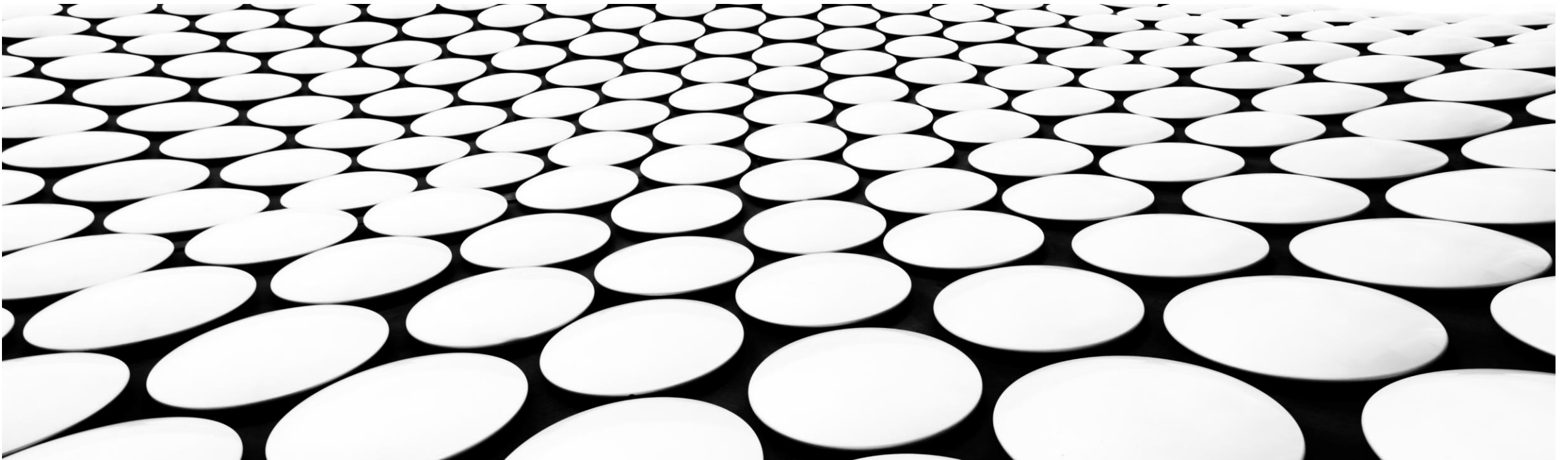
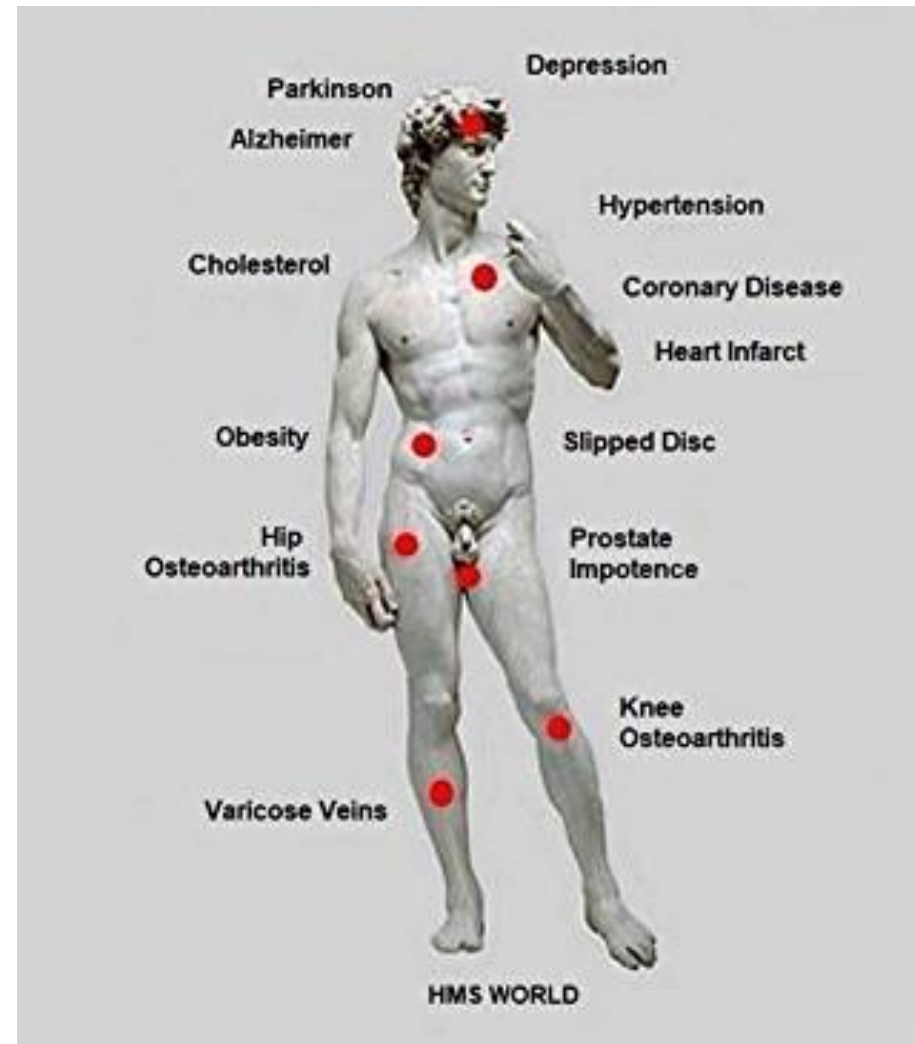

