

## CLINICAL COMMENTARY

## USING ROLLING TO DEVELOP NEUROMUSCULAR CONTROL AND COORDINATION OF THE CORE AND EXTREMITIES OF ATHLETES

Barbara J. Hoogenboom, PT, EdD, SCS, ATC<sup>a</sup>

Michael L. Voight, PT, DHSc, OCS, SCS, ATC<sup>b</sup>

Gray Cook, MSPT, OCS<sup>c</sup>

Lance Gill, MS, ATC<sup>d</sup>

## ABSTRACT

Rolling is a movement pattern seldom used by physical therapists for assessment and intervention with adult clientele with normal neurologic function. Rolling, as an adult motor skill, combines the use of the upper extremities, core, and lower extremities in a coordinated manner to move from one posture to another. Rolling is accomplished from prone to supine and supine to prone, although the method by which it is performed varies among adults. Assessment of rolling for both the ability to complete the task and bilateral symmetry may be beneficial for use with athletes who perform rotationally-biased sports such as golf, throwing, tennis, and twisting sports such as dance, gymnastics, and figure skating. Additionally, when used as intervention techniques, the rolling patterns have the ability to affect dysfunction of the upper quarter, core, and lower quarter. By applying proprioceptive neuromuscular facilitation (PNF) principles, the therapist may assist patients and clients who are unable to complete a rolling pattern. Examples given in the article include distraction/elongation, compression, and manual contacts to facilitate proper rolling. The combined experience of the four authors is used to describe

techniques for testing, assessment, and treatment of dysfunction, using case examples that incorporate rolling. The authors assert that therapeutic use of the developmental pattern of rolling with techniques derived from PNF is a hallmark in rehabilitation of patients with neurologic dysfunction, but can be creatively and effectively utilized in musculoskeletal rehabilitation.

## CORRESPONDENCE

Barbara Hoogenboom  
Grand Valley State University  
School of Physical Therapy  
Cook-DeVos Center for Health Sciences  
301 Michigan NE, Room 266  
Grand Rapids, MI 49503  
Email: hoogenbb@gvsu.edu

<sup>a</sup> Grand Valley State University  
Grand Rapids, MI

<sup>b</sup> Belmont University  
Nashville, TN

<sup>c</sup> Averett University  
Danville, VA

<sup>d</sup> Titleist Performance Institute  
Oceanside, CA