











Programming Options for the Older Adult

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Agenda

- Current Populations & Predictions
- Physiological, Psychological & Social Predictors
- Research
- Facility Recommendations
- Program Options
- Training/Teaching Techniques





CURRENT POPULATIONS & PREDICTIONS







ACSM Current Comments

- By the year 2030, the number of individuals 65 years and older will reach 70 million in the USA alone.
- Those 85 and older will then be the fastest growing segment of our population.

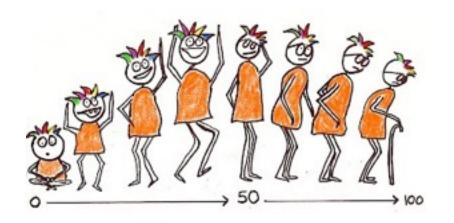






Aging

- Generation Y /Millenials : 1980-2000 (13-33)
- Generation X : 1960-1980 (33-57)
- Baby Boomers: 1946-1964 (50-67)
- Matures 1947- (68+)
 - Young old (65–74)
 - Middle old (75–84)
 - Oldest old (85+)





Wealth, Politics, Life, Environment

- Importance of wealth
 - 45% for Baby Boomers 70% for Gen X

 - 75% for Millennials
- Important to keep up to date with political affairs 50% for Boomers

 - 39% for Gen X
 - 35% for Millennials.
- Important to develop a meaningful philosophy of life 73% for Boomers

 - 45% for Millennials
- Important to clean up the environment 33% for Boomers

 - 21% for Millennials.







POLITIC



Boomers Defined

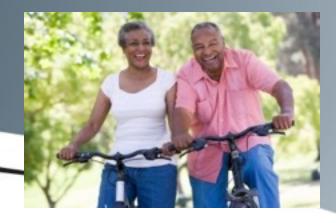
- Control over 80% of personal financial assets
- Engage in 50%+ of all consumer spending.
- Buy 77% of all prescription drugs and 61% of
 - over-the-counter drugs, and
- Spend 80% of all leisure travel
- 30% prefer to pass on their inheritance to charities rather than their children







Boomers aren't retiring



- State of denial regarding their own aging and death
- 60% lost investments because of the economic crisis
- 42% are delaying retirement
- 25% claim they'll never retire (currently still working)
- Leaving an economic burden not planning
- Common retirement age in the USA —67 years

(According to 2011 Assoc. Press and LifeGoesStrong.com surveys)





Matures

- Six dimensions of successful ageing include:
 - No physical disability over 75 as rated by a physician Good subjective health assessment (good self-rating)

 - Length of un-disabled life
 - Good mental health
 - Objective social support
 - Self-rated life satisfaction
 - marriage, income-related work, children, frien contacts, hobbies, community service activities recreation/sports.
- Aging is multidimensional process
 Physical, Psychological & Social

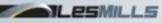






PHYSIOLOGICAL, PHSYCHOLOGICAL & SOCIAL PREDICTORS







Physical Age



- Musculoskeletal
 - Osteoarthritis (inflamed joints due to wear & tear, osteoporosis (bone loss), gout, loss of muscle mass, fractures & falls
- Hormonal
 - Diabetes, menopause, thyroid dysfunction, high blood cholesterol, slower BMI
- Neurological
 - Dementia, Parkinson's, strokes, poor vision, auditory-hearing loss, balance and sleep issues
- Visual
 - Muscular degeneration, glaucoma, cataracts, hypertension related eye diseases
- Cardiovascular
 - Heart attacks, failure, irregular rhythm, high blood pressure atherosclerosis (hardening of arteries ...etc





Psychological & Social Age

- Disengagement
- Continuity
- Selectivity
- Reliability
- Prevention
- Accumulation Theory (Physicar)
- Misrepair (Survival but at what cost?)