THE CAREGIVING EXERCISE SPECIALIST

THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

- This session is introducing you to some of the most common health problems and diseases found in older adults and their impact on fitness training and exercises.



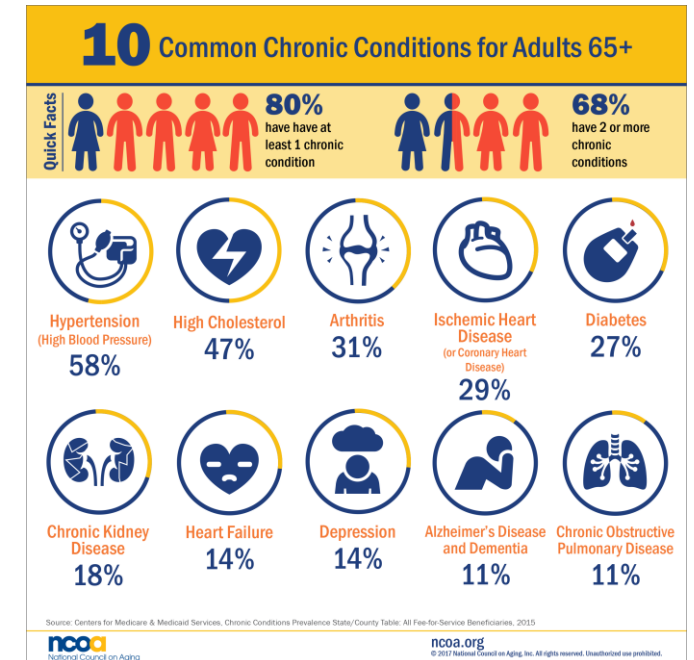
THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

Cardio Vascular Disease:

- Ischemic Heart Disease
- Congestive Heart Failure
- Arrhythmia

Hypertension:

- Hypertension, a major contributor to atherosclerosis, is the most common chronic disease of older adults.
- Isolated systolic hypertension is particularly common among older adults and is associated with mortality even at advanced ages.



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

EXERCISE AND FITNESS TRAINING CONSIDERATIONS

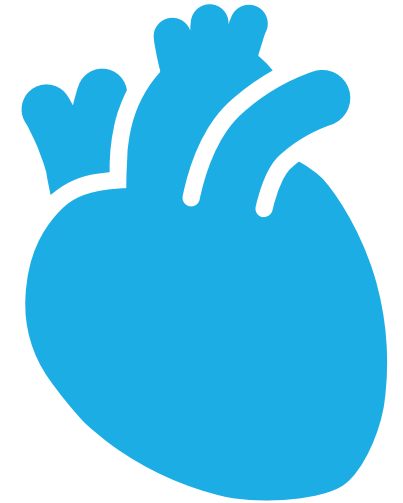
■ Cardiovascular Disease (CVD)

Benefits:

1. Improve Blood Lipids Concentration – Increase HDL and Decrease LDL and Triglycerides
2. Reduce Blood Pressure
3. Increase Insulin Sensitivity – improve effectiveness of available insulin in the blood stream
4. Reduce and/or manage body weight

Warning Signs:

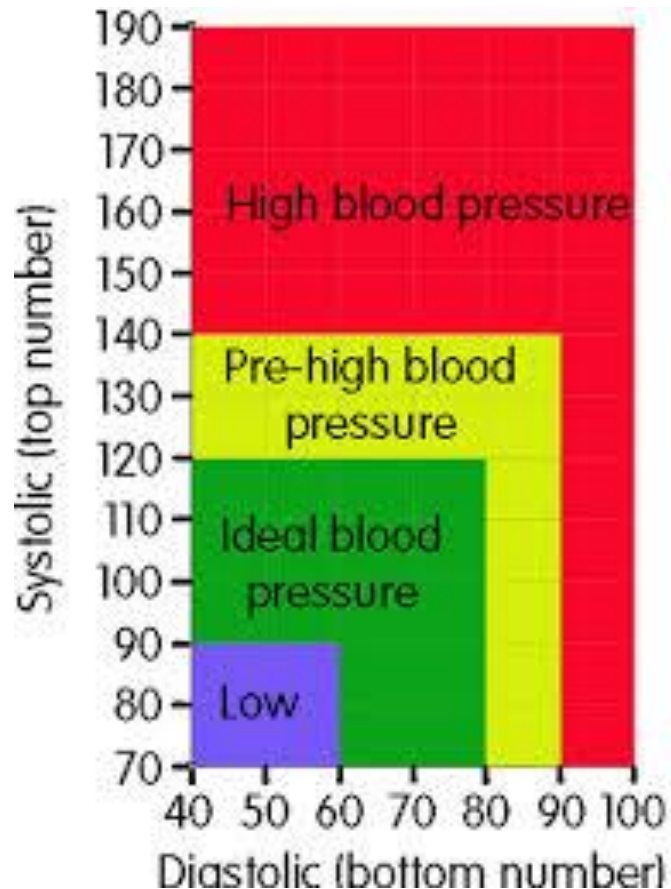
1. Chest Discomfort
2. Shortness of breath
3. Dizziness or Light Headedness
4. Heart Rhythm abnormalities
5. Dropping heart rate during exercising (heart failure)



Summation:

Though the risk of a cardiac event during exercising is very low, patients with cardiovascular disease should be closely monitored especially in the early stages of exercises and fitness training to determine exercise tolerance. Taking pulse and blood pressure in coordination with Rate of Perceived Exertion is recommended.





THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

■ Hypertension (High Blood Pressure)

Benefits:

1. Moderate intensity aerobic exercises have shown great success in the treatment and prevention of Systolic- as well as Diastolic Hypertension.

Warning Signs & Considerations:

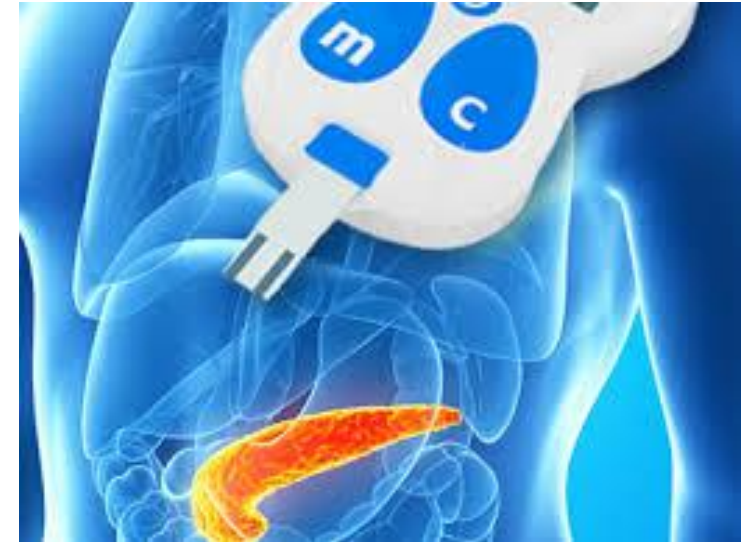
1. As most folks with Hypertension are on medication treating the disease, keep in mind that ending exercises abruptly might lead to a large drop in blood pressure and possible fainting.
2. Hypertension only produces symptoms at extremely high levels, so it is important to monitor the blood pressure especially when starting a training program and look for symptoms related to CVD (see previous slide).



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

Diabetes Mellitus

- Type 1:
Total Insulin Deficiency, requires exogenous Insulin. Pancreas does not produce Insulin at all or very little
- Type 2: Characterized as Non Insulin Dependent Diabetes Mellitus, Insulin Resistant Diabetes or Old Age Onset Diabetes. The Pancreas does produce insulin but not sufficient amounts and insulin's ability to move glucose from the blood stream into the cells is further impaired by Insulin resistance at the cell level (common in obesity)



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

Diabetes

■ Diabetes Mellitus

Benefits : All forms of exercise, aerobic and strength training equally

1. lower Blood Glucose Levels
2. increase Insulin Sensitivity
3. lower A1C



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

Diabetes

■ Warning Signs and Considerations working with a Diabetic:

- The biggest risk for diabetics while exercising is *Hypoglycemia* (low blood sugar)
 1. Shakiness - Nervous and Anxious
 2. Sweating, Chills, Clamminess
 3. Irritability, Impatience - Confusion
 4. Rapid Heart Beat - Light headed
 5. Hunger
 - Possible *Neuropathy* in feet and legs
 - Poor *Circulation* leads to poor wound healing
- Consider blood glucose checks 1 hour prior to exercising, directly before exercising and if necessary while exercising
 - Encourage client to check regularly for injuries to skin
 - Be aware of possible loss of balance due to Neuropathy



