



Elizabeth Larkam

A Pilates instructor for 20 years, Elizabeth Larkam is internationally recognized as an innovator of Mind Body movement techniques for fitness, clinical, entertainment, arts and academic settings. Educated in the original Pilates techniques by Pilates elders, Eve Gentry, Carola Trier, Romana Kryzanowska, Bruce King and Ron Fletcher, Elizabeth was a Dance medicine Pilates specialist at Saint Francis Memorial Hospital in San Francisco. Since 2000 she has been Director of Pilates & Beyond at Western Athletic Clubs. Elizabeth is a member of the Balanced Body University Faculty and a presenter at IHRSA, IDEA, Pilates Method Alliance International Conference, Body Mind Spirit, and Pilates On Tour.

Pilates Programming for the Older Adult

by Elizabeth Larkam

The most rapid population growth over the next decade will be those over 65 years of age. By the year 2030 more than 70 million Americans will be over 65. This is due, in large part, to modern medicine and health promotion activities. Healthy aging is keyed by three characteristics: low risk of disease and disease-related disability; high mental and physical function; and active engagement with life.

The decline of physical fitness begins at middle age and progresses steadily. Muscles weaken and shrink (sarcopenia), and the sense of balance becomes less acute. The overwhelmingly positive effect that fitness has on both these issues makes it perhaps the single most important thing that an older person can do to remain healthy. Physical activity is at the crux of successful aging. Many in this population have realized this and are joining health clubs to rejuvenate themselves.

The MacArthur studies show that older people — even if they've never exercised before — are capable of becoming more physically fit. The frailty of old age is largely reversible. Most older people have the capacity to remarkably increase their muscle strength, balance, walking ability and overall aerobic power.

Pilates mat and studio exercise programs, created for your older members, can address body awareness, muscle strength, muscle endurance, range of motion, balance, coordination, and motor planning. The original Pilates mat and apparatus exercises were designed to flatten the lumbar lordosis, the thoracic kyphosis and the cervical lordosis. The majority of the mat exercises taught by Joseph Pilates involve spine flexion and/or unsupported cervical flexion. Of the 20 most common original Pilates mat exercises, only six are appropriate for the older adult in that they are performed without flexion, maintaining a neutral spine or spine extension. These exercises are *Leg Circles*, *Side Kick*, *Side Kick (Up/Down)*, *Swan*, *Swimming* and the quadruped preparation for *Leg-Pull Front*.

The Pilates Reformer, trapeze table and chair provide versatile environments that support modifications of the original exercises, making most of them appropriate for the older adult population. These modifications are performed in accord with the principles of Pilates exercise: Concentration, Control, Centering, Flowing Movement, Precision and Breathing.

Guidelines for Designing Pilates Programs for the Older Adult

Each Pilates instructor must work within the appropriate scope of practice. Refer to a licensed medical practitioner if you do not have the skills to provide the services required by the client.

Here are several important guidelines to follow:

1. Medical Evaluation

Each member should have a thorough medical evaluation and receive clearance from their healthcare practitioner before embarking on an exercise program. Everyone known to have heart disease or to have multiple major

risk factors such as diabetes, smoking, or hypertension, and all individuals over age 65 should have a thorough medical evaluation prior to initiation of regular aerobic and strength training exercise programs. Risks of exercise include minor muscular/skeletal problems and major heart-related health problems.

2. Maintain a file on each client that includes:

- Completed health questionnaire
- Emergency contact information
- Supervising health care specialist contact information
- List of medications
- Short and long term Pilates functional exercise goal
- Pilates studio exercise plan
- Pilates studio daily session notes

3. Tailor your exercise plan to meet the client goals

▪ De-conditioned Members

De-conditioned members should focus on neutral pelvis and spine alignment together with Pilates breathing. Include supine, quadruped, seated and standing orientations in order to access functional benefits for daily activities.

▪ Members With Osteoporosis

Clients with osteopenia or osteoporosis must focus on neutral spine and spine extension orientations. Avoid flexion, rotation and side bending due to risk of compression fractures to the spine.

▪ Post-rehabilitation Members

Clients seeking post-rehabilitation Pilates sessions following release from physical therapy should follow an exercise program congruent with guidelines from their supervising medical practitioner. Pilates instructors should request guidance regarding the indicated and contraindicated positions and range of motion.

▪ Joint Replacement: Hip And/or Knee

Clients with hip joint replacement must follow a specific exercise protocol congruent with the type of surgery. Usually clients with hip replacement must avoid combining hip flexion, adduction and internal rotation. Focus the Pilates program on lumbar-pelvic stability and strengthening the hip abductors for improvement of gait and standing balance.

Clients with knee replacement must also follow a specific exercise protocol recommended by their supervising medical practitioners. Generally knee flexion of 110 degrees is considered safe and appropriate. Pilates instructors can combine lumbar-pelvic stability with accurate lower extremity mechanics in order to facilitate symmetrical gait and improved standing balance.

- **Shoulder Surgery**

Pilates clients who have had shoulder injuries or surgery can benefit from exercise programs that facilitate accurate thoracic spine alignment and appropriate thoracic mobility. Focus on neutral spine and thoracic spine extension. Avoid exercises that can encourage cervical hyper-extension and a forward head orientation.

- **The Older Athlete**

The older athlete can benefit from a Pilates program that emphasizes precision of core control in standing balance. In addition, include movement sequences that develop hip joint range of motion, pelvic floor elasticity, and spine rotation and extension.

- **Endurance Athletes (Runners, Swimmers, Cyclists)**

These athletes can also benefit from Pilates programs that emphasize precision of core control and dynamic stretching for the tissues that connect the femurs with the pelvis. Include exercise sequences that encourage the spine to move in combined planes of motion. Lack of elasticity of the intercostals and the trunk musculature can impede the ability to breath deeply and move with comfort and efficiency.

- **Golf, Tennis or Racquet Sports**

Clients involved in golf, tennis and racquet sports can benefit from a Pilates program that combines lumbo-pelvic stability with the ability to rotate the pelvis and spine in both directions. Include movement sequences that address tightness in the piriformis and other hip external rotators, as well as the quadratus lumborum.

Other Tips:

- **Frequency:** One, two, or more studio sessions per week augmented by a twenty-minute independent home exercise program.
- **Duration:** Each Pilates studio session is to be one hour. If the client tires, decrease the intensity of the exercise and focus on breathing and activation of the inner unit of core control.
- **Repetitions:** Begin with fewer repetitions, focusing on correct motor patterning and firing sequencing. Without sacrificing correct form, progress to 3 sets of each exercise, with each set including 8 repetitions. With each set include a slight increase in tempo.

Intensity: Sessions should range from easy to moderate

- **Props:** Equip the studio with requisite props for client comfort. Include towels and/or pillows for support, and non-skid mats for safety.
- **Support:** Provide the member with support and guidance as necessary during transitions on and off the exercise apparatus.
- **Auditory environment:** Control the environment so that the client can hear clearly.
- **Sequence the exercises to facilitate comfort and ease of transitions.**
- **Emphasize neutral spine in sitting, supine, bridging, all fours and standing.**
- **Emphasize spine extension rather than spine flexion.**

- Provide appropriate support for the head and neck in supine in order to avoid cervical hyperextension.
- Avoid unsupported cervical flexion.
- Avoid wrist compression. Bear weight on the forearms rather than the heels of the hands.
- Avoid weight bearing on the thoracic spine in flexion.