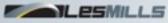




RESEARCH









Miriam Nelson Study

- 10 women over 40
- Full year study
- Overweight
- Individualized customized food plans
- 50% performed strength training twice a week
- Other followed prescribed diet









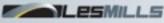
Conclusions

- Exercising showed great improvements in:
 - Fat loss
 - Muscle Increase

 - Body SizeBone Density
 - Balance
 - Mood
 - Sleep
 - Pain Management
 - Cardiac capacity
 - Disease management



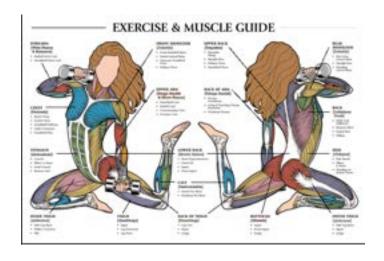




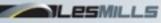


Body Size

- "Exercising" women ended up smaller
 - Averaged <u>173%</u> stronger
 - Thigh muscles
 - only 8% bigger
 - Fat loss compensated for the gain
 - Muscle is denser and more compressed than fat









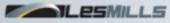
FAT / MUSCLE RATIO

- "Diet Only" lost an average of 13 lbs.
 - 2.2 lbs was lean muscle
 - 11.14 was fat
- "Exercisers" lost 13.2 lbs
 - Gained 1.4 lbs of lean tissue
 - Lost 14.6 lbs of fat
- "Exercisers" lost 44% more fat!











Bone Density

- Regained Bone Density
- Became 15-20 years younger
- Women who didn't exercise lost 2% bone mass
- Exercisers gained 1%







Balance Improvements

- 8% balance decline in women who did not strength train
 - Attributable to 1 year older
- "Exercisers" 14% gain in balance
 - Enormous improvements in strength & muscle
 - Neurological improvements



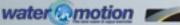


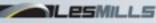


More Active

- Non-exercising group became 25% less active over the year
- Exercisers increased activity by 27%









Frontara Study

- Tuft Center on Aging in 1980s
- 60-70 year olds
- Revolutionized strength testing on older populations
 - Traditionally 30-40% capacity
 - This study 80% capacity
 - 12 weeks
 - 10-12% larger!
 - 100-<u>175%</u> stronger!







Fiatron Study

- Frail Elderly / Nursing home
- 6 women, 4 men (all had 2 chronic diseases/ heart/diabetes/ osteoporosis)
- Ages 86-96
- Same machines as 25 yr olds
- 3 times a week, 8 weeks
- Increased strength by <u>175%</u>
- Walking, speed & balance rose 48%
- 2 participants discarded canes!







Stronger

- Nelson Study (40+) 173%
- Frontera Study (60-70) 100-175%
- Fiatrone (86-96) 175%





Overweight

- 52% of women in their 50's are overweight
- More than 1/3 of women age 30-49 also weigh too much
- Numbers soar at menopause!

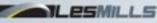




Women vs Men

- Lose muscle and bone as we age
- Women have less muscle and bone
- Less margin of error
- Women risk severe muscular weakness and fragile bones

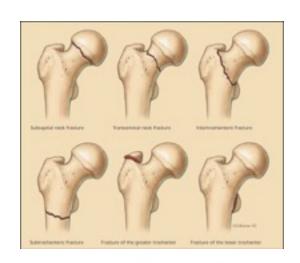


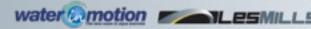




Falls & Broken Bones

- 70 yr old woman faces 30% odds that she will break her hip if she lives 20 more years
- Each year 300,000 people end up in hospital with hip fractures because of osteoporosis







Death from Osteoporosis

- ½ of the victims NEVER go home again
- 1 in 5 (20%) die from complications within a year
- More women die from hip fractures than:
 - Breast cancer
 - Uterine cancer, and
 - Ovarian cancer COMBINED!







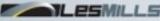
Dense Bones through Activity

- Study compared professional tennis player arms
 - 15-20 denser bones in racquet arms
- Lumberjack study
 - Unusually thick hand bones



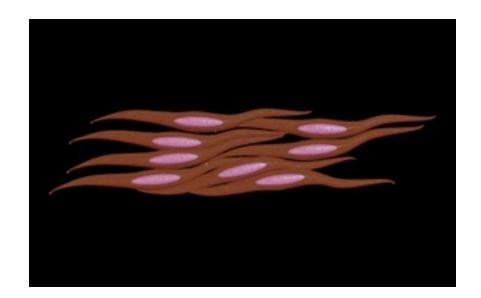








Tug of muscle against the bone works like impact shock







Burn Calories

- Gain weight if you burn less calories
- Exercise decreases with age
- Small but consistent changes produce a remarkable difference





