

**SISFFIT002 Recognise and
apply exercise
considerations for specific
populations**

**SISFFIT014 Instruct
exercise to older clients**



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ASSESSMENT FOR SISFFIT002 & SISFFIT014

Student name	
Date of assessment submission	Click here to enter a date.
Trainer/Assessor's name	
Date of assessment marking	Click here to enter a date.
Outcome for units	☐ Competent ☐ Not Yet Competent

TASK INSTRUCTIONS

- The assessment for these units of competency consists of the following:
 - **Quiz:** You are required to complete a series of multiple choice questions to demonstrate your knowledge and skills.
 - **Short answer activities:** You are required to provide short written responses to a series of activities to demonstrate your knowledge and skills.
 - **Case studies:** You are required to provide written responses to a series of case study scenarios to demonstrate your knowledge and skills.
 - **Practical tasks:** You will be required to put your knowledge and skills into practice, through observed tasks and work experience.
- At times, you will be provided with a specific context to which you must respond, otherwise it is anticipated that you will use a scenario of your choosing to provide context to the task.

QUIZ

QUESTIONS	CORRECT
1. A contraindication can be best described as: ☐ A movement or exercise that will improve the mobility of a pre-existing injury or illness ☐ A movement or exercise that will decrease the performance of a client ☒ A condition that makes a particular movement or exercise unadvisable ☐ A condition that makes a particular movement or exercise advisable	☐
2. Regular exercise has a _____ effect against hypertension. ☐ Protective ☒ Preventative ☐ Positive ☐ Popular	☐
3. Which of the following are signs of symptoms of hypertension during exercise? Select all that apply. ☒ Chest discomfort ☒ Shortness of breath ☒ Poor glycaemic control	☐
4. Which of the following are affected by pulmonary diseases? ☐ Brain ☐ Liver ☒ Lungs ☐ Kidneys	☐
5. Hypoglycaemia refers to a _____ blood glucose level. ☒ Low ☐ Medium ☐ High	☐
6. Type 2 Diabetes is usually known as a: ☐ Gestational disease ☒ Lifestyle disease ☐ Autoimmune disease ☐ Family	☐

7. Which type of fat is very closely related to chronic disease? ☐ Tricep ☐ Supra-illiac ☐ Subscapular ☒ Intra-abdominal	☐
8. Which of the following are signs and symptoms of pre-eclampsia? Select all that apply. ☒ Nausea ☒ Headaches ☒ Abdominal pain	☐
9. Where is the thyroid located? ☐ Groin ☒ Neck ☐ Wrist ☐ Hip	☐
10. Osgood-schlatters is a condition affecting children in which area? ☒ Knees ☐ Achilles ☐ Elbows ☐ Shoulder	☐

Outcome for Quiz	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

SHORT ANSWER ACTIVITIES

ACTIVITY 1

The *Essential Guide to Fitness* states that children are not 'little adults'. What does this statement mean for you, as a trainer, with regards to the screening and planning process?

Screen and planning

Assessor's discretion

Outcome for Activity 1

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

ACTIVITY 2

Describe the benefits of regular activity, listing specific instances where these benefits may be evident.

Benefits of regular activity

Answers may include:

- Reduce your risk of a heart attack
- Weight management
- Lower blood cholesterol level
- Reduces the risk of type 2 diabetes and some cancers
- Lowers blood pressure
- Stronger bones, muscles and joints and
- More energy, a better mood, feel more relaxed and sleep better.
- Evident in:
 - Older adults, reducing the risk of osteoporosis
 - Children and adolescents helping with muscle development
 - Adults with health conditions assisting with weight management
 - Sufferers of mental illnesses- regular activity may change levels of chemicals in your brain, such as serotonin, endorphins and stress hormones.

Outcome for Activity 2

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

ACTIVITY 3

Discuss the implications of planning and prescribing exercise to those with each of the following conditions:

- a) Anxiety
- b) Muscular dystrophy
- c) Rheumatoid arthritis
- d) Obesity

Highlight any implications that may exist for medications commonly prescribed for each condition.

Anxiety

- Client must have clearance from their GP before commencing exercise.
- Client must feel comfortable with you as their Trainer and the movements you are prescribing.
- Be sure to explain clearly and communicate the program to your client.
- Plan a program that starts of light and not too challenging to allow your client to become comfortable with the movements.
- Plan programs with similar structure for your client to associate routine with your sessions.
- Be aware that some medications may affect response and reflexes and can cause drowsiness, fatigue and dizziness.

