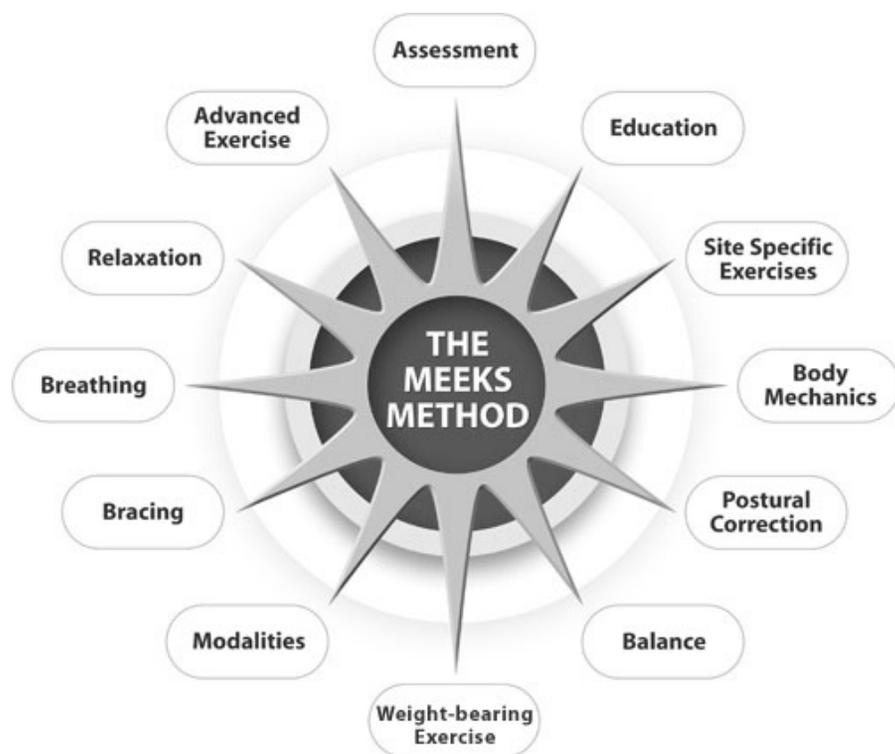


# THE MEEKS METHOD

## A 12-POINT COMPREHENSIVE APPROACH TO THE PHYSICAL THERAPY MANAGEMENT OF OSTEOPOROSIS



This diagram represents a 12-point comprehensive approach to the physical therapy management of persons with osteoporosis. This program is unique and different in that it has been designed to cover “all the bases” to help the person diagnosed with this life-threatening condition live a full and complete life with less fear of falls and fractures.

Before assessment is begun, it is suggested that the therapist conduct a pre-assessment screen to determine whether the patient is at risk for osteoporosis. Pre-assessment information is on pages 5-11.

On pages 12-26 are explanations of each part of the 12-point program. Although the explanations begin at the top and work around the wheel in a clockwise-direction, the use of The Meeks Method can begin at any point around the circle and work in any direction. For example, for a patient with COPD, the clinician might want to begin with breathing and relaxation interventions before proceeding on to more exercise and movement.

The ideal entry point of intervention will depend upon the condition of the patient, the clinical reasoning of the therapist, as well as the evidence for intervention as it appears in the research literature (page 5.)

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## INTRODUCTION AND STATEMENT OF NEED

The world-wide osteoporosis “time bomb is ticking” and effective measures are needed to help with the management of both the condition and its common sequelae.<sup>1</sup> OSTEOPOROSIS is frequently called “The Silent Disease” because it often is far advanced before any signs or symptoms (such as a fracture) occur.

According to the World Health Organization (WHO,) physical activity is vital for maintaining healthy bones throughout life and is an important factor in preventing osteoporosis, reducing falls and decreasing the risk of hip fractures. The general consensus in the research literature, and among medical professionals, is that physical activity and exercise are good for people with osteoporosis. This makes good sense; however, what I have noticed is that people seem to have the idea that any exercise is ok as long as a person is up and moving. This is not good advice as certain movement and exercise (spinal flexion, side bending and rotation) are either contraindicated or should be performed with great caution and awareness in persons with osteoporosis<sup>2-5</sup> and at least one author has stated that exercise should not be “self-selected.”<sup>6</sup>

Osteoporosis frequently goes undetected for years and, even after diagnosis, follow-up care can be questionable as less than 10% of those diagnosed with osteoporosis receive adequate care. It is often considered to be a normal part of the aging process, which it is not. It is a manageable condition and the earlier management is started, the better the results.