Lose Muscle



- Starting around 40 women lose ½ to 1/3 of a pound of muscle each year
- Gaining at least that much in body fat
- Women also loose a similar amount of bone
- Without exercise, by 80 yrs old, we'll only have about 1/3 the muscle we had at 40





Perimenopause

- Changes accelerate during early menopause
- Lose 5 lbs of muscle in just 5 yrs





Post Menopause

- University of Colorado Study
- Sedentary and active women 50-72 compared with women 21-35
- Older women who were not exercising showed decrease in BMR
- Older women who did exercise had the same BMR as average active women half their age





Depression

- 3 out of 4 Americans suffer from depression at some time or another
- Exercise lifts depression
- Combats lethargy
- Makes weight loss easier
- Enhances mood
- Boosts self esteem and self-confidence
- Improves coping skills







Nalin Singh, MD Study

- Tuft University
- 32 men and women who suffered from chronic depression
- Half strength trained, other health ed
- 12 weeks
- 14 out of 16 exercisers no longer depressed
- Only 6 of ed-only group improved
- SAME EFFECT AS ANTI-DEPRESSANTS!





Sleep

- 10 exercisers and 7 in ed-group in Dr.
 Singh's study reported sleep problems
- After 12 weeks, 6 of 10 exercises had no more sleep difficulty
- No-one in ed-group improved





Exercise & Sleep

- People who exercise
 - Fall asleep more quickly
 - Sleep more deeply
 - Awaken less often in the middle of the night
 - Sleep longer
 - Results comparable to the prescribed sleeping pills on the market!







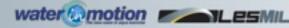
Nerves, Enzymes, Waste & Repair

- Training stimulates muscles & reactivates nerves
- Beneficial enzymes increase improving body's ability to process oxygen and fuel
- Contributes to strength & endurance
- Aids in waste disposal
- Helps the body repair



Mortality

- Cooper Institute of Aerobic Research, Steven Blair, PhD
- Over 25,000 men, 7,000 women ages 22-88
- 601 men and 89 women died over the 7 yr term of the study
- Biggest difference FITNESS not fat!
- Lowest fitness score had double the mortality of those with Med to High rating



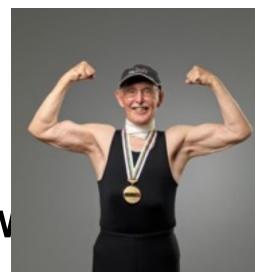


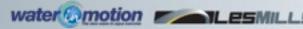
Risk Factors

- Fitness beat all other risk factors:
 - Overweight
 - Diabetes
 - High blood pressure
 - High cholesterol

Only Smoking came close!

Being fit matters MORE THAN W







FACILITY RECOMMENDATIONS









Membership Sales %

- 70% of the <u>45-65 year olds</u> have never purchased a membership
- IHRSA reported that "only 16 percent of individuals <u>66 years or older</u> currently belong to a fitness center" & 75% have never been members



Member Retention - IHRSA

- 72% retention for Matures (65+)
 Embrace systems & social diversity, educated, happy, family-oriented
 - Need for physical, mental & social support
- 70% retention for boomers (45-60)
 - Wealthiest, fittest,
 - Challenge authority, Expect world improvement
- 56% retention for Millenials
 - Sports and jobs entitlement, narcissism
 - Technology InfluencedPredicted to be more
 - globally civic-minded









Difficulties with Seniors

- Expect discounts
- Voice opinions loudly
- Lack of technology cell/email
- Like spacious sinteractions
- Activities beyond fitness demand resources
- 20% of seniors quit because of illness
- Rural & small facilities don't have the numbers where reimbursable programs work





Socialize

Get FIT, have FUN, make FRIENDS



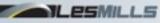


Focus

- EasyParking
- Safe
 - Clean, Uncluttered, Dry
- Accessible
- Affordable
- Flexible
- Comfortable
- Personal
- Variety
- Welcoming
- **FUN**





