



The Innate Lifestyle™ Program

Eat Well Move Well Think Well®

Post-Graduate Training

Workshop #4

Safe Exercise for All Ages

Lifelong Learning Leads to a Longer, Better Life

Reminder from previous workshops

“Physical activity is one of the strongest means for lowering the risk of common chronic conditions such as coronary heart disease, diabetes, obesity, the metabolic syndrome, certain cancers, osteoarthritis, osteoporosis, and even anxiety and depression.”

"The good news message about physical activity **applies equally to children and adults**".



Reminder from previous workshops

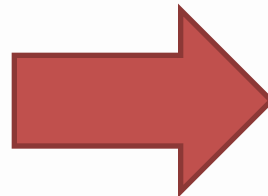
“The multiple health benefits of regular physical activity for children and adults are no longer debatable.”

**"An active lifestyle is a healthy lifestyle.
Inactivity is hazardous to your health."**

"It is said that there are no magic bullets in health care; however, physical activity comes as close to a magic bullet as anything we have."

Reminder from previous workshops

“It is estimated that individuals who devote 7 hours per week to even moderate-intensity physical activity **lower their risk of early death by 40%** compared with those who are active for less than 30 minutes per week.”



Reminder from previous workshops

"Significantly, **physically active people of all body weights** (normal, overweight, or obese) have a lower risk of early death than do inactive people."



Reminder from previous workshops

“In addition to **daily aerobic exercise**, people should engage in **resistance training and flexibility exercises at least twice a week**, which will promote the maintenance of lean body mass, improvements in muscular strength and endurance, and preservation of function, all of which enable **long-term participation in regular physical activity and promote quality of life.**”

“Movement improves brain function, mental abilities, gains in intelligence, performance speed, ease of learning, detail recollection, and reduces levels of anxiety and depression.”



Leviton, Richard. “Brain Builders! A Lifelong Guide to Sharper Thinking, Better Memory, and an Age-Proof Mind,” 1995 Parker Publishing Company, Inc.

Now for some NEW MATERIAL!



ACSM Publishes Updated Exercise Guidelines

The new 2011 American College of Sports Medicine (ACSM) quantity and quality Position Stand paper is an update from the previous 1998 document.

It cites **over 400 publications** from scientific reviews, epidemiological studies, clinical studies, meta-analyses, consensus statements and evidence-based guidelines.

Physical Fitness is defined as:

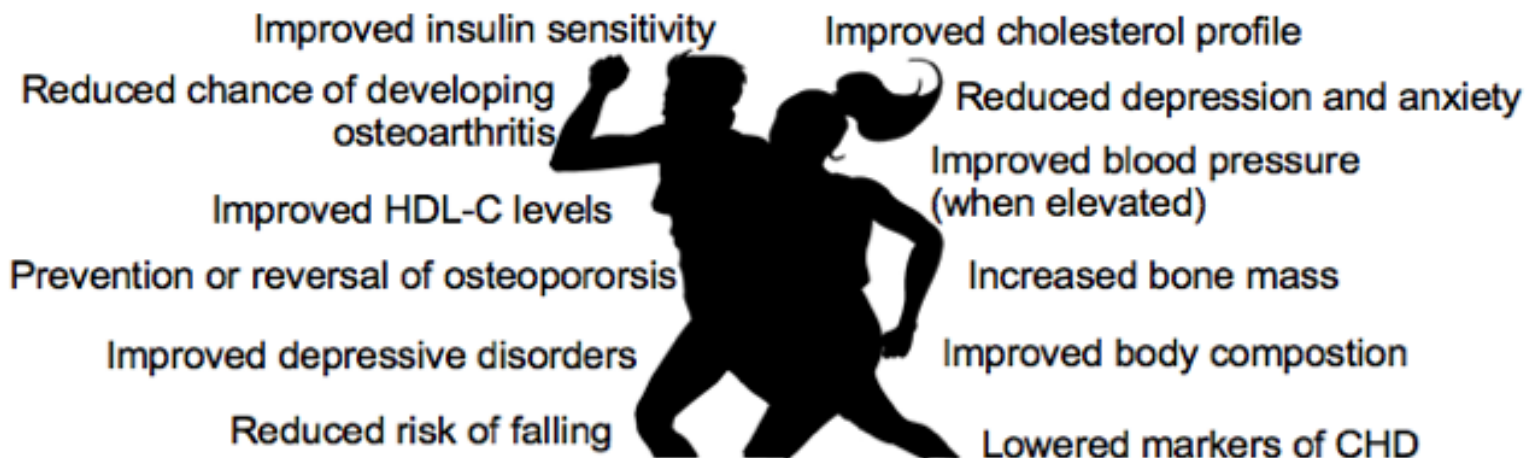
“The **ability to carry out daily tasks** with vigor and alertness, without undue fatigue and with ample energy to enjoy [leisure] pursuits and to meet unforeseen emergencies.”