Muscular dystrophy

- Client must have clearance from their GP before commencing exercise.
- Know the type of MD your client has and how it will affect their strength and ROM to adjust your program accordingly.
- Flexibility should be included to prevent contractures and reduce risk of injury.
- Cardiac conduction disorder is common, have clearance before commencing aerobic exercise.
- Client should avoid exercising alone and strenuous activity in hot conditions.
- For strength training, start low (less than 50% of 1 RM) and gradually increase over the next months.
- Allow at least 48 hours of rest between training to allow muscle groups to recover.
- Tell your clients to listen to their bodies and do not continue with any movements that they are not comfortable with.
- Consider safety, exercise intensity, mode of exercise, and psychological and environmental aspects to ensure that the program is safe and effective.

Rheumatoid arthritis

- Client must have clearance from their GP before commencing exercise.
- Rheumatoid arthritis is a chronic condition which causes inflammation in the synovial tissue of the joint and pain during movement. Avoid strenuous exercise when joints are inflamed and take two- three days of rest.
- Prescribe low impact exercises such as stretching to help maintain flexibility, walking and swimming, using tension bands, gym equipment, light weights or yoga.
- High-impact exercises like jogging should be avoided due to the increased stress it puts on joint
- Medication such as Dmards has side effects including nausea and medication Nsaids can cause headaches and dizziness.

Obesity

- Client must have clearance from their GP before commencing exercise.
- Low-intensity aerobic activity with progressively increasing duration.
- High impact movements such as jogging can cause stress on the knees and joints and is generally not recommended for the obese because of risk for injury.
- Prescribe lower impact aerobics activities such as walking, swimming and cycling.

- Be mindful of heat exhaustion.
- Monitor your client and stop immediately if stop if you experience chest pains, shortness of breath, palpitations, nausea, pain in the neck or jaw, or major muscle or joint pain.
- Clients with obesity taking high blood pressure and high cholesterol medication could suffer from dizziness or light headedness, feeling tired, weak, drowsy, or a lack of energy, headaches, nausea or vomiting.

Outcome for Activity 3	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

ACTIVITY 4

Consider the implications of pregnancy on exercise.

- Describe the benefits associated with exercise during pregnancy.
- Describe the risks associated with exercise during pregnancy.
- What warning signs should a trainer look out for with a pregnant client during exercise?

Benefits

- Improving your physical and mental wellbeing.
- Maintaining a healthy weight during pregnancy helps in returning to your pre-baby weight more quickly.
- Lower risk of gestational diabetes
- Postnatal depression.

Risks

- Women who are pregnant and participating in activities that require a high degree of balance or rapid changes in direction should consult with their doctor first.
- The risks are relatively low to pregnant woman who adhere the recommended guidelines of at least 150 minutes of low- moderate physical activity per week.
- However, as pregnancy progresses, the body goes through significant changes, in the joints, changes in centre of gravity and an increased resting heart rate. Therefore, modifications to programs may need to be considered.

Warning signs

- High heart rate
- Dizziness
- Headache
- Uterine Contractions
- Vaginal bleeding
- Amniotic fluid leakage
- Nausea
- Insufficient weight gain
- Shortness of breath
- Faintness
- Back or pelvic pain
- Decreased foetal movements
- Sudden swelling of ankles, hands and face

Outcome for Activity 4

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

ACTIVITY 5

Consider the role of physical activity for older adults:

- a) List some physiological benefits of physical activity for older adults, considering:
 - Muscles
 - Joints
 - Bones
 - Fat levels
 - Chronic disease
 - Risk of falls
- b) Identify some programs in place in your local area that provide access to exercise for older adults

Physiological benefits

Muscles - muscle mass can increase in the older adult when regularly exercising. Some studies suggest that the average body loses around 3kg of lean muscle every decade from middle age. The amount and size of muscle fibres decreases with age. There is evidence to suggest that these changes are related to a sedentary lifestyle, rather than age.

Joints - the joints of the body require regular movement to remain mobile and healthy. Specifically older adults with arthritis can benefit from aerobic and strengthening exercise programs to assist with this mobility.

