Indian PT education, integrating community-oriented curricula.
Diane Lee (Canada) & Shirley Sahrmann (USA)	Pioneers of movement-impairment syndromes and regional-interdependence models.



7 Summary: Threads That Shaped Physiotherapy

1. **War & Epidemics** - created urgent demand for function-restoring practitioners.
2. **Scientific Revolutions** - anatomy, neurology, biomechanics provided mechanistic backbone.
3. **Women Leaders** - unusually for early 20th-century medicine, women led and professionalised the field.
4. **Legislative Recognition** - registration acts and direct access raised autonomy and standards.
5. **Technology & Data** - from stethoscopes and parallel bars to cloud-based force platforms and AI, tools have continuously expanded therapeutic reach.

Take-home: Physiotherapy's core mantra—"movement is medicine"—has remained unchanged for millennia, but its methods, settings and scientific rigour have evolved dramatically. Grasping this history helps future practitioners appreciate both the discipline's heritage and its untapped horizons.

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