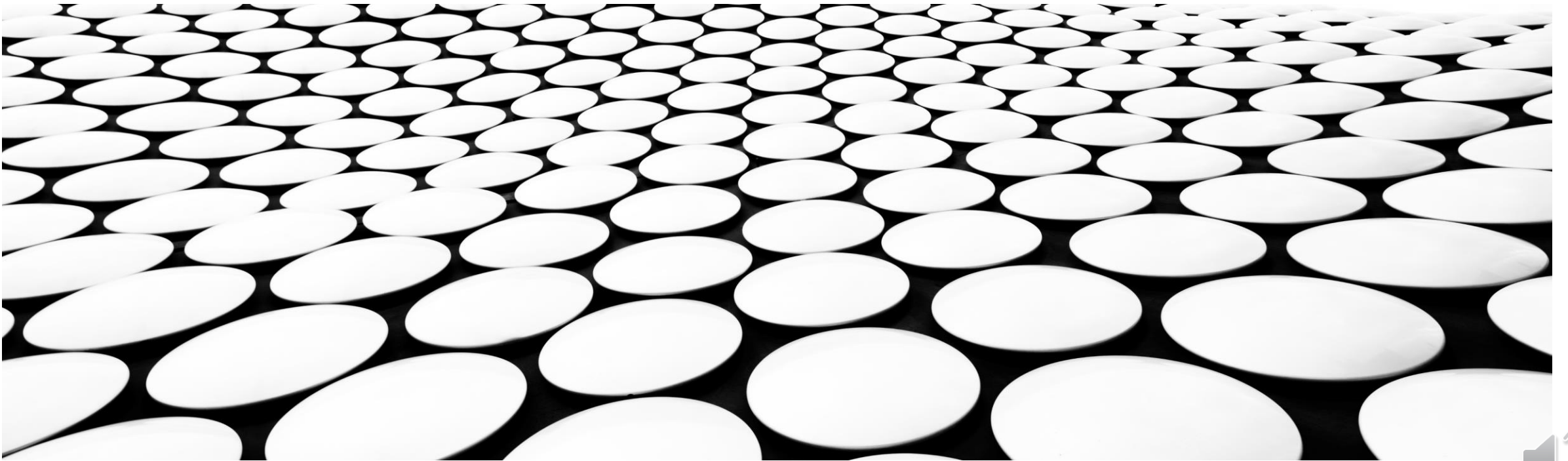

THE CAREGIVING EXERCISE SPECIALIST

AN INTRODUCTION TO TRAINING



AN INTRODUCTION TO TRAINING

- The Scope of Responsibility and Expertise of the “Caregiving Exercise Specialist”

>>> As a “*Caregiving Exercise Specialist*” you are about to become an expert in administering and supervising a safe and effective training program for your Pre-Frail, Frail, or Dependent client or family member under the supervision of a Physical Therapist, Physio Therapist or Certified Personal Fitness Trainer. You are able to vary the training program understanding *Progression and Regression of Exercises* and are able to *Adjust Training Intensity* while closely monitoring any changes in your client such an adjustment might trigger. <<<



AN INTRODUCTION TO TRAINING

- Exercise, Workout and Training

Definitions:

- Exercise: An activity requiring physical effort to improve health and fitness
- Workout: Can be as little as one (i.e. jogging), but is typically a group of several exercises performed within one session to improve health and fitness
- Training: Is a goal oriented workout with a purpose, and a plan





AN INTRODUCTION TO TRAINING

- Seniors come in all Fitness Levels, from Elite Athlete to Dependent. The Functional Aging Institute (FAI) created this Hierarchy of Functional Aging. As this Certification is for Caregivers, we presume that the seniors you serve belong to one of the last three categories in that hierarchy.



AN INTRODUCTION TO TRAINING

Before starting a Fitness Training Program for the Pre-Frail, Frail or Dependent client

1. Know your clients health-history and any current or ongoing health problems
Use PARQ or other Health History Form and discuss health and medications with Therapists and Physician if possible
2. Determine space and equipment availability
3. Determine client's best day time for training
4. Be client centric when setting goals.
Goals should take into account client's Physician's and Therapist's recommendation, but also the client's needs and interests
5. Understand your scope of expertise and act within that scope only!