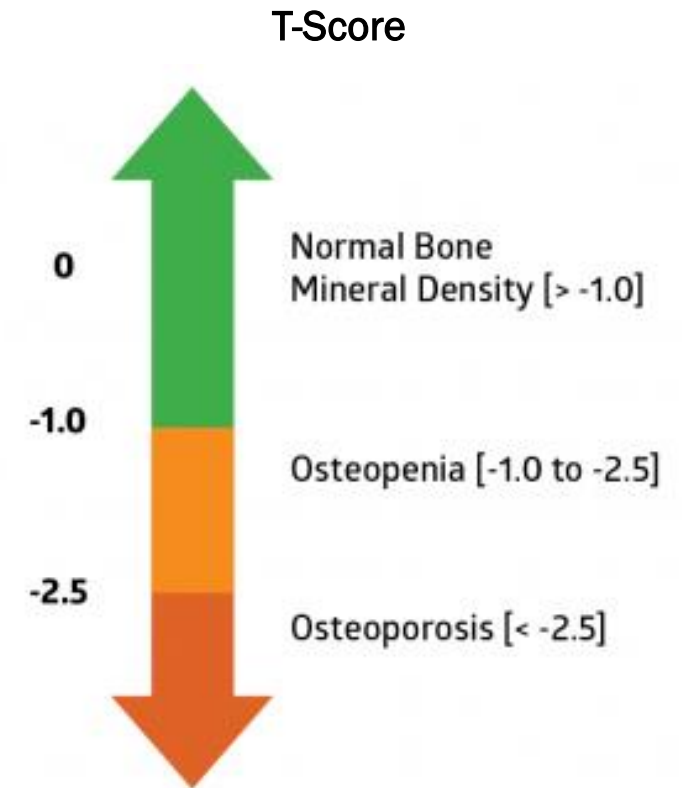
THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

Osteopenia/Osteoporosis

- Both conditions are referring to a loss of bone mineral density making the bone more vulnerable to fractures. Osteopenia is a milder form of Osteoporosis.

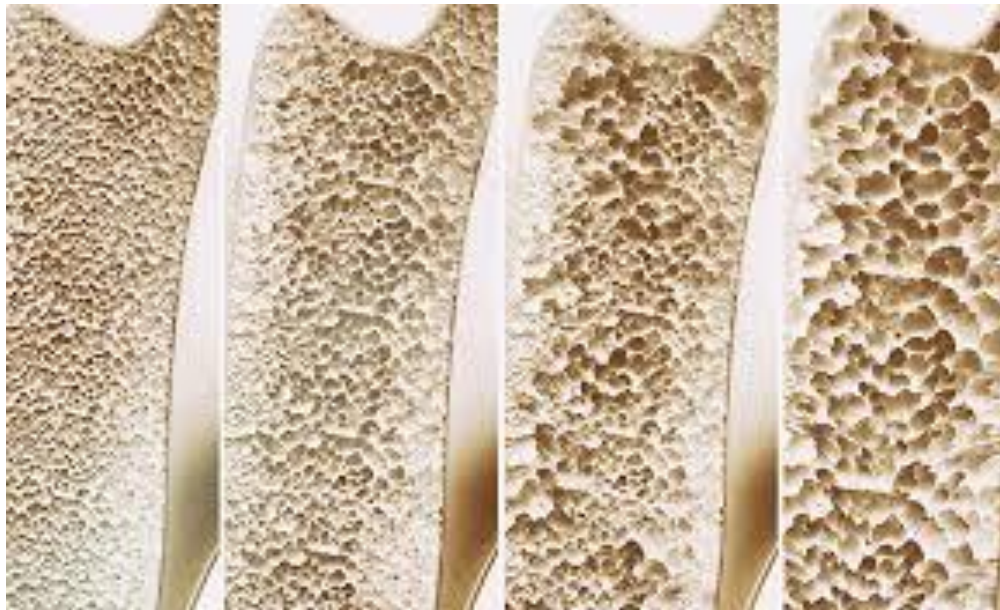
caused by:

- Diet (limited calcium intake)
- Life-style (smoking, alcohol consumption, sedentary life-style)
- Diseases that limit calcium absorption in the digestive tract (Crohn's Disease, Celiac, IBS)
- Hormonal changes (reduced testosterone and estrogen levels)
- Medication (Steroids)



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

EXERCISE AND FITNESS TRAINING CONSIDERATIONS



■ Osteoporosis – Osteopenia

Benefits:

1. Weight Bearing and Resistance Exercises increase bone mass and keep bones healthy and strong

Risks and Considerations:

1. Bone fractures especially wrist, hip, and lumbar vertebrae
2. Work with short levers and avoid too much impact



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

- Osteoarthritis (OA)

Previously considered a condition of wear and tear is today believed to be a joint disease that is more common to develop as we age. Possibly caused by injury to a joint, overuse, obesity, genetics and muscle weaknesses. Being female further increases the risk of developing OA.