Bones - exercise may help to reduce the risk of bone loss and osteoporosis. Weight-bearing exercise, in particular, helps to keep bones healthy and strong. Bone density begins to decline after the age of 40, but this loss accelerates around the age of 50 years. As a result of this bone loss, older people are more prone to bone fractures.

Fat levels - Regular exercise burns kilojoules, increases muscle mass and speeds the metabolism. Carrying too much body fat has been associated with a range of diseases including cardiovascular disease and diabetes. Together, these physiological changes help an older person maintain an appropriate weight for their height and build.

Chronic disease - Helps in the prevention of cardiovascular disease, cancer and type-2 diabetes

Risk of falls - improves/maintains mobility, flexibility and functional ability. Improves/maintains muscle strength which assists in the maintenance of balance and helping to prevent falls.

Local programs

Assessor's discretion

Outcome for Activity 5	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

ACTIVITY 6

Calculate the approximate heart rates and BMIs for the individuals listed in the tables below.

Age	RHR	MHR	70% MHR
11	84	209	147
60	60	160	112
80	72	140	84

Details	BMI
Leah: - Height 152cm - Weight 52kg	22.5
Ash: - Height 188cm - Weight 82kg	23.2
Jennifer: - Height 170cm - Weight 99kg	34.25
Harvey: - Height 209cm - Weight 129kg	29.53

Outcome for Activity 6	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

CASE STUDIES

CASE STUDY 1

Jalen (14) is a talented junior footballer who has been training with you for around six (6) months. He has recently had a growth spurt, but as a consequence has started to complain of tightness and pain just below his kneecap. It is not painful enough for him to stop training completely, but Jalen wants to be prepared to perform well at national titles in eight (8) weeks' time.

Respond to the following points:

- Write a modified training program that allows Jalen to keep building strength and hypertrophy, while protecting his knee from undue stress. Use the *Fit to Learn Program Card* template.
 - Refer to the screening you conducted with Jalen prior to him beginning his training with you six (6) months ago (see below).
- Identify an Allied Health Professional (AHP) you would send Jalen to for further help.
- Identify who would be involved in the follow up screening.
- Explain what you would do with the documentation upon its completion.

CLIENT PROFILE QUESTIONNAIRE

CLIENT NAME: Jalen

Personal Profile Information:

Gender:	Male	Date of Birth:	15/01/2003
Height:	165cm	Weight:	50.8 kg
BMI:	18.65	Maximum Heart Rate:	206 BPM

Weekly Exercise Information:

Explain in detail what type of resistance exercises, cardiovascular or sports activities you perform on average during a 7-day period.

Exercise/Activity	Days/week	Duration
Football Training	2	60 mins
Football Game	1	90 mins

Lifestyle / Professional Activity (non-exercise related):

☐ Sedentary
 ☐ Moderately Active
 ☒ Active
 ☐ Very Active

Which best describes you?

☐ Sedentary adult	☐ Athlete restricting
☒ Growing teenage athlete	☐ Adult building muscle
☐ Exercising adult	☒ Competitive athlete

What are your goals?

- | | | |
|---|---|--|
| ☐ Weight Loss | ☐ Improve Eating Habits | ☐ Rehab |
| ☐ Gain Weight | ☐ Improve Strength | ☐ Improve Flexibility |
| ☒ Improve Fitness Level | ☐ Maintain Fitness Level | ☐ Understand how to perform exercises |
| ☐ Improve Cardiovascular Fitness | ☐ Improve Flexibility | ☒ Athletic Progress |

Health & Medical Conditions:

- | | | |
|--|---|---|
| ☐ Heart disease | ☐ Diabetes | ☐ Anemia |
| ☐ Liver disease | ☐ High cholesterol | ☐ Asthma |
| ☐ High blood pressure | ☐ Pregnant | ☐ Recent surgery |
| ☐ Arthritis | ☐ Injuries | ☐ Other |

What time do you normally wake up? 6:30am

What time do you normally go to bed at night? 9:30pm

Do you wake up well rested/ tired? Usually well rested

If you smoke, how many per day? No

If you smoke, how many years have you smoked? N/A

If you drink alcoholic beverages, what and how many per day? N/A

What do you feel is your best accountability gauge for your desired progress: Football **Have you ever been placed on any type of nutritional/training program in the past?** No

If yes, describe: N/A

List specifics injuries you have, have had, surgeries or aches/pains you have: Nil

Training Likes/ Dislikes: Burpees

Comments: Starting junior football and would like to increase fitness and athleticism.