Physical therapists see persons with osteoporosis daily in their clinics and treatment facilities (including pediatrics, acute care, sub-acute units, out patient facilities, nursing homes, skilled nursing facilities, and home care;) however, osteoporosis may not be a part of the diagnosis when the patient is seen for therapy. Therapists need to learn to recognize osteoporosis in their patients, to screen for the condition before assessment and intervention, and to be knowledgeable regarding the prescription of a SAFE and therapeutic exercise program.

The “bottom line” in management is Prevention of Fracture, whether it is the first fracture or any one after that. Once a person has had an osteoporosis-related fracture, it can be very difficult to stop the process, especially compression fractures of the vertebral bodies, which sometimes resemble a set of dominoes in the rapidity with which the fractures occur. This phenomenon has been called the Vertebral Fracture Cascade.<sup>7</sup>

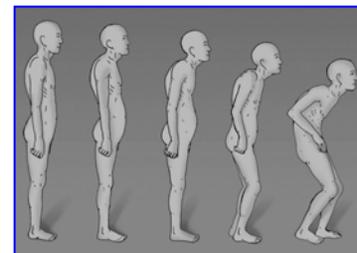
The unique skills and knowledge of the physical therapist can make a positive difference for those with, or at risk for, osteoporosis. However, it is also important to remember the role of dietary and medical management of the condition. See Triangle of Management Page 30. Fostering close relationships with other health professionals is important for total patient management.

**I have titled this manual “Physical Therapy Management of Bone Health” because it is important to understand that osteoporosis, and other bone pathology, is occurring in younger as well as in older populations. Physical therapists need to be aware of this and to be screening for the condition in all populations. If management is approached in this way, even younger people will be knowledgeable regarding safe and therapeutic movement for good bone health, not only when they are first seen in the physical therapy clinic but also later on in life.**

## EXPLANATION OF THE MEEKS METHOD

The Meeks Method<sup>8</sup> for the physical therapy management of patients with osteoporosis consists of several principles of movement designed with the prevention of falls and fractures as the primary goal. These principles are:

1. Maintenance and/or restoration of correct anatomical body alignment with the purpose of:
  - A. Assuring that muscle contraction via the attachments on the bones occurs in such a way as to promote stronger bone, and
  - B. Promoting weight-bearing forces throughout the skeleton in such a way as to strengthen bone,
2. Preventing and/or arresting the common Patterns of Postural Change<sup>9</sup> that occur as, but not necessarily because, people age,
3. Strengthening the primary support muscles of the spine and hip for increased stability and safety in movement, and
4. Selectively and safely loading the bone, considering actual bone mineral density, previous osteoporosis-related fracture, body height loss and postural change (Page 14-15.) “When in doubt, don’t” and “Err on the side of caution” are good rules to consider when prescribing exercise.



### PATTERNS OF POSTURAL CHANGE

The above diagram represents The Meeks Method concept of how the human body changes as, but not necessarily because, people age. Given that a person is born without any anatomical abnormality, that person will reach young adulthood with good body alignment. However, along the way, body alignment is influenced by lifestyle (how much a person sits, stands, exercises etc.,) accidents and/or illnesses that require immobilization and/or bed rest, as well as by emotional states and belief systems that influence body posture.

Most people, if asked to visualize a person 25 years old, would visualize the person on the left side of the above continuum and, if asked to visualize a person 85 years old, would visualize the person on the right side. Ageing is usually associated with a forward-bending, stooped-over type of posturing. However, there are people in their 80’s and 90’s who resemble the person on the left side of the continuum and there are people in their 20’s and 30’s who resemble the person on the right side of the continuum. This pattern is not due to age alone.

**The Meeks Method is designed to prevent, arrest and/or reverse this common “ageing” pattern.**