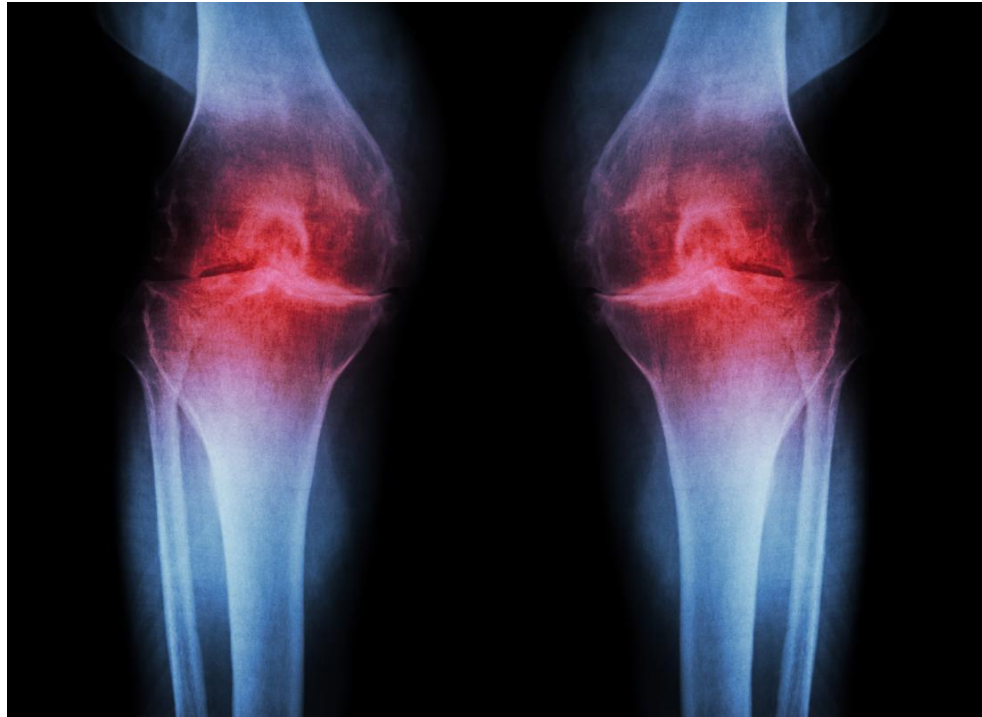
OA causes pain, swelling, stiffness, limited range of motion, joint instability, and muscle weaknesses in and around the affected joint.

Common forms of treatments include Non Steroidal Anti Inflammatory Drugs (Aleve, Aspirin, Motrin etc.), Corticosteroids, exercises, and often as a final solution surgical joint replacement.



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

EXERCISE AND FITNESS TRAINING CONSIDERATIONS



■ Osteoarthritis

Benefits:

Strength exercises promote greater joint stability,
Flexibility and Mobility exercises reduce joint stiffness
and improve joint range of motion
Aerobic activities improve stamina and help with weight
management
Balance training strengthens small muscles around the
joints and decreases the risk of falls

Risks:

Avoid high impact exercises such as plyometrics and
heavy loading of affected joints as it might lead to an
acute flare up of the OA



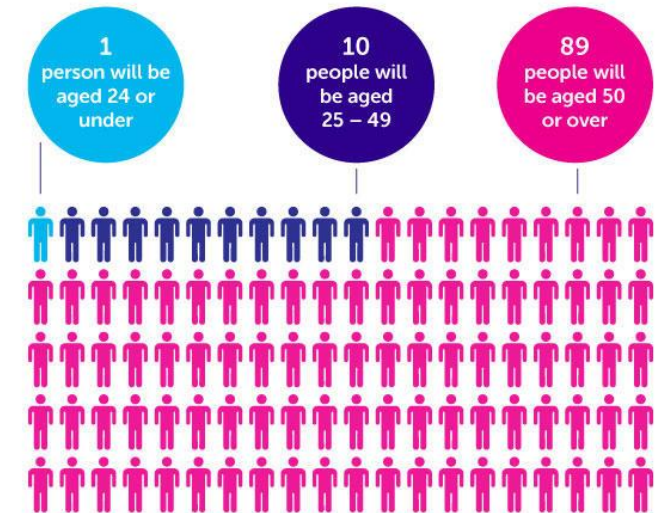
THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

■ Cancer

The structural and functional changes in cells, tissues and organs that define the aging process also elevate the risk of an uncontrolled division of abnormal cells aka Cancer. 60% of cancers are found in the population 66 plus. The most common cancers found in the elderly are Breast Cancer, Prostate Cancer, Lung Cancer, and Bowel Cancer. While Breast and Prostate Cancer usually grow slower in the older adult, bladder and some forms of Leukemia are more aggressive and harder to treat in the elderly.

