



21st CENTURY

PERSONAL TRAINING SCHOOL

Senior Training WORKSHOP

21st CENTURY PT SCHOOL

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Welcome to Senior Training Workshop

Due to the increase of knowledge in the areas of health, medicine and nutrition, the life expectancy of human beings is constantly being prolonged. Therefore the need to keep the body in good condition to offset the effects of ageing, damage to the skeletal system and also damage to the mind is of vital importance!

This 1 day workshop will equip the trainer or coach to provide functional assistance to seniors ranging from the ages 55-80 years old. It is a proven fact that with the right type of knowledge and training, a fitness professional can greatly enhance the physical and mental performance of seniors and empower them with confidence to enjoy what should be the best years of their life.

During this workshop we will cover the following sections necessary to provide you with the tools and knowledge to start training seniors:

- 1) Anatomy and Physiology
- 2) Strength & Aerobics Training
- 3) Nutrition
- 4) Functional Training
- 5) Mobility and Flexibility

Senior Training - Anatomy and Physiology

Ageing has several effects on the body, learning to understand the process, its effects and also the effects of physical activity are crucial in helping your senior client.

People over the age of 65 constitute one of the fastest growing populations in industrialized countries. They also are the highest burdened population with at least one chronic condition with over 88% falling into this category. Much of these conditions are preventable with regular physical activity. Loss of function can become evident as early as the fifth decade of life. Persons at this age or over are also found to be the most sedentary.

Below are the most common and preventable conditions found in the senior population which can be treated through regular physical activity.

Maintaining or losing weight

As we grow older our metabolism naturally slows down, this making it harder to maintain a healthy weight. Exercise contributes to an increase in lean muscle mass and thus an increase in metabolism during exercise and rest, resulting in a healthy weight and overall wellness.

Seniors are at a risk of several illnesses and chronic diseases which greatly reduce their overall quality of life and independence. Exercise has been proven to provide many benefits to seniors including:

- Better heart health
- Blood pressure
- Bone density
- Improved immune system
- Improved digestive functioning
- Lowered risk of diabetes & obesity
- Alzheimer's disease
- Colon cancer
- Osteoporosis
- Arthritis
- Back & Joint pain
- Depression

As a trainer you must be aware of the several anatomical & physiological factors that may affect the choice of exercises, intensity & duration when planning a training program for your senior client. Before starting an exercise program it is important to meet with a doctor for a full physical exam. If there are any medical problems that may affect the client you must collaborate with the doctor to develop a safe exercise program.

Issues to consider:

- 1) Older adults generally have decreased flexibility, mobility, balance and coordination.
- 2) Postural defects
- 3) Muscular weakness
- 4) Skeletal weakness
- 5) Ability to lubricate joints
- 6) Heart condition
- 7) Respiratory function

Senior Training Workshop – Strength & Aerobics Training

Strength Training

As we grow older all parts of our movement apparatus (skeleton, muscles, joints, ligaments and tendons) become weaker and more susceptible to injury, making us less independent and carrying out simple daily tasks can become a challenge. A regular strength training regime can effectively prevent all these problems. In addition, strength training can help reduce the signs and symptoms of many chronic diseases listed earlier.

The below listed guidelines are for healthy seniors ready to take on an exercise regime. Make sure you have consulted with the client's doctor as guidelines may vary depending on the client's medical status.

Strength Training - Workouts and Guidelines:

- Allow at least 10 minutes to warm-up as seniors joints may take longer to warm up and lubricate their joints. Using low-impact machines such as the cross-trainer is preferable.
- Always start with light weights or machines and build resistance and intensity as the client becomes more adapt.
- Include all major muscle groups (arms, legs, stomach, back and hips) 2 times a week. Make sure the same muscle group is not trained two days in a row; allow at least one day rest between muscle groups.
- Make sure to move through the motions slowly, both in the concentric and eccentric portions of muscle contraction. Do not jerk or swing the weights.
- Work with 8-12 repetitions and 1-2 sets of each exercise.
- Focus on core-strength before moving on to more demanding strength exercises.
- Make sure the client is wearing proper shoes to provide more stability (ex. Weight training shoes to provide more stability. Never use jogging shoes for such exercises like squats or leg press)

Aerobics Training – Workout and Guidelines:

- Always start at a slow pace and gradually build intensity and speed as the client gets warmed up.
- Aerobic activity should be performed at least for 10 minutes.
- 150 minutes of moderate-intensity aerobic activity per week (ex. 20 minute walk per day)
- If your client cannot do the recommended amount of physical activity due to health conditions, they should be as physically active as their health and condition allows.
- Use low impact machines such as the cross-trainer to protect the joints.
- Make sure your client has proper shoes with adequate cushioning.

Listed below are factors that an exercise professional should take into consideration before applying a training program on a client:

- 1) Do not prescribe an elderly client with an exercise prescription if you do not feel comfortable to do so or lack the necessary competence to administer and direct such a patient.
- 2) Always receive some form of medical clearance from a doctor. This will let you know if there are any previous injuries or health problems that can affect the exercise prescription.

- 3) If your client complains of any discomfort, dizziness, nausea, pain, light headedness, headaches or any other abnormal symptoms, discontinue the exercise immediately and seek medical help.
- 4) Make sure your client has regular physical check-ups during the duration of your training program with your client.
- 5) Have regular follow-ups with your client to check their progress using basic fitness tests.