2020 PAR-Q+
The Physical Activity Readiness Questionnaire for Everyone

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GENERAL HEALTH QUESTIONS

Please read the 7 questions below carefully and answer each one honestly: check YES or NO.

YES	NO
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

if you answered YES to all of the questions above, you are cleared for physical activity.
Please sign the PAR-Q+ and the Declaration. You do not need to complete Pages 2 and 3.

if you answered YES to one or more of the questions above, COMPLETE PAGES 2 AND 3.

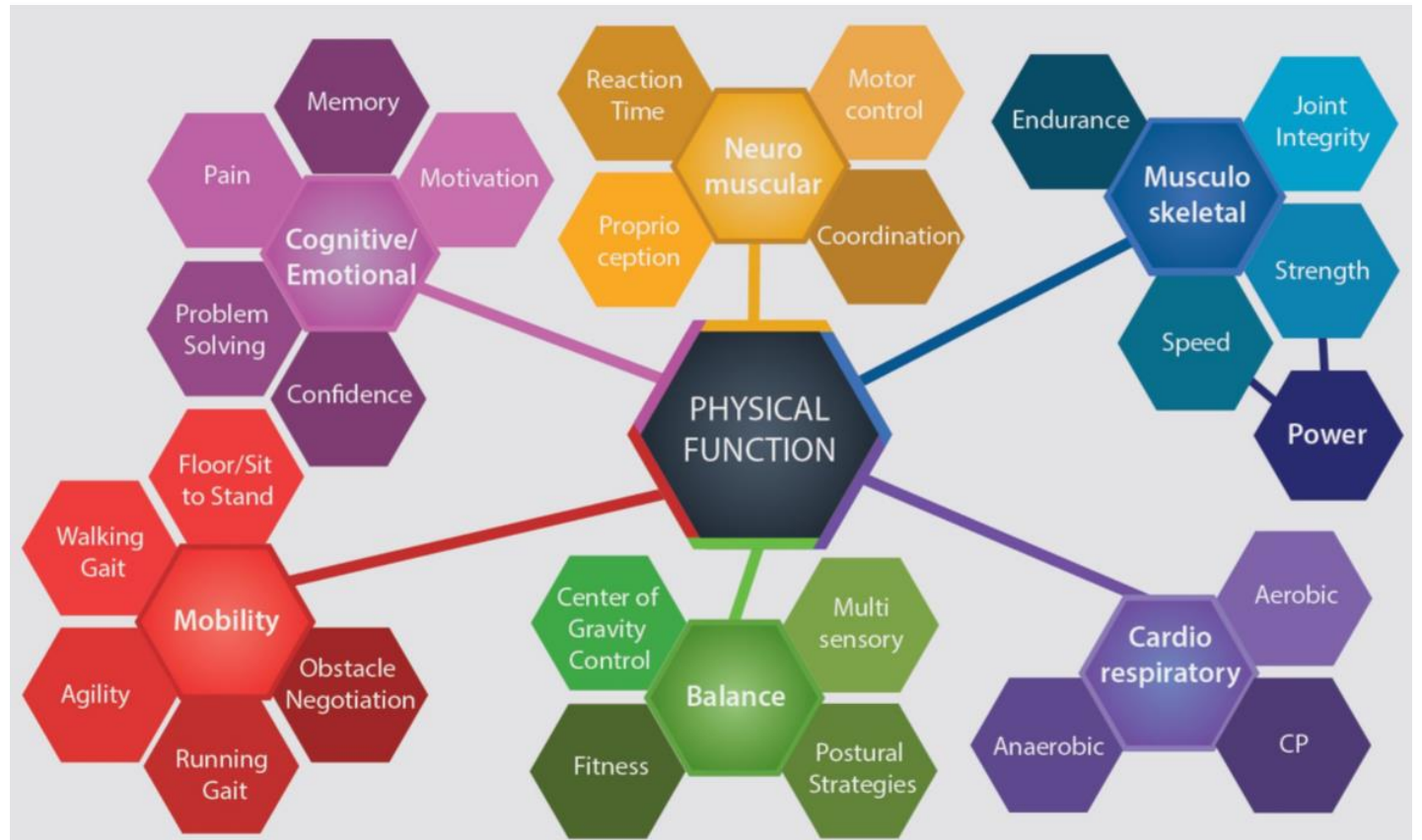
Delay becoming more active if:

- you have a temporary illness such as a cold, fever, or flu
- you are pregnant or have a heart condition
- you have a chronic condition that may be aggravated by physical activity
- you have a chronic condition that may be aggravated by physical activity

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AN INTRODUCTION TO TRAINING



Functional Aging Institute

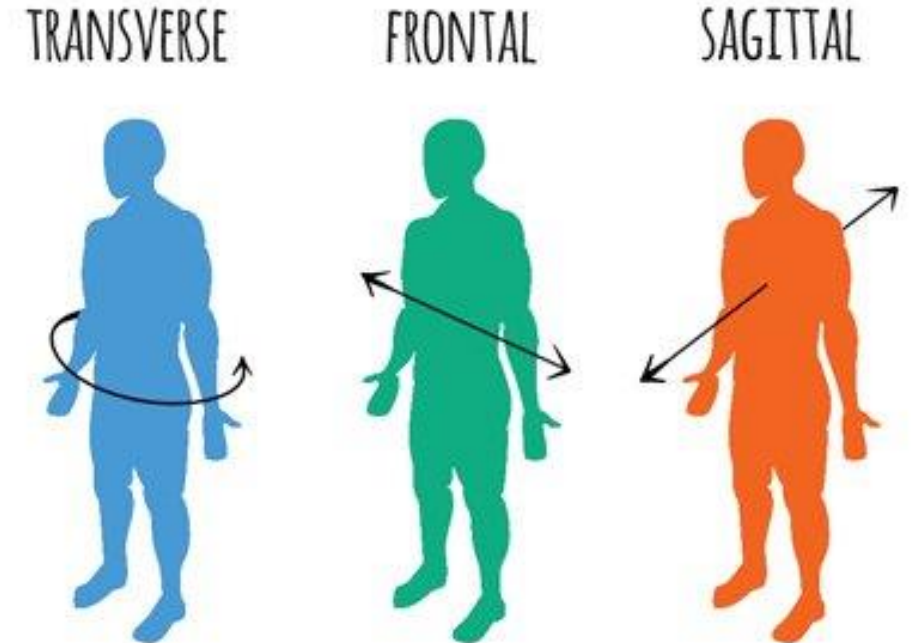


AN INTRODUCTION TO TRAINING

- Planes of Movement

When we exercise we do so in three different Planes of Movement.

1. **Transverse Plane**
This plane divides the body into an upper and lower part. Movements in this plane are rotational.
Example: Seated Spinal Rotation
2. **Frontal Plane**
This plane divides the body into front and back. Movements in this plane are sideways movements.
Example: Hip Abduction
3. **Sagittal Plane**
This plane divides the body into left and right half of the body. Movements in this plane are forward and backward movements.
Example: Walking



AN INTRODUCTION TO TRAINING

Types of Training:

- | | |
|--|---|
| <ol style="list-style-type: none">1. Cardiovascular Training<ul style="list-style-type: none">AerobicAnaerobic2. Strength Training<ul style="list-style-type: none">Strength EnduranceHypertrophy TrainingMaximum StrengthPower | <ol style="list-style-type: none">3. Balance and Agility Training<ul style="list-style-type: none">Postural ControlProprioceptionCoordinationReaction4. Mobility and Flexibility Training<ul style="list-style-type: none">Joint Range of MotionStretching5. Cognified Fitness<ul style="list-style-type: none">Coordinately and cognitively demanding activities |
|--|---|



AN INTRODUCTION TO TRAINING

- **Cardio-Vascular Training**

Definition: Physical Exercises utilizing large muscle groups performed for an extended period of time that increase heart rate, breathing frequency and breathing depth with the goal to improve the function of heart and lung, leading to improved muscular oxygenation and peripheral muscular fatigue resistance (Stamina).

