



Active Ageing

Lesson 2
Part 1
Common Medical Conditions associated with Ageing




1




Learning Outcomes

- At the end of this lesson you will be able to:
- Identify some of the common medical conditions associated with ageing
- Describe the symptoms caused by those conditions
- Identify the exercise implications of those conditions




2



Learning Outcomes


- Identify the type of exercise which may help to alleviate or improve some of those conditions
- Identify when exercise may be contra-indicated depending on the condition



3

Medical conditions

- **Arthritis** – The breakdown of tissue inside the joints.
- Osteoarthritis – most common in older people – wear and tear.
- Symptoms- joint pain, restricted movement, inflammation.




4

Arthritis

Benefits of exercise –


- Increase flow of nutrient-rich blood to joints
- Relieves joint pain and stiffness
- Build stronger muscles that reduce joint stress, improve flexibility and decrease disease activity



5

Arthritis



- Exercise Type:
 - Low-impact strengthening exercises – body weight, light dumbbells, resistance bands
 - Lower extremity arthritis – target quads and hamstrings
 - Range of motion exercises – yoga, tai-chi
 - Aerobic – walking, cycling and aqua



6

Exercise Type Contd.

- Increase time in warm up
- Proper technique
- Work all major muscle groups



7

Arthritis



- Avoid:
 - High impact exercises
 - Twisting and jerking movements
 - For rheumatoid arthritis – take a break from strength training during flares



8

Arthritis


- For low bone density – Avoid bending, curving the spine forward and ab crunches, toe touches. Avoid golf, tennis and high-impact activities.
- Back Pain – Avoid heavy weight lifting, sit-ups, leg lifts and exercise that involves leaning forward for long periods – cycling for example.



9

Osteoporosis


• Osteoporosis- A condition that weakens the bones. Losing bone mass is a natural part of the ageing process.



10

Osteoporosis


• Symptoms - Back pain, caused by a fractured or collapsed vertebra.
• Loss of height over time.
• A stooped posture.
• A bone that breaks much more easily than expected.



11

Osteoporosis



• Benefits of exercise:
• Increase muscle strength
• Improve balance
• Decrease risk of bone fracture
• Maintain or improve posture
• Relieve or decrease pain



12

Osteoporosis



- Avoid:
 - High-impact exercises
 - Jerky or rapid movements
 - Sit ups or toe touching
 - Golf, tennis, bowling and some yoga poses



13

Task



- **Task:**
- **Write down briefly the exercise implications for a client with arthritis.**



14

Hypertension


- Hypertension- Blood pressure in arteries is constantly elevated.
- Symptoms- Severe headache, anxiety, chest pain, irregular heartbeat.



15

Hypertension


• Benefits of Exercise: According to ACSM-
 "Participation in exercise is a key modifiable determinant of hypertension and is recognised as a cornerstone therapy for the primary prevention, treatment, and control of high BP"



16

Benefits


- Regular aerobic exercise lowers resting systolic BP 5-7mmHg(Use talk test here to measure intensity)
- Resistance exercise lowers resting systolic BP 2-3mmHg
- Such a reduction in BP transfers to a lower overall risk of CVD by 20%-30%



17

Hypertension



- Avoid:
- For those inactive clients start with short sessions -10-15mins
- On BP medication? Then exercise at an intensity that is "somewhat hard"
- Cool down slowly (Some medication may reduce BP too much if exercise stops too quickly).



18

Hypertension



- Beta blockers and diuretics affect body's ability to regulate temperature during hot conditions – plenty of fluids.
- Do not exercise if resting systolic BP is ≥ 200 or resting diastolic BP is ≥ 115 .
- **Task: Briefly write down the benefits of PA for clients with high BP**



19

Cardiovascular Disease/ Stroke



- Coronary Heart Disease- Can be caused by certain lifestyle choices and other medical conditions such as –
- smoking, high cholesterol, high blood pressure, diabetes, obesity.



20


CAD

- Stroke – Blood supply to part of the brain is cut off.
- Symptoms- Face- Unable to smile, face dropped to one side. Arms- Unable to lift arms and keep them there. Speech- Slurred speech or unable to talk at all. Time- Dial emergency services immediately.









21

CAD




UNIVERSITY OF
LIMERICK
DUCEBURGH LIMERICK

- Benefits of Exercise:
- According to the WHO there are substantial health benefits for CVD risk reduction with moderate intensity PA of at least 150mins per week.
- PA improves systolic BP, angina symptoms, quality of life and reduced risk of cardiac events by 20%.







22

CAD




UNIVERSITY OF
LIMERICK
DUCEBURGH LIMERICK

- Use continuous exercise using large muscle groups(Walking, swimming, group aerobics)
- Cross training circuits (10-12 exercises/10-12 reps)
- Intensity – 40-85% Max HR Reserve(MHR-RHR)X 40-85% +RHR







23

CAD



UNIVERSITY OF
LIMERICK
DUCEBURGH LIMERICK



- Special considerations:
- Antihypertensive medication can influence exercise – Beta blockers- decrease exercise capacity not allowing HR rise beyond a certain point – Use RPE for measuring intensity.
- Other medications – May lead to sudden drop in BP while exercising or afterwards.

24

CAD



- Ensure good warm up and cool down procedures.
- Avoid Valsalva manoeuvre during resistance training.
- **NOTE: Check medication and its effect on the body during exercise and also doctor's clearance!**

25

Dementia



- Dementia- Affects the brain's memory capacity and functionality caused by Alzheimer's disease.
- Symptoms- Difficulty remembering, problems in conversation, difficulty judging distance, forgetting where you are or what date it is.

26


Dementia

- Benefits of exercise: Braintraining
- In order to continue the process of developing new cells in the brain(neurogenesis) brain exercise is recommended.
- Encourage brain activity every day-
- Reading, writing, doing crossword puzzles, etc.
- Playing cards, bingo or board games.





27

Dementia




- Engaging in activity that requires thought, such as Tai Chi, yoga or dancing.
- Employing hand-brain coordination, such as using a computer mouse or playing video games.
- Working the hands to build something, even with clay or putty.
- Stimulating the brain by traveling.
- Breaking up an accustomed daily routine to try doing different things.




28

Dementia




- According to the Alzheimer's Research & Prevention Foundation, [regular physical exercise](#) can reduce your risk of developing Alzheimer's disease by **up to 50 percent**. What's more, exercise can also slow further deterioration in those who have already started to develop cognitive problems. Exercise protects against Alzheimer's and other types of dementia by stimulating the brain's ability to maintain old connections as well as make new ones.




29

Dementia





- Exercise Guidelines:
- 150mins of moderate intensity exercise per week (Walking, swimming)
- Moderate levels of weight and resistance training
- Include balance and coordination exercises (Yoga, Tai Chi, exercises using balance balls)



30

Dementia



- Avoid:
- The use of dumbbells or barbells which can be dropped
- High intensity exercise where a person is "gaspig" for breath
- Dehydration – ensure adequate hydration levels
- Any exercise that causes dizziness, lightheaded sensation or faint.



31

Coming up in Part 2

- Other common medical conditions and a Quiz to test your knowledge.....



32