Older & Specific Populations 2

Specific Populations
Learning Topics

- Identify client fitness requirements
- Develop specific program plans
- Conduct specific exercise sessions
- Evaluate specific programs
A business or organisation, that is a provider of group fitness training, has a responsibility and a legal obligation to provide a safe environment for instructors and participants:

- WORK HEALTH AND SAFETY ACT 2011 - SECT 17
  Management of risks
- WORK HEALTH AND SAFETY ACT 2011 - SECT 19
  Primary duty of care

To uphold their responsibilities, an organisation will have policies and procedures in place to ensure the safety for everyone involved.

This will include risk management polices that will outline the measures in place to remove risk such as:

- Qualifications required to instruct group fitness sessions:
  - Certificate III in Fitness
  - Hold current First Aid and CPR

- Roles and responsibilities of staff:
  - Conduct risk assessment and implement control measures if need
  - Conduct pre screening of participants before sessions
  - Safe instruction and monitoring of exercise
  - Special considerations for Specific Populations, if necessary
Pre-Exercise Screening

Pre-Exercise Health Questionnaire (Part 1)

1. Has your doctor ever told you that you have a heart condition or have you ever suffered a stroke?
   - YES
   - NO

2. Do you ever experience unexplained pain in your chest or during physical activity/exercise?
   - YES
   - NO

3. Do you have pain or have spells of dizziness during physical activity/exercise that causes you to lose balance?
   - YES
   - NO

4. Have you had an asthma attack requiring immediate medical attention at any time over the last 12 months?
   - YES
   - NO

5. If you have diabetes (Type 1 or Type 2), have you had trouble controlling your blood glucose in the last 3 months?
   - YES
   - NO

6. Do you have any degenerative muscle, bone or joint problems that you have been told could be made worse by participating in physical activity/exercise?
   - YES
   - NO

7. Do you have any other medical condition(s) that may make it dangerous for you to participate in physical activity/exercise?
   - YES
   - NO

Exercise Intensity Guidelines

Use as a guide for questions on the following page (24) and for client exercise recommendations.

<table>
<thead>
<tr>
<th>Intensity Level</th>
<th>Frequency</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedentary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigorous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RISK FACTOR

1. Are you at least 65 years of age?
   - YES
   - NO

2. Do you smoke cigarettes on a daily or weekly basis?
   - NO
   - YES

3. Do you have a family history of heart disease (e.g., stroke, heart attack)?
   - YES
   - NO

4. Are you overweight or obese?
   - YES
   - NO

5. Have you been told you have high blood pressure?
   - YES
   - NO

6. Have you ever been told you have high cholesterol?
   - YES
   - NO

7. Have you ever been told you have high blood sugar?
   - YES
   - NO

8. Do you have a risk factor for cardiovascular disease?
   - YES
   - NO

TOTAL RISK FACTORS

8 RISK FACTORS — MODERATE FOR CLIENTS

9 RISK FACTORS — HIGH RISK FOR CLIENTS

Refer to the exercise intensity guidelines table bottom of Pre-Exercise Questionnaire (Part 1)
The risk-stratification process is no different for Specific Populations as it is to the supposedly average client.

However, the likelihood of clients in Specific Populations having exercise or activity restrictions can often be much higher.
Risk Stratification

Low-Risk Clients:
- Answers “No” to ALL questions in Stage 1, and has a +1 (or lower) Risk Factor result from Stage 2 of the pre-exercise screening forms

Referral:
- Not required for low or moderate based on pre-exercise screening information

Exercise Guidelines:
- No restrictions for low to moderate exercises, on the condition of being safe and maintaining good form and technique
**Risk Stratification**

**Moderate-Risk Clients:**
- Answers “No” to ALL questions in Stage 1, is a male over 45 or female over 55 years of age, or has a +2 (or higher) Risk Factor result from Stage 2 of the pre-exercise screening forms

**Referral:**
- Required when client is to be performing any activity or exercise which is above 70-75% of maximal effort (1RM or MHR)

**Exercise Guidelines:**
- Avoid high-intensity exercise, unless a qualified AHP has positively responded to a referral
## Exercise Intensity Guidelines

*Use as a guide for questions on the following page (Q4) and for client exercise recommendations*

<table>
<thead>
<tr>
<th>Category</th>
<th>Intensity Range (HRmax)</th>
<th>Description</th>
<th>RPE#</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEDENTARY</td>
<td>&lt; 40% HRmax</td>
<td>Very, very light</td>
<td>&lt; 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Activities that usually involve sitting or lying and that have little additional movement and a low energy requirement</em></td>
<td></td>
</tr>
<tr>
<td>LIGHT</td>
<td>40 to &lt;55% HRmax</td>
<td>Very light to light</td>
<td>1-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>An aerobic activity that does not cause a noticeable change in breathing rate</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>An intensity that can be sustained for at least 60 minutes</em></td>
<td></td>
</tr>
<tr>
<td>MODERATE</td>
<td>55 to &lt;70% HRmax</td>
<td>Moderate to somewhat hard</td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>An aerobic activity that is able to be conducted whilst maintaining a conversation uninterrupted</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>An intensity that may last between 30 and 60 minutes</em></td>
<td></td>
</tr>
<tr>
<td>VIGOROUS</td>
<td>70 to &lt;90% HRmax</td>
<td>Hard</td>
<td>5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>An aerobic activity in which a conversation generally cannot be maintained uninterrupted</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>An intensity that may last up to about 30 minutes</em></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>≥ 90% HRmax</td>
<td>Very hard</td>
<td>≥ 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>An intensity that generally cannot be sustained for longer than about 10 minutes</em></td>
<td></td>
</tr>
</tbody>
</table>
Higher-Risk Clients:
- Answers “Yes” to ANY of the questions in Stage 1 of the pre-exercise screening forms (all further Stages are now irrelevant)