Aerobic versus Anaerobic Cardiovascular Training

Aerobic: Endurance exercises such as jogging, swimming, cycling, and brisk walking etc.

Anaerobic: Quick burst exercises like, sprinting, jumping, heavy weight lifting, High Intensity Interval Training etc.

Anaerobic exercises are often contra indicated for the pre-frail, frail, and dependent because of existing health problems such as hypertension, cardiovascular disease, pulmonary disease, severe osteo-arthritis etc.



AN INTRODUCTION TO TRAINING

- **Strength Training**

Exercises designed to increase muscular strength by exercising a specific muscle or muscle group against resistance created by gravity or elasticity. We differentiate Weight Training using free weights or weight machines (Nautilus, Life Fitness etc.), Calisthenics using body weight or a percentage of it, and Resistance Training commonly using elastic resistance bands and tubing or springs (Pilates). Volume of Strength Exercises are commonly described as Sets and Repetitions.

Strength Endurance Training requires exercise loads or resistance light enough that the client can repeat the exercise 12-20 times before reaching muscular difficulty or involuntary muscle fatigue.

Hypertrophy Training requires loads/resistance that are strong enough to create muscular difficulty or involuntary muscle fatigue within 8-10 repetitions.

Maximum Strength Training is not suitable for the groups a Caregiver typically works with. They refer to loads and resistance one can manage for 1-5 repetitions

Power Training uses light loads/resistance but adds the element of speed requiring fast, powerful muscle contractions. Power Training is not for everyone and even though it shows great promise improving physical function in the older population it needs to be based on the individual situation.



AN INTRODUCTION TO TRAINING



■ Balance and Agility Training

is about improving static, dynamic and static-dynamic balance to reduce the risk of falling. Exercises should be focused on improving postural alignment (as much as possible), improve coordination and reaction speed to optimize movement and ensure quick balance recovery and fall mitigation.

Examples:

1. Variable Stances – narrow, semi tandem, tandem, single leg
2. Multi Directional Stepping (i.e, Clock Lunges) – active or reactive
3. Reducing visual, vestibular, and proprioceptive input
4. Reaction Games
5. Gait Training, Agility Ladder Drills etc.



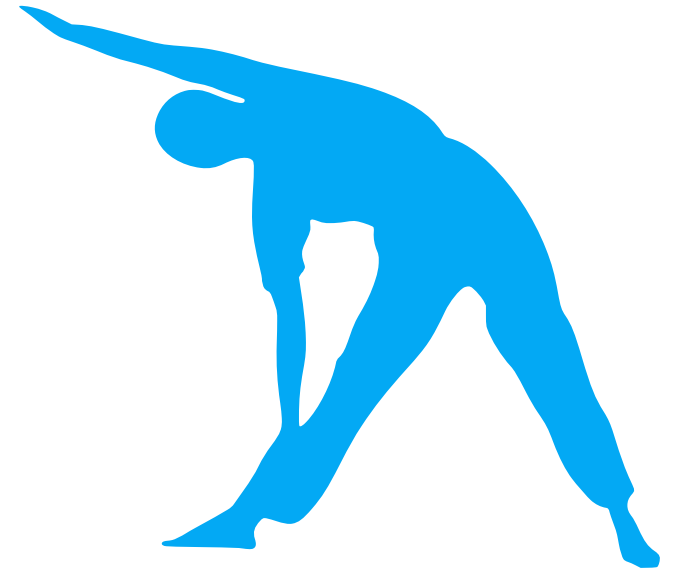
AN INTRODUCTION TO TRAINING

- **Mobility and Flexibility Exercises**

restore and maintain optimal Joint Range of Motion. Optimal Joint Range of Motion is associated with better posture, better mobility and decreased wear and tear on joints and a reduced injury risk

Examples:

1. Dynamic and Static Stretches – addressing muscle and tendon tightness
2. Active and Passive Joint Mobilization – addressing joint stiffness (i.e. adhesive capsulitis)





INTRODUCTION TO TRAINING

- Cognified Fitness

We know that exercising especially aerobic exercises improve cognitive function and can prevent aging related decline by increasing Angiogenesis (cerebral blood flow) and Neurogenesis (formation of new neurons in the brain)

Adding exercises that are coordinately and cognitively challenging seem to have greater impact on cognitive function than aerobic exercises alone.