CANCER IS MUCH MORE COMMON IN OLDER PEOPLE

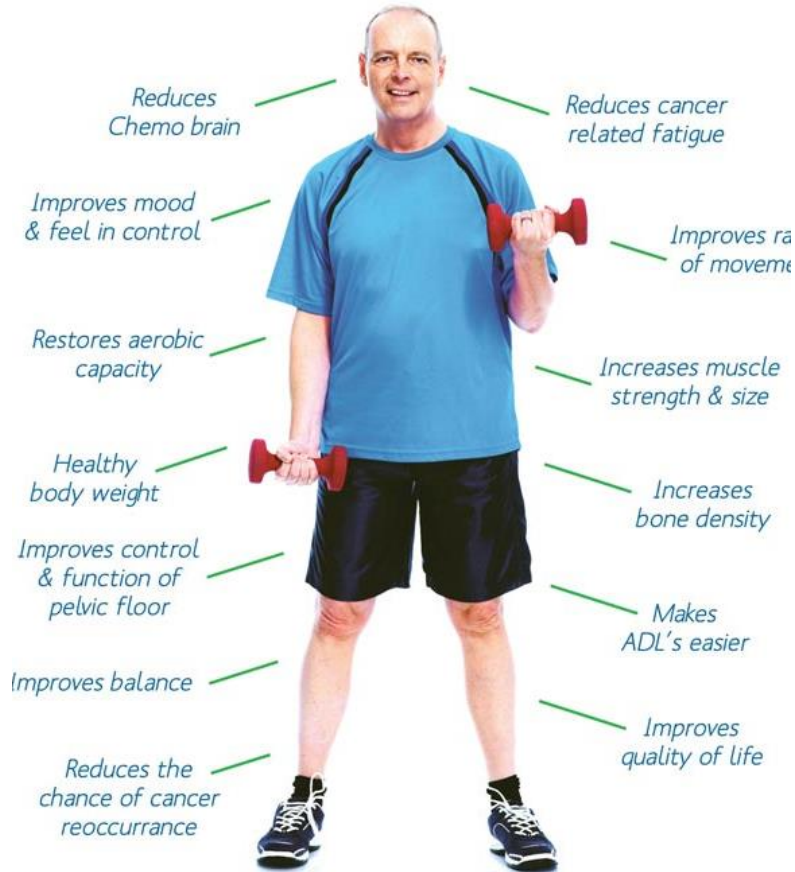
For every 100 people diagnosed with cancer:



TOGETHER WE WILL BEAT CANCER
cruk.org



EXERCISE HELPS OVERCOME CANCER TREATMENT SIDE EFFECTS



*Statements are evidence based

THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

EXERCISE AND FITNESS TRAINING CONSIDERATIONS

Cancer

Benefits:

Exercising is able to counteract the adverse affects of cancer and it's treatments. It isn't directly affecting the disease but is associated with better Quality of Life, better sleep, higher energy levels, greater strength, and physical function while reducing anxiety, depression, nausea, and Body Mass Index (BMI).

The American Cancer Society recommends 150 minutes of moderate or 75 minutes of higher intensity Aerobic Exercises as well as 2 Strength Training sessions per week.

Risks:

The exercise choices and intensities depend on and have to reflect the

- Type and Stage of Cancer
- Treatment used
- Current Strength and stamina of the patient