CLIENT EVALUATION

Measurements:

Right Arm:	27.6	Left Arm:	26.6
Right Leg:	52.2	Left Leg:	50.2
Waist:	65.3	Hips:	66.1

Fitness Appraisal:

Exercise	Time	Comments
Max Push Ups in 60 seconds	24	On toes
Max Sit Ups in 60 seconds	27	
Max Squats in 60 seconds	31	
Max Plank	43 seconds	
Sit and Reach Test	+ 3cm	
Core Strength Test	2	

I, Jalen AGREE TO ALLOW MY TRAINER TO DESIGN A PROGRAM FOR ME TO ENHANCE MY HEALTH & FITNESS GOALS. I WILL FOLLOW THAT PROGRAM TO THE BEST OF MY ABILITY AND I WILL NOT HOLD MY TRAINER OR ANY ONE RELATED PERSONS OR PARTIES PERSONALLY LIABLE FOR ANY PROBLEMS, ILLNESSES OR INJURIES THAT MIGHT OCCUR DUE TO A SUDDEN CHANGE IN MY EXERCISE OR EATING HABITS. THIS PROGRAM DOES NOT REPLACE THE EXPERT ADVICE OR MEDICAL TREATMENT OF MY OWN PRIVATE DOCTOR. I HAVE GIVEN MY TRAINER ALL NECESSARY INFORMATION ABOUT MYSELF TO PREVENT ANY POSSIBLE COMPLICATIONS.

Signature:  Date:

FIT TO LEARN PROGRAM CARD					
Name					
Trainer					
Date					
Goals/Aims					
Contraindications					
Session length					
Exercise	Sets	EPC	Reps	%1RM/Weight	Rest
<i>Squat</i>	3	202	8-10	70%	60 sec
Cardiovascular training method	Time/Distance			Level/Resistance/Intensity	
Cool down					
Stretches					

Program modifications (if any)	
Evaluation (Comments / Reflections / Feedback)	

	Response
b)	Assessor's discretion
c)	Assessor's discretion
d)	Assessor's discretion

Outcome for Case Study 1	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

CASE STUDY 2

Tamsyn (28) is a pregnant prospective client who contacted you through word of mouth promotion. She is concerned about excess weight gain during the course of her pregnancy, and is also starting to become concerned about discomfort in her lower back.

Tamsyn is open to both resistance and cardiovascular training and will be able to attend the gym two (2) times a week for up to an hour.

Respond to the following points:

- a) Identify an Allied Health Professional (AHP) you might refer Tamsyn to.
- b) Write a modified training program for Tamsyn. Use the *Fit to Learn Program Card* template.

	Response
a)	Assessor's discretion

FIT TO LEARN PROGRAM CARD					
Name					
Trainer					
Date					
Goals/Aims					
Contraindications					
Session length					
Exercise	Sets	EPC	Reps	%1RM/Weight	Rest
<i>Squat</i>	3	202	8-10	70%	60 sec
Cardiovascular training method	Time/Distance			Level/Resistance/Intensity	
Cool down					
Stretches					

Program modifications (if any)	
Evaluation (Comments / Reflections / Feedback)	

Outcome for Case Study 2	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

CASE STUDY 3

Greg (70) is interested in training with you. He is currently taking medication for high blood pressure, and is concerned about the strain this may end up putting on his heart.

Greg is able to attend the gym three (3) times per week for no more than 45 minutes. He had hip surgery 5 years ago, but despite not suffering any obvious ill effects Greg is still a little wary of high impact exercises and would like to improve his balance.

Respond to the following points:

- a) Identify an Allied Health Professional (AHP) you might refer Greg to.
- b) Write a modified training program for Greg. Use the *Fit to Learn Program Card* template.

	Response
a)	Assessor's discretion

FIT TO LEARN PROGRAM CARD					
Name					
Trainer					
Date					
Goals/Aims					
Contraindications					
Session length					
Exercise	Sets	EPC	Reps	%1RM/Weight	Rest
<i>Squat</i>	3	202	8-10	70%	60 sec
Cardiovascular training method	Time/Distance			Level/Resistance/Intensity	
Cool down					
Stretches					

Program modifications (if any)	
Evaluation (Comments / Reflections / Feedback)	

Outcome for Case Study 3	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

PRACTICAL TASKS

You are required to have a suitable observer verify your ability to complete the following tasks. These tasks may be simulated or real.

