

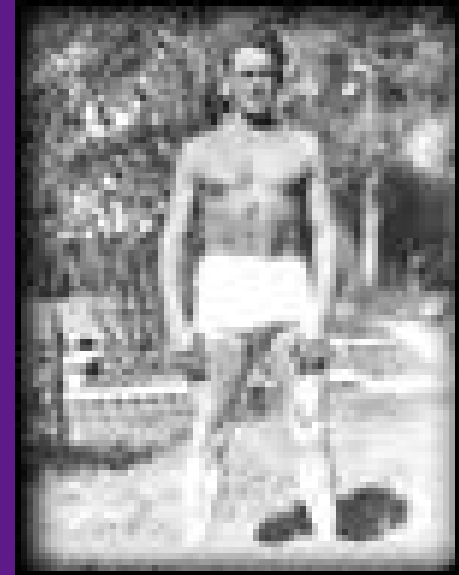
Pilates for Rehabilitation in a Group Class Setting

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OBJECTIVES

- Pilates
 - History
 - Principles
- Review of Research
- Pilates Applications to Specific Patient Population
- Benefits of a Group Setting
- Show exercise examples

HISTORY



- Joseph Pilates (1880 – 1967)
- Childhood - sickly
- Adolescence - studied many types of fitness
- Adulthood – Nurse, Posed for anatomical charts
- World War I – developed assisted exercise
- 1920's – moved to United States
- Today - Pilates no longer Trademarked

PRINCIPLES

- Authentic Pilates
 - Breathing
 - Balanced Muscle Development
 - Concentration
 - Control
 - Centering
 - Precision
 - Rhythm
- Polestar Pilates
 - Breathing
 - Core Control
 - Spine Elongation
 - Spine Articulation
 - Shoulder Girdle Organization
 - Lower Extremity Alignment

REVIEW OF STROKE RESEARCH

Constraint Induced Therapy (Forced-Use):

- Neural plasticity and practice allows gains in function to occur long after spontaneous recovery

Liepert J, Miltner WHR, Bauder H, Sommer M, Dettmers C, Taub E, Weiller C. Motor cortex plasticity during constraint induced movement therapy in stroke patients. *Neurosci Lett.* 1998;250:5-8.

BACTRAC (Bilateral Arm Training with Rhythmic Auditory Cueing):

- Training involved and uninvolved sides simultaneously

Whitall J, Waller SM, Silver KHC, Macko RF. Repetitive bilateral arm training with rhythmic auditory cueing improves motor function in chronic hemiparetic stroke. *Stroke.* 2000;31:2390-2395.

Pilates Class for Stroke Survivors Pilot Study:

- In 2004, following eight Pilates classes, five stroke survivors: Increased range of motion in shoulder flexion and hip extension, Increased strength in shoulders and hips, Improved balance

REVIEW OF MS RESEARCH

Multiple Sclerosis Longitudinal Study:

- 611 subjects over 5-year period
- Conclusions: Positive impact of exercise on long-term progression of functional limitation and quality of life

Stuifbergen AK, Blozis SA, Harrison TC, Becker HA. Exercise, functional limitations, and quality of life: a longitudinal study of persons with multiple sclerosis. Arch Phys Med & Rehabil 2006;87:935-43

WHY PILATES FOR A SPECIFIC PATIENT POPULATION?

- Strengthens core to improve efficiency of extremity movements
- Focus on control of movement
- Improve functional activities, like walking and balance
- Low impact
- Minimal equipment
- Can practice at home



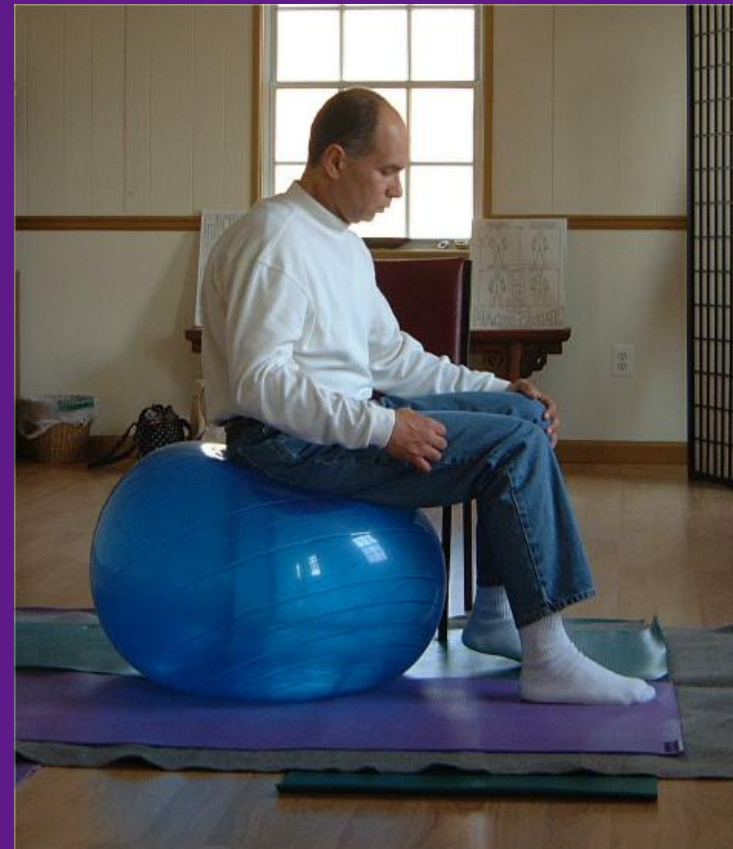
BENEFITS OF GROUP SETTING

- Visits not limited by insurance
- Affordable
- Group of peers
- Wellness model

MAT WORK



BALL WORK



PRIVATE SESSIONS USING REFORMER



Partial Weight- Bearing

Supine Arms & Abdominals



PRIVATE SESSIONS USING REFORMER



Quadruped

Kneeling with Arms



CLASS INFORMATION

PILATES for STROKE SURVIVORS; PILATES for PEOPLE with MS

- Participants should be independent for ambulation, stairs and transfers from floor to stand.
- Class size is limited to six people.
- Fridays, 1-2 pm (Stroke), 2:15-3:15 (MS)
- Sessions on-going, call for current dates
- Cost is \$96 for 8 sessions (\$12 per class)
- Baltimore Centre for Wellness in Ellicott City (near Circuit Court; plenty of parking)