

Aqua Ease

Presented by
Craig Stuart

1

Defining Age

Chronological Age

The passage of time from birth in years

- “Young old” – 65 – 74 years
- “Middle old” – 75 – 84 years
- “Old old” – 85 – 99 years
- “Oldest old” – 100+ years

2

Defining Age

Biological Aging

Known as primary aging, refers to a group of processes within the body that eventually lead to loss of adaptability, functional limitations, disease, disability and eventual death

3

Defining Age

Successful Aging

People with better than average physiological and psycho-social characteristics in late life and healthy genes. Successful agers are more satisfied with life in general (Rowe and Khan, 1987)

4

Successful Aging

- A study on successful aging suggests only 30% of how we age is based on genes and 70% is determined by our lifestyle choices.
- Fewer Americans are becoming chronically disabled as they age (today’s healthy 70 yr olds are doing what 50 yr olds did a generation ago).

5

Successful Aging

- Science indicates that a return to training at any age reverses the effects of poor health
- Ghandi stated “live as if you were to die tomorrow and learn as if you were to live forever”
- You don’t stop exercising because you grow old – you grow old because you stop exercising

6

Purpose

- Develop & refine functional capacity
- Quality of Movement vs Volume of Work
 - 1 - Balance
 - 2 - Coordination
 - 3 - Flexibility
 - 4 - Endurance
 - 5 - Strength

7

Goals

- Restore natural ease and balance
- Improve movement quality
- Promote movement efficiency
- Increase stability
- Enhance mobility

8

Population

- Training techniques and exercise guidelines are targeted to meet the specific needs of the active-aging mature adult

9

Method

- Purposeful integration of aquatic based resistance exercises and functional training guidelines

10

Functional Training

- Balance body segments over one's base of support to challenge the body to maintain ideal posture
- Incorporate movement patterns that involve and challenge agonist, antagonist, synergists and stabilizers

11

Functional Training

- Challenge the body with proprioceptively enriched exercises in a unstable working environment
- Facilitate as much multi-joint movement as possible to create muscular & joint interdependency

12

Functional Mobility

- Improve weight shift
 - Weight on both feet
 - Alternating weight exchange
 - Standing on one or both legs - rooting / grounding
- Improve speed and stride length
 - Go slow - go fast
 - Do it big - do it small

13

Functional Mobility

- Teach recovery techniques & strategies
 - SQUAT JACKS - TUCK Series
- Emphasize repetitive practice of motor skills and ADL tasks.

14

Motor Skills & ADL Tasks

- Sit to Stand / Stand to Sit
- Reach High / Reach Low
- Ambulate Uneven Surfaces
- Navigate Obstacles
- Change Gait Speed
- Change Stride Length
- Practice Self Care Tasks

15

1 - Balance

- The most essential core skill basic to human movement
- First acquired developmental skill in infants
- Diminished capacity is critical watermark of aging - first skill we lose
- The 'glue' that holds the physical system together

16

Components

- Equilibrium – orientation to the vertical position via nerve signals from the inner ear
- Body Alignment – a kinesthetic sense of how body segments are linked together
- Pelvic Stability – a consistent pelvic angle during activity
- Coordination - an internal awareness of the relationship between upper and lower body
- Muscle Tone – capacity to accomplish all of the above components with the least amount of effort

17

Sample Exercises - Balance

- Single Leg - Heel Dig / Toe Tap
- Single Leg - X-Country Ski
- Single Leg - Lunge / Knee Lift & Hug
- Single Leg - Figure 8's

18

2 - Coordination

- Harmonious adjustment & alignment when producing complex movements
- Capacity for rhythm and interconnection
- Cycle of muscular contraction and relaxation that facilitates movement

19

Sample Exercises - Coordination

- Rock Side
- Instep Sweep
- Rock Side / Heel Lift & Reach Back
- Combo - Front / Front - Back / Back

- Single Leg - Bicycle Forward
- Single Leg - Bicycle Backward

20

3 - Flexibility

- To bend without breaking
- Overall range of motion of the joints in the body
- Muscle elasticity most important component

21

4 - Endurance

- Ability to last, continue or remain
- Capacity for sustained effort over time
- Ability of the mind/body system to function at peak efficiency for long periods of time
- Training is rhythmic in nature and involves high number of repetitions
- Emphasize basic locomotor skills
- Change patterns frequently so not to physically or mentally exhaust

22

Sample Exercises - Endurance

- March X3, Knee Lift & Sweep Front
- March X3, Knee Lift & Surrender
- March X3, Knee Lift & Hop

- Walk / Run "Freeze Frame" - Travel
 - SLOW / FAST
 - SMALL / BIG

23

5 - Strength

Activities that tone the larger skeletal muscles and improve the performance of ADL's

- Quadriceps & Hamstrings
- Abdominals & Lower Back (Core)
- Upper Back & Chest
- Shoulders & Neck
- Biceps & Triceps

24

Class Format

- WARM-UP 5 minutes
 - Practice basic motor patterns
- CARDIO ENDURANCE 10 minutes
 - Intervals - "Go easy, Go hard"
- CARDIO + BALANCE 5 minutes
 - "Freeze Frame" / Open Pathway
- POSTURAL TRAINING 5-10 minutes
 - Single Leg Series/ Squat Jack Tuck Series
- STRENGTH TRAINING 10 minutes
- RELAXATION & STRETCH 10 minutes

25

Modifications for Exercise

Balance & Spatial Awareness

- Be cautious with travel - especially backwards and lateral
- Allow for inertia currents to catch up
- Avoid quick head moves

26

Modifications for Exercise

Body fat increase & body shape change

- Use shallow water for very buoyant
- Use buoyant equipment appropriately
- Use neutral working position for frail students

Blood pressure or blood flow concerns

- Emphasize thermoregulation
- Longer warm-up and adjust cool-down period
- Educate and cue appropriate breathing patterns

27

Modifications for Exercise

Stiff Joints and poor muscle tone

- Teach to a conservative range of motion
- Be rigorous with posture & position cueing
- Give "pause time" to rest and recover
- Review neutral position - especially pelvis

28

Conclusion

Many of the things we once thought were the inevitable consequences of aging may very well be the inevitable consequences of inactivity

"A moving door hinge never corrodes - flowing water never grows stagnant"

- D. Ming-Dao

29

References & Resources

- Physical Activity Instruction of Older Adults by C Jessie Jones and Debra J Rose, 2005
- Burdenko Institute - books & training courses - www.burdenko.com
- YMCA Water Training for Health by Mary Sanders, XXXX
- Golden Waves - Functional Training for Older Adults, DVD - www.dswfitness.com

30