

Survey categorizes the seven most influential people in orthopedic PT

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*"If I have seen further, it is by standing on the shoulders of giants."
Sir Isaac Newton, 1676*

Arguably the greatest genius of all time, Sir Isaac Newton attributed his success to the opportunity to build on the work of others. He readily paid tribute to the "giants" who came before him. The seven people profiled in this article can be considered our "giants" in the field of orthopedic physical therapy. Through their work, they have greatly influenced the current thinking and performance of orthopedic physical therapists today. They have established an extraordinary foundation of knowledge upon which to build.

Methodology

A survey form was sent to a random sampling of 320 physical therapists from the orthopedic section of the American Physical Therapy Association. The survey form contained the names of 11 distinguished physical therapists and one physician from the field of orthopedic physical therapy. Research methodology for choosing the initial 12 names was based upon the assumption that talent recognizes talent.

Noteworthy physical therapists were surveyed and asked who among their peers should be included on a Top 10 list of influential physical therapists and physicians in orthopedic physical therapy. The entire list of recommended names is provided at the end of the article.

The initial list was narrowed to 12 individuals based on frequency of name submission, originality of ideas, and the ability of the individual to pass on their teachings to a national or worldwide audience.

In the final survey sent to the 320 members of the orthopedic section of the APTA, participants were asked to indicate the amount of influence the work of the 12 individuals has on their thinking or performance in orthopedic physical therapy. The influence scale was: 0 = no influence; 1 = low influence; 2 = moderate influence; 3 = high influence and 4 = very high influence.

One hundred and forty-eight participants returned surveys, for a response rate of 46 percent. The scores were tallied and averaged and the individuals with the top seven scores were recorded. The final rankings were:

1. Robin McKenzie 2.55
2. James Cyriax, MD 2.44
3. Florence Kendall 2.33
4. Geoffrey Maitland 2.24
5. Stanley Paris 2.00
6. Shirley Sahrmann 1.81
7. Brian Mulligan 1.80

Freddy Kaltenborn received an honorable mention at 1.78.

The work of these seven giants is highly worthy of study. When looking to advance learning in orthopedic physical therapy, one would be well served to begin with these men and women. This is particularly true of new students. Students begin their education with a clean mental file, and from the start they should be provided some of the best sources available. What follows is a brief profile of the seven influential giants.

1. Robin McKenzie

No one should be surprised to find Robin McKenzie's name on the top of this list. McKenzie determined that various exercises could change the location and severity of pain. He made the serendipitous discovery that when pain retreated from the extremities with positioning or exercise, a positive treatment outcome was forthcoming. McKenzie was the first to recognize this phenomenon of centralization of pain.

Just as Newton formulated the Universal Law of Gravitation from the simple observation of an apple falling from a tree, McKenzie went on to derive an entire conceptual framework for treating back and neck pain from this observation. The McKenzie Method of Mechanical Diagnosis and Therapy is now used worldwide by tens of thousands of physical therapists, chiropractors and physicians.

The McKenzie Method is taught as a five-level sequential education program comprising five courses (A through E) in more than 32 countries. The educational program is standardized, with the content for each level consistent around the world. The extensive web of educational programs is managed by The McKenzie Institute International, a charitable trust. Headquartered in Waikanae, New Zealand, the international nonprofit organization also funds worldwide research.

McKenzie has published several books for both the professional and layperson. His titles have been translated into many languages, with millions of copies sold worldwide. Interestingly, the goal of the McKenzie Method is to make patients independent of therapists. Therefore, his books for the layperson have a self-treat theme. His latest book, co-authored by Stephen May, is for the professional and is the second edition of *The Lumbar Spine: Mechanical Diagnosis and Therapy*. In the foreword of this landmark edition, Professor Nikolai Bogduk, professor of pain medicine at the University of Newcastle, Australia, accurately summarizes the place the McKenzie Method occupies in the new millennium.

2. James Henry Cyriax, MD

It is likely that Dr. Cyriax (1904-1985) has had more of a long-standing influence on the other names on this list than any other individual. His influence on the field of orthopedics, physical therapy, chiropractic and massage is profound.

