

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

Chapter 1 • Introduction to Physiotherapy

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 <i>Tai Chi</i> (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

Influential Figures

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.

- **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.