AN INTRODUCTION TO TRAINING

- **Training Intensity**

refers to the amount of energy we need to perform a physical activity. With increased intensity we expect:

1. Increase in heart rate
2. Increase in breathing frequency and depth
3. Increased facial redness
4. Increased perspiration

Know your client as everyone reacts differently to exercise intensity.

Be aware of medications that influence body's responses to exercising.



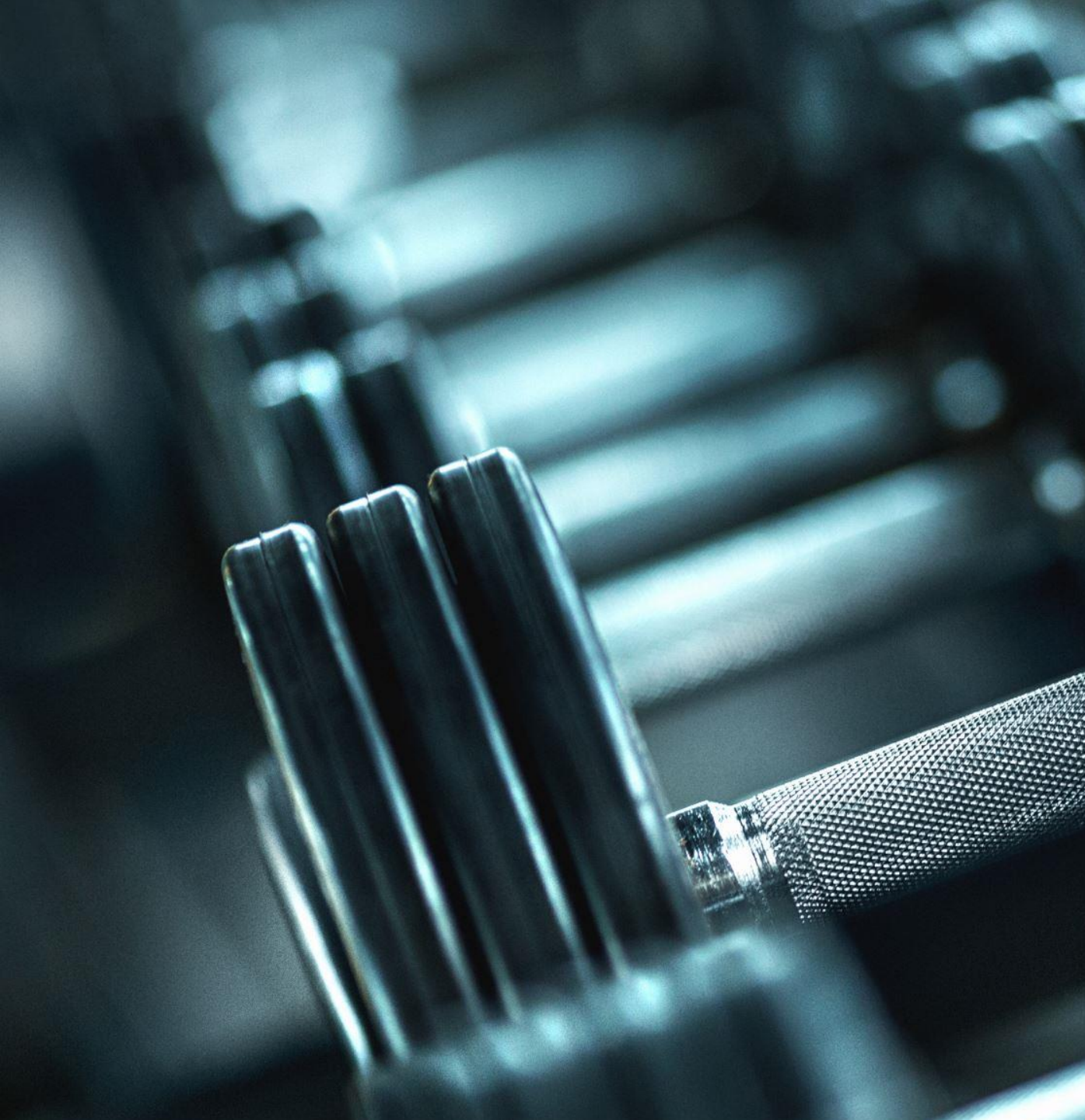
AN INTRODUCTION TO TRAINING

■ Gaging Training Intensity by:

1. Measuring Heart Rate – manually or electronically
2. Checking Blood Pressure
3. Observing changes to breathing
4. Observing change to facial coloring
5. Observing perspiration
6. Ask for pain or discomfort especially chest, arms and jaw
7. Ask for Rate of Perceived Exertion (Borg Scale)

1 - 10 Borg Rating of Perceived Exertion Scale	
0	Rest
1	Really Easy
2	Easy
3	Moderate
4	Sort of Hard
5	Hard
6	
7	Really Hard
8	
9	Really, Really, Hard
10	Maximal: Just like my hardest race



A close-up, low-angle shot of a dumbbell handle and its weights. The handle is in sharp focus, showing its knurled texture. The weights are stacked on top, with the top few visible. The background is blurred, showing more of the gym equipment.

AN INTRODUCTION TO TRAINING

- **Manipulating Training Intensity**

Training Intensity is typically associated with the Cardio-Vascular and Strength/Resistance Training part of the workout. But Balance and Agility Training can also lead to increased physical stress due to a high demand on concentration and movement precision.

- **Cardio-Vascular Training:**
Speed, Duration, Rest Period, Incline, Resistance
- **Strength and Resistance Training:**
Load, Volume, Rest Period, Speed
- **Balance and Agility and Cognified Fitness:**