Referral:
- MUST be sent to an AHP for further pre-screening

Exercise Guidelines:
- Exercises are to be only as prescribed by the AHP
Contraindications to Exercise

Specific Populations will have individualised reasons as to why they either should or shouldn’t participate in certain forms of exercise.

The role of the trainer is to engage with Specific Populations to encourage and motivate these clients to participate in appropriate physical activity regardless of their condition.

As a result, many standard exercises can be labeled as contraindicated if it is potentially unsafe for specific clients.
Contraindications to Exercise

Whilst trainers are not expected to know the detailed physiology of Specific Populations, being able to have an appreciation for the accommodations which need to be made is definitely important:

- Children, older adults, disability clients, Culturally And Linguistically Diverse (CALD) groups, etc.

All of these groups will have reasons as to why their approach to training with them will be slightly different. The role of the trainer is to know what is appropriate for each, and when to cease training if required.
Cessation of Exercise

Situations where a session or program will need to be stopped can include:

- Chest pain at rest or during activity
- Severe breathlessness/feeling faint/dizziness/loss of balance
- Unusual fatigue or shortness of breath
- Asthma aggravation/attack
- Significant muscle, bone or joint pain (beyond what is normally expected during exercise)
- A situation whereby the fitness professional makes a judgement that continuing the session is beyond their professional capabilities and scope of practice
- Potentially compromise client health and safety
Health risks during most types of exercise for Specific Populations is always going to be higher than that of the average “healthy” population groups.

However, the benefits of appropriately prescribed exercises can often alleviate, and in some cases reverse, the effects of their specificity.
Anyone who participates in regular physical activity will develop a tolerance to the level of exercise they are performing.

The more someone performs physical activity, the higher level of tolerance will be developed.

When training people in particular Specific Population groups, exercise tolerance can quite often be a much longer process than usual, e.g. cardiovascular training for people with Asthma.
Allied Health Professionals

The following are examples of other Allied Health Professionals within the exercise industry who would be able to assist trainers with Specific Population concerns or situations:

- Accredited Exercise Physiologist (AEP)
- Accredited Practising Dietician (APD)
- Chiropractor
- Continence nurse advisor
- General Practitioner (GP)
- Occupational Therapist (OT)
- Osteopath
- Physiotherapist
- Podiatrist
- Psychologist
- Remedial massage therapist
- Sports doctor
- Sports physician
Specific Population groups will not always necessarily have any anatomical or physiological considerations that will hinder their exercise ability, and therefore should be screened, trained and treated as anyone not in a Specific Population Group.

However, certain groups will have their own specific requirements that need to be taken into consideration.
Children:

- Not yet fully developed physically
- Can perform similar movements to adults, but without additional weight, i.e. body weight only, unless control and stability is shown otherwise
- Avoid using adult-sized exercise machines

Women and Older Adults:

- Should train the same as other groups
- Training goals are often different, but training principles are the same
- Stages of menstrual cycle or growth phases, such as pregnancy, can alter or effect training benefits
Clients with a Disability:
- Exercise Professionals cannot prescribe programs for clients with temporary disabilities, i.e. injuries.
- They can implement programs which have been written specifically for the rehabilitation process by another qualified Allied Health Professional.
- Clients who have managed and stable disabilities can still be trained by Fitness Professionals, with care being taken towards their specific situation.

Culturally and Linguistically Diverse (CALD) Groups:
- No reason to be trained any differently from any other group, other than any specific cultural considerations.
- Conversing and understanding of instruction will need to be considered though.
When training someone that falls into a Specific Population group, appropriate management measures need to be designed where signs and symptoms of intolerance or an unstable condition can be easily recognised.

Exercise Professionals need to know when to do any of the following:
- Cease or modify exercise
- Refer to a medical or allied health professional
- Call an ambulance and convey relevant information, if required
People are more likely to stick with an exercise program if it is fun and enjoyable, convenient and cost-effective or considered to be of good value.

Start out with brief workouts that are within a person’s abilities.

Try a variety of exercises and new activities.
Exercise Adherence Strategies

- Use diversions such as listening to music, watching television, or reading during exercise

- Utilise social support:
  - Find an exercise partner
  - Hire a personal trainer
  - Exercise in a group setting

- Monitor progress - Record activity and progress in an exercise diary or log
Topic Completed

- Please ensure you have taken notes (if applicable) and understand the principles outlined in this lecture.