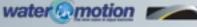


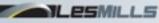


Facility Awareness

- More than just physical
- Engaging front desk staff
- Eye Contact
- Smile!
- Customer Service
- Appropriate Programming
- Comfortable Marketing
- Friendly music
- Convenient Time-slots (many still work!)
- Watch noise level of music & Grunting
- Accessible bathrooms









Extra Curricular

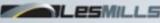
- Lunches
- Pot Lucks
- Speaker Events
- Raffles
- Dances





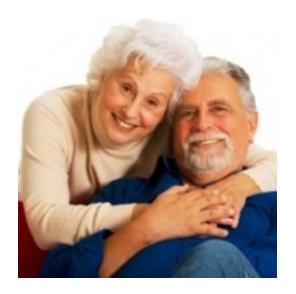








PROGRAM OPTIONS









Planning your program

- Every session has a memory
- Every track has a memory
- Inspire & capture the influencer
- Set goals and tell them (reduces fear)
 - Start with ...
 - Move to ...
 - End with ... set a goal!
 - Offer VARIETY





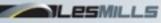


Various Programming

- Cardio
- Strength
- Yoga
- Aqua
- Be Current
 - Tabata
- Be Relevant
 - Golf



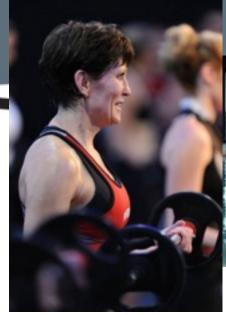






KRANKING®



























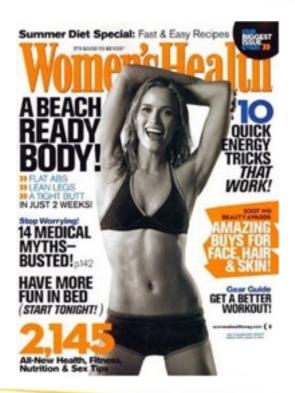


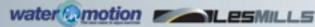


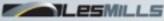
Shop the Stand













Websites

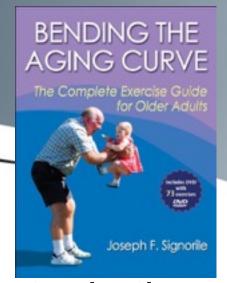
- www.silversneakers.com
- www.silverandfit.com
- www.icaa.cc
- www.agelessgrace.com
- http://projectenhance.org
- http://www.helpguide.org/life/ senior_fitness_sports.htm
- http://www.seniorfitness.net/
- http://www.seniorfitness.net/sfaspt 2.htm





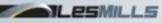
Books

- Bending the Aging Curve by Joe Signorile, Ph.D.
- Growth of the active-aging industry in the US and Canada (Active Aging in America, 2014, 3rd Edition)
- Fallproof by Debra Rose



and Mobility Training Program







Debra J. Rose

TRAINING &TEACHING **TECHNIQUES**









Instructor/Trainer

- THE Most Important element!
- Be a champion!
- Competent
- Charming
- FUN!
- Certified
- "Bold not Old"



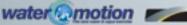


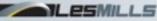


Instructors/Trainers as Mentors

- Start a mentorship program
- Find a front row participant/client
- Represent the demographic
- Don't teach for \$\$\$
- Reward
 - Dinner/Manicure
 - Starbucks card
 - Trainer of the month









Harder to Teach

Focus is to get the fit fitter

Harder to instruct a modified, yet progressive workout

- "That's not for me Yet"
- Maintenance can be a Goal!

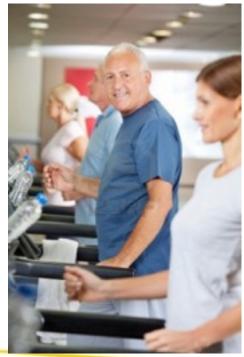




Intergeneration Music

- Various Eras
 - 1950s, 60s, 70s
- Ageless
 - Recognizable by all generations
 - Popular interpretation (Remake)
- Hits of the times
 - Everyone knows the songs
 - Think about music piped in
- Memorable
 - Words and tunes are sing-able!