“Physical fitness is operationalized as [a set of] measurable health and skill-related attributes that include cardiorespiratory fitness, muscular strength and endurance, body composition and flexibility, balance, agility, reaction time and power.”

OVERALL BENEFITS OF EXERCISE

Decreased risk of developing coronary heart disease (CHD)

Decreased risk in formation of type 2 diabetes and metabolic syndrome



Higher levels of well-being, quality of life, cognitive function and energy
Lowered risk of developing functional limitations
Improved balance, agility, gait, and coordination

Decreased risk of having a stroke

Decreased risk of genesis of colon and breast cancer

Sound Familiar?

Aerobic Exercise

Analysis indicates that a 12.9% increase in VO_2 max in seniors can be realized within **8-10 weeks of aerobic training**.

Gradually increasing aerobic training can boost the aerobic power of the elderly by at least 10 ml/kg/min, potentially **delaying the loss of independence by as much as 20 years!**

Aerobic Exercise

An increase of 25% in VO_2 max (about 6 ml/kg/min) is equivalent to **gaining back an estimated 12 years of vigor to one's lifestyle.**



AEROBIC EXERCISE

Variable	Evidence-based recommendation
Frequency ¹	5 (or more) days per week – moderate ² intensity 3 (or more) days per week – vigorous ³ intensity
Intensity	Moderate to vigorous intensity
Time	30-60 minutes of moderate intensity 20-60 minutes of vigorous intensity
Type	Purposeful, continuous, rhythmic exercise involving major muscle groups of the body
Pattern	May be in one continuous session; or multiple sessions of at least 10 minutes to accumulate desired amount. If walking, seek to accumulate 7,000 steps or more per day.
Progression	Progress intensity, duration and frequency gradually until desired goal is attained

Note 1: The Innate Lifestyle requires **DAILY** aerobic activity!

Notes 2 and 3: Moderate intensity includes exercise that is fairly light to somewhat hard; vigorous exercise is somewhat hard to very hard.

Resistance Training



“Higher levels of **muscular fitness** are associated with lowered risk of all causes of disease, improved cardiometabolic health and lowered risk of developing functional limitations.”



Resistance Training

“Resistance exercise may be an effective intervention in the treatment of metabolic syndrome.”

“The bone loading stress of resistance exercise may **prevent, slow and even reverse the loss of bone mineral and mass** that is seen with osteoporosis.”



Resistance Training

After 26 weeks of resistance training researchers identified 179 genes associated with age and exercise showing a reversal of their gene expression.

This means quite literally that **resistance training was not only slowing, but also reversing the aging process at the gene level.**



RESISTANCE EXERCISE

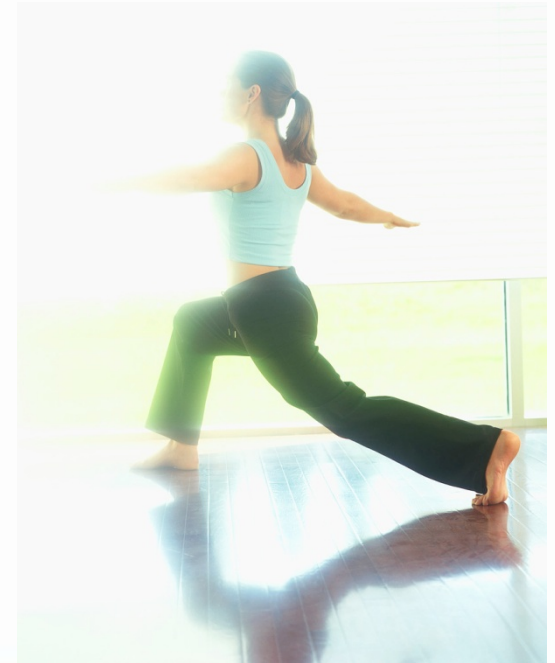
Variable	Evidence-based recommendation
Frequency	Major muscle groups should be trained 2-3 days/week with a 48-hour rest between sessions for muscle groups
Intensity	40-50% of 1RM; or very light to light load for beginning older persons and for beginning sedentary persons 60-70% of 1RM; or moderate to hard load for novice to intermediate adult exercisers ≥80% of 1RM; or hard to very hard load for experienced weight lifters
Repetitions	10-15 repetitions to improve strength in beginning, middle aged and older persons 8-12 repetitions to improve strength and power in most adults 15-20 repetitions to improve muscular endurance in most adults
Sets	Single set training for novice and older adults 2-4 sets are recommended for strength and power of most adults ≤2 sets for muscular endurance
Rest	2-3 minutes of rest between multiple set training