Senior Training Workshop – Nutrition

As we get older our physiologies get more sensitive to the nutrition we provide it, along with difficulties digesting and processing foods. Therefore it is crucial to make sure that your client receives proper nutrition for optimal results and well-being. Below are nutritional guidelines for your senior client:

Make sure your client has received medical clearance to follow the nutritional guidelines mentioned below:

- Water is crucial for all biochemical reaction in the body and thus optimal health. Make sure your client drinks at least 35ml water/kg body weight every day and that they have sufficient water before, during and after exercise.
- 25-35 grams of dietary fiber per day for intestinal health
- Avoid any processed foods and focus on whole foods such as fruits, vegetables, lean meats and whole grain breads.
- Avoid all foods that are high in sodium, sugar, trans- and saturated fats. Recommendations from SNR are; salt max 6 grams per day and sugar max 5% of your total energy intake.
- Eat regularly with at least 3 meals a day.
- Balanced meal with Carbohydrates, fats and protein within an hour after exercising.
- Small snack containing EAA, Carbohydrates and vitamins and minerals 1-2 hours before and/or directly after exercise is preferable (ex. Natural low fat yoghurt and a banana)

Many elderly people have difficulties doing simple daily tasks which puts them in dependent care of others and greatly reduces the quality of life both physically and mentally.

The program below is an example that can be used on beginner senior clients to improve their functionality and ability to perform daily tasks with ease. This program can be performed at home or at the gym.

Warm-up: Start with a 10 minute walk either outside or at the gym using the cross-trainer or treadmill.

Strength:

- 1) Squats
- 2) Regular or Wall Push-ups
- 3) Toe stands
- 4) Overhead press
- 5) Step Ups
- 6) Bicep curls
- 7) Hip Abduction
- 8) Knee Extension
- 9) Knee curls
- 10) Pelvic tilt
- 11) Plank

Balance & Coordination:

- 1) Balance on one leg
- 2) Balance on one leg while reaching at different directions with other leg
- 3) Balance on one leg while bouncing medicine ball in different directions

Cool-down:

- 1) Quadriceps stretch
- 2) Hamstrings stretch
- 3) Chest and Arm stretch
- 4) Shoulder and Back stretch
- 5) Neck stretch

Equipment: Dumbbells, step-up bench, chair, resistance band and medicine ball

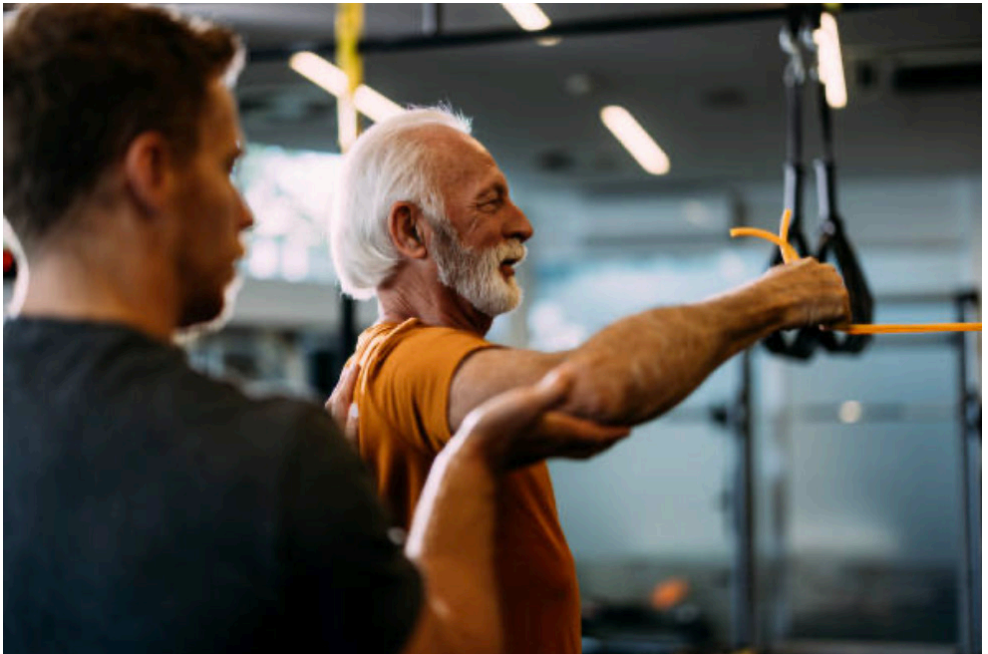
Senior Training Workshop – Mobility and Flexibility

Many elderly people suffer from mobility and flexibility problems due to their sedentary lifestyle, joint health and chronic illnesses such as arthritis, which restrict them in their daily activities and increase the risk of injuries caused by falls or improper technique during exercises. Applying exercises which improves mobility, flexibility and balance will reduce the risk of falls and alleviate symptoms of chronic conditions.

Refer to the stretching and balance exercises provided under the Functional Training section.

Exercises and Guidelines:

- Stretch gently
- Relax and breath during stretches
- Hold each stretch for about 20-30 seconds
- Do not bounce
- Do not push a stretch too far; stretching should not be painful
- Only do stretching when warmed up or after exercise as cool-down
- If your client complains of any muscular or joint pain or discomfort, stop immediately.



We at 21st Century PT School hope that this workshop has been of benefit to you, we hope that you continue to further your education in the areas of health, sport and fitness with 21st Century PT School and wish you all the best with your future plans, educations and successful careers.



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