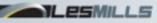
Balance Challenge

- Safe Environment
 - Buoyant
 - Supported & Slow
- Function
 - Prepare for weather
 - Quality of life (carry grandchildren)
 - Regain youthful participation
- Fear
 - Move with purpose and without hesitation











Special Attention

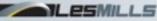
- Flexibility
 - Plantar/Dorsi Flex Foot
- Midline of the body
 - Avoid crossing
 - Provide options



Adds integrity to knee joint

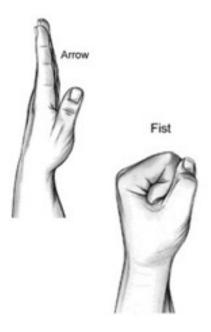


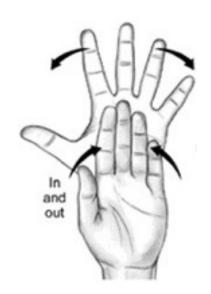






Manual Dexterity













Shoulder Girdle

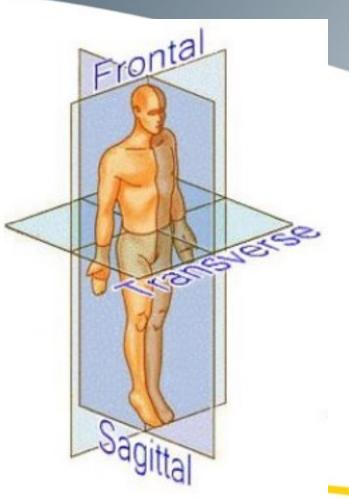
- Shoulder girdle/scapular elevation due to time and gravitational pull
 - Round-shoulderness
 - Weak rhomboids
 - Tight pecs
 - Elevated shoulder girdle
- Work to depress shoulder gird
 the scapular & stretch the pecs





Movement in this order

- Sagittal right & left
- Frontal front & back
- Transverse side to side





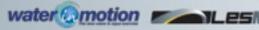


Cognitive Challenge

- Challenge the body and Mind
- Change every 3 months = 12 weeks
 - Summer, Spring, Winter, Fall
 - Choreography, music, marketing









Visual Cuing

- Exaggerated
- Seated/Chair
- Supported
- Eye level



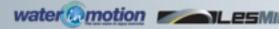




Verbal Cuing

- Simple
- Clear/concise
- Tonal
- Early preview
- Repetitive
- Move, Muscle, Motivation cues
 - "Lift the arms", "deltoids work", "feel the energy"







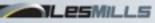
Suggestions

- Dress in bright clothing (happy)
- "Ladies & Gentlemen" vs "you guys"
- Be aware of discomfort
 - Remember Names
 - Show concern
 - Connect!











Fast Twitch Focus

- Loss of fast twitch fibers
- Retention of slow twitch fibers
- Challenge = stimulation and hypertrophy
- No new growth just improved development
- In water
 - land tempo moves
 - Less impact more power







Longer Repetitions

- Adaptable
 - Comfortable now
 - 8 counts not 4, 16 counts not 8
- Achievable
 - future without fear
- Accomplished
 - self-esteem
 - success











Practical Recommendations

- Longer warm-ups (up to 25% of class time)
- Barefoot = balance and foot awareness
- Hydration (fear of drinking)
- Memory games phone numbers, choreography
- Increase intensity promotes sleep + enhances balance
- Reduced turning
- Visual and vestibular tracking exercises during routine
- Head above heart
- Slow changes of position (sit to stand, or floor to stand)
- Pelvic Floor Control
- Task-dependent (squatting/toilet lifting/grandchildren)

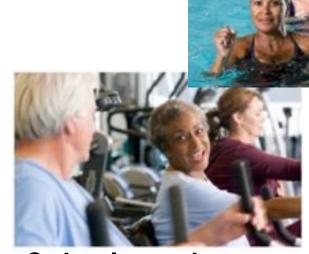




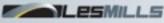


ADL – Activities of Daily Living

- Independence
- Strength
- Power and Control
- Mind stimulation
- Socialization
- Sense of well-being & belonging









 The time is NOW to prepare for the health, functional capacity, quality of life and independence in this incredibly important population.



- ACSM Current Comments
 Robert S. Mazzeo, PhD.,

 FACSM
- http://www.acsm.org/docs/currentcomments/ exerciseandtheolderadult.pdf





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