1RM = one rep maximum; the most weight you can lift one time



Flexibility Training

For most adults, flexibility training will help to improve balance and postural stability.



FLEXIBILITY EXERCISE

Variable	Evidence-based recommendation
Frequency	2-3 days (or more) per week of stretching the major muscles groups; greater gains will be attained if done daily
Intensity	Stretch to the point of slight discomfort or feeling of tightness in muscle
Time	30-60 seconds of static stretching holds for older persons 10-30 seconds of static stretching holds for most adults
Pattern	2-4 repetitions of each stretch is advocated
Volume	Provide a total of 60 seconds of stretching time per target muscle group for any stretching method utilized

Neuromotor Training

Neuromotor exercise (i.e. **functional exercise**) training is advantageous as part of an all-inclusive exercise program for adults, especially older persons.

This type of training can **improve balance, agility, muscle strength, gait, coordination, and reduce the risk of falls.**

NEUROMOTOR EXERCISE

Variable	Evidence-based recommendation
Frequency	2-3 days (or more) per week
Time	20-30 minutes per day
Type	Exercises that improve balance, agility, coordination and gait, particularly for older adults to improve/maintain physical function and to prevent falls (wobble board, one leg stance, tandem gait, skipping, tai chi, qigong, yoga, dancing, marching in place (alternating knee lifts), one leg lunges, walking in a circle, figure eights, etc.)

Now let's put it together!



A TYPICAL WEEK

Day	Activity
Monday	Aerobic training Resistance training
Tuesday	Aerobic training Flexibility training/Neuromotor training
Wednesday	Aerobic training Resistance training
Thursday	Aerobic training Flexibility training/Neuromotor training
Friday	Aerobic training Resistance training
Saturday	Aerobic training Neuromotor training
Sunday	Aerobic training Flexibility training PLAY!

TRAINING TIPS FOR SENIORS

- 1) Teaching **correct lifting mechanics** should be a priority with all personal trainers working with mature clients.
- 2) Many older individuals do not understand the **concept of progressive overload**, and must be educated and directed properly.
- 3) Always have clients perform exercises in a **“pain-free” range of motion** with controlled joint movements.

TRAINING TIPS FOR SENIORS

4) Keep **breathing patterns normal** during resistance exercises. Encourage the client to exhale during the more challenging part of the exercise. For instance, when doing a squat, inhale on the descent of the squat and exhale on the ascent against gravity.

Breath holding during resistance exercise may elevate intrathoracic pressures dangerously high, placing undue stress on the heart.

TRAINING TIPS FOR SENIORS

- 5) **Begin resistance training programs with minimal training loads** to allow adequate time for the joint(s) and associated connective tissues to adjust to the loads.
- 6) Avoid excessive resistance training loads or repetition of loads as this may aggravate a pre-existing health condition. **Clients with arthritis and other joint and bone disorders should be advised to NOT do resistance during periods of pain or inflammation.**

TRAINING TIPS FOR SENIORS

7) Since eccentric training (lengthening muscle actions) has been shown to result in greater muscle soreness, the **use of eccentric training in mature populations should be done with care.**

8) When **restarting a resistance training regimen after a break or leave of absence**, have clients begin with loads that are approximately 50% or less of the previous training intensity.

TRAINING TIPS FOR SENIORS

- 9) To help mature clients develop **better balance and muscle coordination**, perform several exercise in a standing position with free weights and other exercise props, such as medicine balls.
- 10) Plan workout time efficiently for the mature client. **Sessions lasting over 60 minutes may be too fatiguing.** In addition, training sessions that are too long may be disadvantageous to overall exercise adherence.

EXERCISE IS FREE!

Most of us spend our days in a working environment, but that doesn't mean that we can't move throughout the day.

Move as if your life depends on it – because it does!!