- Look at your Assessment Log Book for learning tasks and activities that relate to this specific Lecture.

- Complete your online exam and Logbook Tasks.

- Time to move on to the next topic!
The following slides are designed to give a brief overview of the assessment tasks for this topic which relate to this lecture content.

The Assessment Logbook should be read in conjunction with these slides as it will contain a more detailed explanation of what is required for these tasks.

It is also an opportunity to ask any questions from the Lecturer (or send through a Communication Log) of any aspect of the Assessment Tasks that you may require assistance with.
Assessment Tasks

Task 1 - Planning Exercises for Older & Special Populations
Task 2 - Deliver Exercises for Older & Special Populations
You work in a health and fitness centre. All members must undertake a pre-participation health screening as part of their initial health assessment.

The results of these measures are used to prescribe an appropriate exercise program for the individual.

You are responsible for conducting the health assessment and are expected to give feedback to the participant during the appointment on the results and also how those results will influence your choices as to which exercises will be prescribed for them.
There are ten (10) Case Studies stored in your Online Resources. Each Case Study contains a Pre-Exercise Health Questionnaire and Goals Consultation.

For each Case Study you are to analyse the information provided and determine the level of risk associated with each client.

Analyse if they require AHP Referral and develop a Beginner Resistance Training Program for each Client (10 in total).

You will plan the Resistance Training Program under the assumption the Referred Clients AHP approves exercise at or below a moderate level.
Assessment Task 1

You must submit the following as evidence for assessment of this task:

- Complete all of the following items of documentation and forms for the ten (10) Case Studies;

- 10 x Typed documents (or single document containing all case studies) listing all indicated information where client has suggested elevated risk and provide confirmation of the client’s requirement for referral to an AHP

- 10 x Resistance Training Programs with exercise considerations for each case study

- Allied Health Referral Form (when required)
Marking Criteria:

- Learner considers and confirms client needs, expectations and preferences using suitable questioning techniques.
- Learner reviews and advises client of outcomes of pre-exercise health screening procedures.
- Learner refers client to medical or allied health professionals as required.
- Learner identifies potential barriers to client’s participation.
- Learner selects and uses appropriate baseline functional capacity or fitness assessments, as required.
- Learner recognises and explains benefits of exercise for older populations and the role of exercise in reducing risks associated with ageing.
- Learner receives guidance from medical or allied health professionals for exercise participation, as required.
- Learner develops and documents client profile for re-evaluation purposes.
- Learner determines type of training, training methods and equipment required to achieve client goals.
- Learner incorporates guidance/advice from medical or allied health professionals into the provision of fitness advice/or planning of instruction.
- Learner develops and documents program plans that incorporate key instructional information to target components of fitness, including guidance from medical or allied health professionals if required.
- Learner explains benefits of exercise and anticipated structural and physiological adaptations as they relate to client goals and needs.
- Learner develops customised training sessions that include a variety of exercises and equipment to meet client needs.
- Learner discussed and confirmed client understanding of potential signs and symptoms of intolerance, precautions or contraindications to exercise and recommended precautions.
Assessment Task 2

This task requires you to Instruct an individual of your choosing through the ten (10) Resistance Training Programs Developed in Task 1.

You are required to take them through an instructional session only demonstrating and teaching each exercise and the method of delivery.
Third Party Reports

- You will be assessed via a third party report from a supervising Exercise Professional of your choosing.

- Your supervisor must hold the qualification equivalent and have a minimum of two (2) years experience in the field.

- The Work Placement Logbook in your resources contains a Third Party Report for your supervisor to complete as evidence of your demonstration of the Marking Criteria and Task Instructions.

- Print forms as required.
You must submit the following as evidence for assessment of this task:

Complete all of the following items of documentation and forms for the ten (10) Programs;

- 10 x Third Party Reports by Supervisor
- 10 x Client Feedback & Trainer Responses
  - 1 for each Program
Assessment Task 2

Marking Criteria:

☒ Learner allocated sufficient space, assembled resources and check equipment for safety and maintenance requirements
☒ Learner provided clear exercise instructions and confirm client understanding
☒ Learner demonstrated exercises, techniques and equipment to client
☒ Learner monitor participation and performance to identify signs of exercise intolerance and modify as required
☒ Learner monitor client intensity, techniques, posture and safety, and modify program as required
☒ Learner demonstrated the ability to seek ongoing guidance from, or refer client to, medical or allied health professionals, as appropriate
☒ Learner selected and used communication techniques that encourage and support clients
☒ Learner modified session as required considering basic mechanics, safety and fitness outcomes
☒ Learner responded to clients experiencing difficulties and answer questions as required
☒ Learner completed session documentation and progress notes
☒ Learner monitored and evaluated exercise program at appropriate intervals
☒ Learner provided written and verbal feedback to medical or allied health professionals, as required
☒ Learner requested and responded to feedback from clients
☒ Learner reviewed own performance and identify areas needing improvement
☒ Learner identified aspects needing further emphasis or attention in future sessions
☒ Learner Evaluated program or activities and discuss modifications to program
☒ Learner documented and update records of evaluation and modification of programs