Dr. Cyriax is generally considered to be the father of orthopedic medicine. He was a British orthopedist who developed one of the most commonly used systems for physical examination. He originated the concept of selective tension used to identify the specific tissue (e.g., muscle, tendon, ligament) causing an individual pain or dysfunctional movement.

Dr. Cyriax originated and wrote about the concept of referred pain. He was among the first to recognize the intervertebral disk as a possible source of spinal and limb pain. He wrote extensively about his treatment methods, which consisted of manipulation, massage, traction and injection. Dr. Cyriax's technique of cross-friction massage continues to be widely used today.

The textbooks of Dr. Cyriax are still, for many, the "bibles" of orthopedic medicine. Since his death, there have been great changes in orthopedic physical therapy teaching. However, much can still be learned from his work. His textbooks include: *Cyriax's Illustrated Manual of Orthopaedic Medicine*, *Textbook of Orthopaedic Medicine: Diagnosis of Soft Tissue Lesions*, *Textbook of Orthopaedic Medicine*, *Slipped Disk: Relieving and Understanding Your Back Troubles*, *The Slipped Disc and Cervical Spondylosis*.

3. Florence Kendall

Florence Kendall has been involved in the field of physical therapy for the past 70 years. She taught physical therapy at the University of Maryland School of Medicine Physical Therapy Department. She was also an instructor in biomechanics at the School of Nursing at Johns Hopkins Hospital, Baltimore.

She is the author of numerous books and journal articles about physical therapy. She is also responsible for three films and a five-part *Muscle Testing Video Library* that has been translated into Italian and Japanese. She is probably best known for her book *Muscle Testing and Function*, originally published in 1949, which is now in its fourth edition. She is currently working on the fifth edition. The book has been translated into nine foreign languages and is recognized as the gold standard for musculoskeletal assessment. Her latest book is *Golfers: Take Care of Your Back*, co-authored with Susan M. Carpenter and John Marshall (illustrator).

4. Geoff D. Maitland

Geoffrey Maitland is a consultative manipulative physiotherapist and specialist lecturer at the University of South Australia. Maitland's concept of manipulative therapy has been established as one of the standard approaches to spinal manipulative techniques. His text, *Vertebral Manipulation*, is an indispensable and authoritative guide to his approach. His world wide best-selling book *Peripheral Manipulation* forms one of the cornerstones of modern manual therapy.

Maitland's approach focuses on detailed assessment, clinical reasoning and reassessment to determine the physical dysfunction and efficacy of manual physiotherapy techniques. Advocates of his approach emphasize that it is the clinical reasoning component that is the hallmark of his philosophy. The communication, interaction and reasoning processes which accompany the Maitland techniques create a very effective manual physiotherapy approach.

The International Maitland Teacher's Association (IMTA) was founded in 1992 in Zurzach, Switzerland (www.imta.ch). The IMTA teaches the Maitland Concept in several countries throughout the world. In the United States, Maitland-Australian Physiotherapy Seminars (MAPS) is recognized as the national leader in teaching Maitland's approach.

5. Stanley Paris

Stanley Paris received training in manual therapy from such noted pioneers as Dr. Cyriax, Alan Stoddard, MD, DO, and Freddy Kaltenborn, PT, in both London, England and Oslo, Norway. His most noted accomplishment is the founding of the University of St. Augustine in Florida (originally the Institute of Graduate Health Sciences) in 1978. The school is located on a 28-acre campus in St. Augustine. Some 300 physical and occupational therapy students attend the university full-time, with an additional 2,000 students attending their seminars each year.

The specialty of the university is orthopedics and manual therapy, with a strong interest and experience in sports. The university course *Introduction to Spinal Evaluation and Treatment by Manipulation* is probably the longest running course in the history of physical therapy, and remains the most popular today (since 1964) with regular updates. The University of St. Augustine was also the first school to offer a specialist graduate degree in a clinical area (beginning in 1979), and the first school with a DPT graduate (beginning in 1995), which is now the DHSc program. Paris has played a large and continuing role in the advocacy of manipulation/mobilization, direct access and the doctoral degree in physical therapy, having in excess of 400 students currently enrolled in transitional DPT courses either online or through a combination of seminars and online studies.

