

The importance of training for senior citizens:

Why is cycling important?

- Reduces spasticity
- Increases muscle strength
- Increases participation in individual and community activities
- Improves the sense of well being and reduces anxiety
- Increases and maintains heart and lung efficiency
- Increases and maintains strength, flexibility, mobility and coordination
- Improves and maintains bone structure and strength
- Assists in weight control

Cycling improves walking

Cycling and walking
mutual characteristics

- Motor behavior
- Rhythmicity
- Low variability
- Central Pattern Generator
- Movement in sagittal plane



Cycling is better than

- *Rowing machine* – user may strain back; proper form must
- *Stair machine* - may cause back strain
- *Treadmill* - pricey; may require more maintenance
- *Cross country ski* - hard to learn; requires coordination
- *Weight machine* - space user; hard to use; pricey
- *Rider* - may cause back strain; benefits may diminish
- *Free weights* - may require spotters; proper education needed

Aging and benefits of training:

Aging effect negatively and training improves the following parameters:

- Maximal cardiac output
- Resting and exercise blood pressure
- Maximal oxygen consumption
- HDL (good cholesterol)
- Risk for heart diseases
- Muscle mass
- Muscular strength
- Muscle endurance
- Bone mass
- Flexibility
- Recover time

Exercise in aging:

- maintains functional capacity for independent living
- Promotes psychological well-being
- Provides opportunities for social interaction

American College of Sports Medicine guidelines for Exercising and Prescription, 1995

- Exercising should be done two to three times per week
- Multiple sets may be more beneficial
- Exercises should be progressive in nature and individualized
- Exercise should involve all the major muscle groups (lower and upper limbs)

Cycling is better than other activity

- Comprise a large part of motor behavior
- Complex (unlike reflexes)
- Stereotyped (unlike directed movements)
- Repetitive (unlike fixed action patterns)
- Produced by central pattern generators