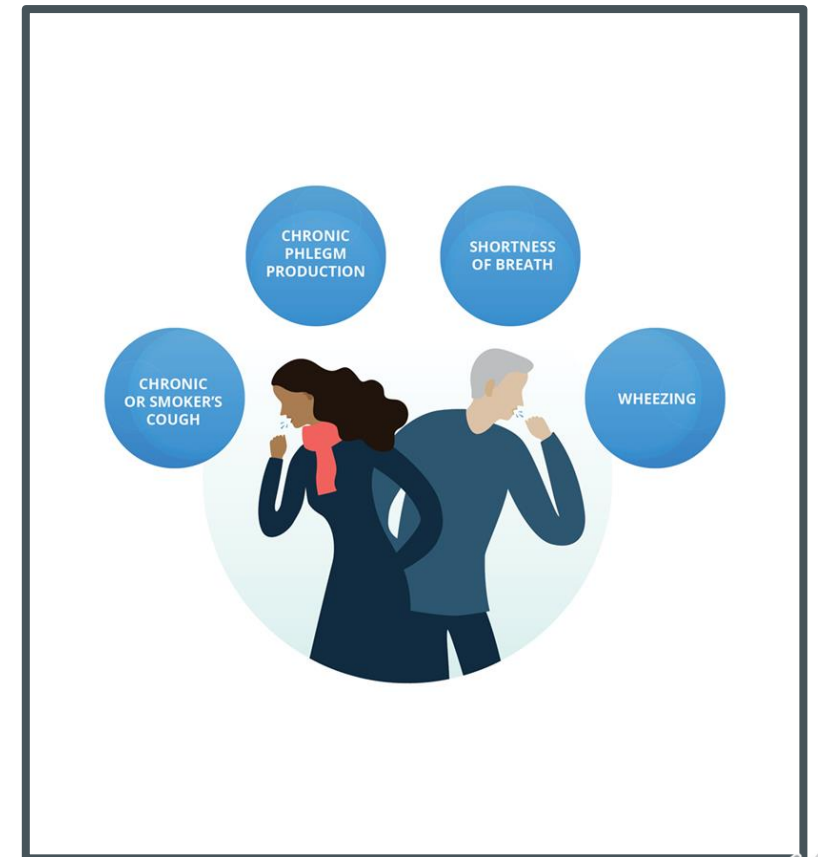


THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

- Chronic Obstructive Pulmonary Disease (COPD)

COPD is a very common illness amongst the elderly, cause of chronic morbidity and mortality. Cigarette smoke is the most common cause of COPD, but other noxious particles (air pollutants) can be causing COPD as well. COPD is characterized as a chronic inflammatory response to such noxious particles and can lead to Emphysema and small airway fibrosis causing the following symptoms:

1. Shortness of breath
2. Chronic cough
3. Increased sputum production
4. Wheezing
5. Chest tightness
6. Fatigue
7. Frequent respiratory infections



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

EXERCISE AND FITNESS TRAINING CONSIDERATIONS

■ COPD

Benefits:

Moderate exercise can improve:

1. The body's use of oxygen
2. Energy levels
3. Anxiety, stress and depression
4. Sleep
5. Self-esteem
6. Cardiovascular fitness

Risks and Considerations:

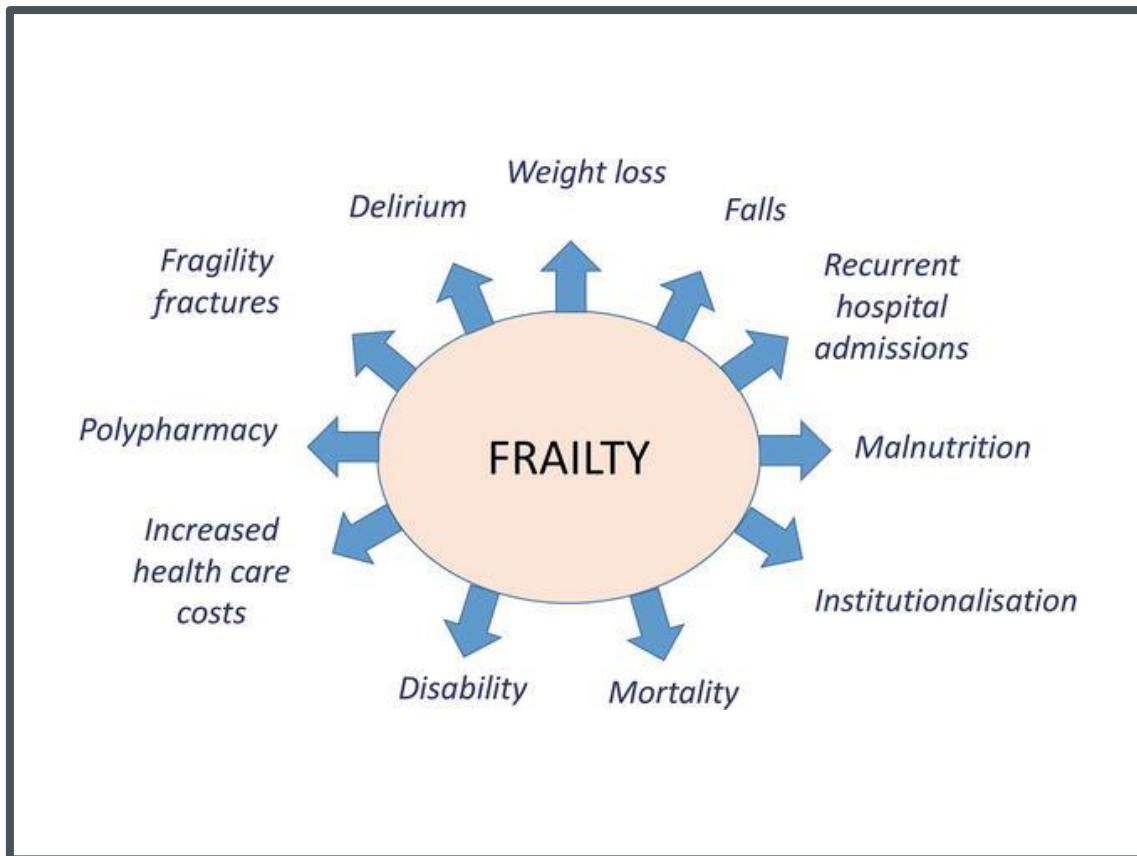
Avoid exercising when patients is:

1. Having a fever or infection
2. Feeling nauseated
3. Having chest pain

Mild Shortness of breath while exercising might be an intended consequence of exercising as it might strengthen respiratory musculature assisting in in and exhalation.