6. Shirley Sahrmann

Shirley A. Sahrmann, PhD, PT, FAPTA, is professor of physical therapy/neurology/cell biology and physiology, and director of the program in movement science at Washington University School of Medicine, St. Louis. She received her doctorate in neurobiology from Washington University.

Dr. Sahrmann initially studied patients with hemiplegia from stroke. She became interested in their hyperactive muscle reflexes. In a landmark study, she demonstrated that the hyperactive reflex of hemiplegia is not the primary cause of the inability to move, but is merely a symptom. This finding forced physical therapists to rethink treatment techniques directed at alleviating muscle hyperactivity.

Dr. Sahrmann analyzes movement patterns and muscle imbalances in patients with musculoskeletal pain syndromes. She hypothesizes that the repeated movements and sustained postures used in everyday activities contribute to a joint developing a directional susceptibility to movement. The treatment program is based on an examination designed to determine the diagnosis and identify the contributing factors, such as impairments in muscle length, performance and stiffness. Based on the results of the examination, patients are instructed in a corrective program of exercises and in methods of modifying the way they are performing their daily activities, which includes work, exercise and fitness activities.

Dr. Sahrmann's research interests are in development and validation of classification schemes for movement impairment syndromes, as well as in exercise-based interventions for these syndromes. Her recent book, *Diagnosis and Treatment of Movement Impairment Syndromes*, describes the syndromes and methods of treatment.

7. Brian Mulligan

Brian Mulligan originated and developed the concept of combining accessory mobilizations with physiological movements in the extremities (MWMs). In the spine, he promotes the use of natural apophyseal glides (NAGS) and sustained natural apophyseal glides (SNAGS). Hence the name of his textbook: *Manual Therapy: NAGs, SNAGs, MWMs, etc.* (4th Ed).

Many physical therapists who use his techniques claim they experience a "miracle a day" in the clinical setting. In 1995, Mulligan set up the Mulligan Concept Teachers Association, an international organization providing standards and accreditation for instructors of his methods. Currently, 34 instructors teach the Mulligan concepts throughout the world. Mulligan is an Honorary Fellow of the NZ Society of Physiotherapy and a life member of the

NZ Manipulative Physiotherapists Association. He has been in private practice for more than 40 years in Wellington, New Zealand.

Honorable Mention: Freddy Kaltenborn

Both Paris and Mulligan acknowledge Freddy Kaltenborn as a mentor. McKenzie regards Kaltenborn as one of the international figures who provided the gold standard for the practice of manipulative therapy. Kaltenborn is the author of two classic guides: *Manual Mobilization of the Joints: The Extremities* and *The Spine: Basic Evaluation and Mobilization Techniques*. Along with another notable physical therapist, Olaf Evjenth, Kaltenborn developed the Kaltenborn-Evjenth Concept, now taught in at least 17 countries. The Orthopaedic Manual Therapy Kaltenborn-Evjenth System helped form the standards of the International Federation of Manipulative Therapists (IFOMT) in 1974.

Other influential physical therapists considered for or included in the study were Michelle Battie, David Butler, Robert Donatelli, Brian Edwards, Robert Elvy, Olaf Evjenth, Gary Gray, Ola Grimsby, Greg Johnson, Gwendolen Jull, Mark Laslett, Jenny McConnell, Wayne Rath, Mariano Rocabado, Duane Saunders, Lance Twoomey, William Vicenzio, Paula Van Wejimen, Kevin Wilk, Dos Winkle and Michael Wooden. Influential doctors considered for the study included Alan Stoddard, MD, DO; Robert Maigne, MD; James Mennel, MD; Karel Lewitt, MD, and Lawrence Jones, DO.

The "giants" profiled in this article have made important and lasting contributions to the world of orthopedic physical therapy. Their work has high educational value, and merits study by current and future generations.

Robert J. Schrupp is the owner of Therapy Network Inc. in Winona, MN. Further information regarding this article is available at www.influentialgiant.com

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