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Advanced Techniques in Physiotherapy & Occupational Therapy

Krishna N Sharma



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CHAPTER

2 Kaltenborn-Evjenth Orthopedic Manual Therapy

Krishna N Sharma

HISTORY

It was originally developed by *Mr Freddy M Kaltenborn* from Norway who later on collaborated with another Norwegian practitioner *Mr Olaf Evjenth* in 1958 who contributed in this school of thought by developing techniques for muscle strengthening, stretching and coordination training (Fig. 2.1).

- Mr Kaltenborn started his career as a physical educator and athletic trainer in Germany in 1945.
- He started working as a physical therapist in Norway in 1949.
- He worked as a Physical Therapist in Norway from 1950 to 1982.
- Between 1952 and 1954, he worked with Dr James Mennell and Dr James Cyriax in St. Thomas Hospital, London, England.



Fig. 2.1: Mr Freddy M Kaltenborn (left) and Mr Olaf Evjenth (right).

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- This system began in 1954 with joint testing and treatment and was known as *Manual Therapy ad Modum Kaltenborn*.
- It later became known as the *Nordic System* or Norwegian System.
- He became certified instructor if Cyriax approach in 1955.
- After this he studied at the British School of Osteopathy.
- After returning to his native country Norway, he started incorporating these learned concepts into his own system.
- In 1958, the physical therapists in Norway referred his techniques as *Manual Therapy ad Modum Kaltenborn*.
- Kaltenborn also studied chiropractic and became certified in 1958 by the Forschungs- und Arbeitsgemeinschaft für Chiropraktik (FAC) in Germany.
- In 1962 the FAC incorporated the *Kaltenborn Method* into their approach and changed the name of their professional practice from "Chiropraktik" to "Chirotherapy."
- In 1962 he studied at the London College of Osteopathy in London, England.
- He published his first book on manual therapy *Frigjøring av Ryggraden* in Norwegian language in 1964.
- This book was translated in English by Robin McKenzie and was published as *Mobilization of the Spine*, 1970.
- In 1971, he became certified osteopathic instructor by Dr Alan Stoddard.
- He published his second book *Manual Therapy for the Extremity Joints* in 1974.
- He presented his *OMT Kaltenborn-Evjenth Concept* in 1973 when he with Cyriax, Hinsen, and Stoddard founded *International Seminar of Orthopaedic Manipulative Therapy (ISOMT)*.
- Between 1977 and 1984 he served as a professor at the Michigan State University, College of Osteopathic Medicine, USA.

KALTENBORN-EVJENTH OMT PROTOCOL

This concept has its standard protocol and the techniques are just a part of this protocol. This concept follows the following protocol taken from the 4th edition of his book *Manual Mobilization of Joints—The Kaltenborn Method of Joint Examination and Treatment, Volume II—The Spine*.

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Physical Diagnosis (Biomechanical and Functional Assessment)

A. Screening Examination: A short exam to quickly identify the region with problem.

B. Detailed Examination

1. **History:** Narrow diagnostic possibilities; develop early hypotheses to be confirmed by further examination; determine whether or not symptoms are musculoskeletal and treatable with OMT (includes present episode, past medical history, related personal history, family history, review of systems).
2. **Inspection:** Further focus the examination (includes posture, shape, skin, assistive devices).
3. **Tests of function:**
   - **a. Active and passive movements:** Identify location, type, and severity of dysfunction (includes standard-anatomical-uniaxial movements and combined-functional-multiaxial movements).
   - **b. Translatoric joint play movements:** Further differentiate articular from nonarticular lesions; identify directions of joint restrictions (includes traction, compression, gliding).
   - **c. Resisted movements:** Test neuromuscular integrity and status of associated joints, nerves and vascular supply.
   - **d. Passive soft tissue movements:** Differentiate joint from soft tissue dysfunction and the type of soft tissue involvement (includes physiological movements, accessory movements).
   - **e. Additional tests** (includes coordination, speed, endurance, functional capacity assessment).
4. **Palpation** (includes tissue characteristics, structures).
5. **Neurologic and vascular examination.**

C. Medical diagnostic studies (includes diagnostic imaging, laboratory tests, electrodiagnostic tests, punctures).

D. Diagnosis and trial treatment.

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Treatment

To Relieve Symptoms (Most Often Pain)

1. **Immobilization**
   - General—bed rest
   - Specific—corsets, splinting, casting, taping
2. **Thermo-Hydro-Electro (T-H-E) therapy**
3. **Pain relief joint mobilization** (Grade /-1/ Slack Zone in the actual resting position)
   - Intermittent manual traction
   - Vibrations, oscillations.
4. **Special procedures** (Includes acupuncture, acupressure, soft tissue mobilization).

To Increase Mobility

1. **Soft tissue mobilization**
   a. **Passive soft tissue mobilization**
      - Classical, functional, and friction massage.
   b. **Active-facilitated soft tissue mobilization**
      - Contract-relax, reciprocal inhibition, muscle stretching.
2. **Joint mobilization**
   a. **Relaxation joint mobilization (Grade I–II)**
      - Three-dimensional, pre-positioned mobilizations.
   b. **Stretch joint mobilization (Grade III)**
      - Manual mobilization in the joint (actual) resting position
      - Manual mobilization at the point of restriction.
   c. **Manipulation**
      - High velocity, short amplitude, linear thrust movement.
3. **Neural tissue mobilization:** To increase mobility of dura mater, nerve roots, and peripheral nerves.
4. **Specialized exercise:** To increase or maintain soft tissue length and mobility and joint mobility.

To Limit Movement

1. **Supportive devices.**
2. **Specialized exercise.**
3. **Treatments to increase movement in adjacent joints.**

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To Inform, Instruct, and Train

Exercises and education to improve function, compensate for injuries, and prevent reinjury. Instruction in relevant ergonomics and self-care techniques, e.g. medical training therapy, automobilization, autostabilization, autostretching, back school, activities of daily living, etc.

Research

Clinical trials to determine the efficacy of both single and combined treatment methods. An evidence-based approach to every aspect of evaluation and treatment is an essential precursor to orthopedic manual therapy (OMT) research.

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- Equally beneficial for both students and professionals.

Krishna N Sharma PhD MPT (Neuro) COMT (France) is a renowned face in physiotherapy fraternity. He is also a prolific author with more than 125 published books, more than 25 best-sellers and 3 world records. He sits in several academic and editorial boards as advisor and reviewer. While serving as the Vice-Chancellor of Victoria University, Kampala, Uganda; he teaches manual therapy in many Asian, African and European countries. To more about the him, kindly visit www.drkrishna.co.in

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