From easy to hard, from simple to complex



AN INTRODUCTION TO TRAINING

- You should always have a Progression and Regression ready for each exercise you teach!

Examples:

1. Stationary Cycling: Cycling at Resistance Level 3 and speed of 10 miles per hour at a Target Heart Rate of 100 bpm
Progressing – Resistance Level 4 or speed of 11 miles per or a Target Heart Rate of 110 bpm
Regression – Resistance Level 2 or speed of 9 miles per hour or a Target Heart Rate of 90 bpm
2. Push Up: Kitchen Counter Push-Up – 3 sets of 10 repetitions
Progression – Coffee Table Push-Ups - 3 sets of 6 repetitions
Regression – Wall Push Ups – 3 sets of 10 repetitions



AN INTRODUCTION TO TRAINING

- Cardiovascular Training Equipment Choices For In-Home Training with the Pre-Frail, Frail and Dependent Client

1. Stairs or Hallway
2. Treadmill
3. Stationary Recumbent Bike
4. Nu-Step
5. Pool



AN INTRODUCTION TO TRAINING

- Strength and Resistance Training Equipment Choices For In-Home Training with the Pre-Frail, Frail and Dependent Client
 1. Body Weight - Calisthenics
 2. Free Weights aka Dumbbells – can be replaced by cans and or water bottles
 3. Exercise Tubing and Resistance Bands and Loops
 4. Ball, Belt, Pillow, Cane, Towel and other household items (be creative)
 5. Weight Machines (if available)



QUIZ

1. Who is supervising the Exercise Program you administer?
2. What is Training?
3. Who in the Functional Hierarchy of Aging is most likely in need of care?
4. What is the PARQ?
5. Name two components of Physical Function!
6. What are the two main forms of Cardiovascular Training?
7. What is Power Training or Rapid Movement Training?
8. Why do we stretch at the end of each workout?
9. How could you progress a Push-Up?
10. What is Calisthenic Training?