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS



■ Frailty Syndrome

Frailty is characterized by a significant decrease in mobility due to age related changes to the muscular- (sarcopenia = loss of muscle mass) and skeletal system (Osteopenia and Osteoporosis), as well as malnourishment evidenced by involuntary weight-loss. It increases the risk for poor health outcomes, including falls, hospitalization, and mortality.



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

EXERCISE AND FITNESS TRAINING CONSIDERATIONS

- Frailty Syndrome

Benefits:

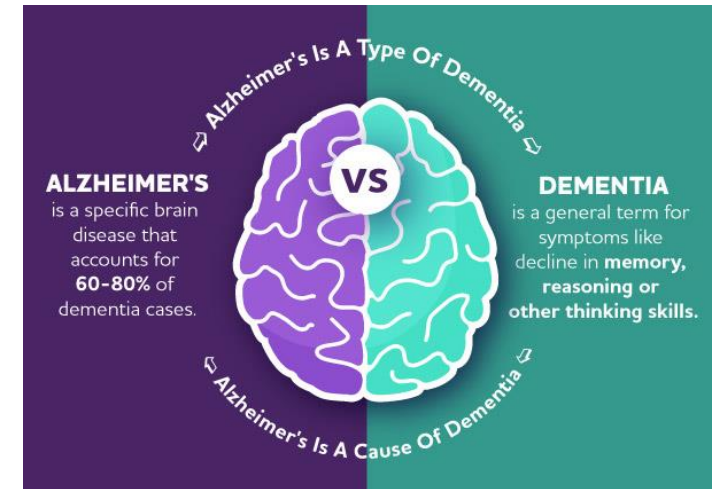
1. Decreased muscle inflammation
2. Increasing anabolic processes
3. Increasing muscle protein synthesis
4. Improving muscle weakness and disuse atrophy
5. 17% decrease of falls
6. Improved function in Activities of Daily Living (ADL)



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

- **Dementia/Alzheimer's Disease (AD)**

While Dementia describes a decline in mental abilities interfering with daily life, Alzheimer's is the most common reason for Dementia and a specific disease. In the early stages patients have problems with newly acquired information. As the disease progresses symptoms worsen and include disorientation, confusion and lead to behavioral changes. Later on physical abilities like speech, swallowing and walking are affected. There is no prevention, cure or even way to slow the progress of the disease. While the disease is clearly more common in the 65 plus population, it isn't a part of normal aging and can start at a younger age.



THE MOST COMMON HEALTH PROBLEMS AMONGST OLDER ADULTS

EXERCISE AND FITNESS TRAINING CONSIDERATIONS

■ Dementia/Alzheimer's Disease (AD)

Benefits:

1. Improved cerebral blood flow and neurogenesis, explaining why regular exercising seems to aid in the prevention of AD and help maintain cognitive functions.
2. Aerobic exercises of moderate to severe intensities seem to be optimal in the prevention and improvement of AD
3. Strength training is more effective influencing posture and motor functions and reduce risk for developing AD
4. Reduced Caregiver burden
5. Prevention of secondary health problems (CVD, Hypertension et.)

Considerations:

1. Learn about the patients past life-style, work, social and recreational interests
2. Choose an environment that isn't over stimulating or overwhelming to the patient
3. Plan a program including aerobic activities, strength and resistance training, balance training and mobility exercises.
4. Repetitive programs, possibly boring to healthy individuals, might provide some comfort in being predictable



QUIZ

1. What are the most common chronic diseases at an advanced age?
2. Name 2 benefits that regular exercising has on Cardiovascular Disease (CVD)!
3. What are common warning signs when working with a client with CVD
4. Name 2 benefits that regular exercising has on Diabetes!
5. What is considered the greatest risk when working with a diabetic client?
6. What is the T Score for Osteoporosis?
7. Name one strategy to avoid bone fractures when working with a severely osteoporotic client!
8. What is Osteoarthritis
9. What are the American Cancer Association's exercise recommendations for patients?
10. Name 3 COPD symptoms!
11. How is Frailty Syndrome characterized?
12. What is Angiogenesis and Neurogenesis?