TASKS	VERIFIED
A. You are to address ten (10) different clients, consisting of two (2) from each of the following five (5) specific population groups. For each population group, one client requires guidance/instruction by a medical or Allied Health Professional [AHP], the other client does not require such guidance/assistance: • Children and adolescents • Women • Older adults • Clients with a disability • Culturally and linguistically diverse [CALD] groups You are to complete the following tasks: • Use industry endorsed pre-exercise screening tools and risk stratification processes to identify each client's risk level and functional capacity • For the five (5) clients requiring additional guidance/instruction, prepare referral letters to a relevant AHP or medical professional with supporting pre-exercise health screening documentation • Use the <i>Fit to Learn Program Card</i> template to plan, document, implement and evaluate suitable exercise programs for all clients • Conduct sessions that incorporate: ○ Appropriate selection and monitoring of a range of gym-based cardiovascular and resistance equipment, according to manufacturer and industry guidelines ○ Demonstration, instruction and explanation of exercises – including their benefits for the client ○ Injury prevention strategies specific to client needs and program (considering awareness of intolerance/contraindications to exercise) ○ Suitable order and sequence of activities ○ Session components that target client needs and goals ○ Suitable duration, intensity, volume ○ Acknowledgement and planning for common considerations, such as overtraining and fatigue, deconditioned clients, poor technique, falls risks and incontinence ○ A high level of personal presentation ○ Ways to ensure hygiene of clients and self – through towels and cleaning products ○ Ongoing clear/constructive feedback without discrimination ○ Use of evidence based exercise adherence strategies specific to the population groups • Modify programs for clients, addressing at least three (3) of the following: ○ Technical requirements (including intensity, posture, safety) ○ Changing needs due to fitness adaptations ○ Changing needs due to gym access ○ Changing goals and motivation levels ○ Client needs, objectives, likes and dislikes ○ Technical difficulty adjustments of exercises ○ Medical professional or AHP feedback	☐

• Conduct periodic ongoing evaluation of outcomes from fitness programs in accordance with the established program goals and industry best practice • Complete and update client records, noting privacy requirements: ○ Pre-exercise screening documents ○ Prescribed programs (including modifications) ○ Client consent ○ Copies of any communications	
B. Over at least five (5) hours of work experience in a fitness industry workplace, you are to deliver client contact sessions for ten (10) older clients – with at least two (2) requiring guidance/instruction by a medical or Allied Health Professional [AHP]. Across the client contact sessions, complete the following tasks: • Use industry endorsed pre-exercise screening tools and risk stratification processes to identify each client's risk level and functional capacity • For at least two (2) clients, prepare referral letters to a relevant AHP or medical professional with supporting pre-exercise health screening documentation • Plan, document, implement and evaluate suitable exercise programs for: ○ Three (3) clients that do not require guidance or instruction provided by AHP or medical professionals ○ Two (2) clients in response to guidance or instruction provided by AHP or medical professionals • Conduct sessions that incorporate: ○ Appropriate selection and monitoring of a range of appropriate equipment, according to manufacturer and industry guidelines ○ Demonstration, instruction and explanation of exercises – including their benefits for the client ○ Injury prevention strategies specific to client needs and to minimise the risk of falls (considering awareness of intolerance/contraindications to exercise and how to minimise the risk of falls) ○ Acknowledgement and planning for common considerations, such as overtraining and fatigue, deconditioned clients, poor technique, falls risks and incontinence ○ Suitable order and sequence of activities ○ Session components that target client needs and goals ○ Suitable duration, intensity, volume ○ Ongoing clear/constructive feedback without discrimination ○ Use of evidence based exercise adherence strategies ○ Variations and structure suitable to older clients' needs ○ Provision of hydration and rest opportunities as required ○ A high level of personal presentation ○ Ways to ensure hygiene of clients and self – through towels and cleaning products ○ Explanation of the role of exercise and incidental physical activity in prevention of chronic diseases and functional decline that may or may not be associated with ageing and reducing the risk of falls • Modify programs for clients, addressing at least three of the following: ○ Technical requirements (including intensity, posture, safety) ○ Changing needs due to fitness adaptations	☐

○ Changing needs due to gym access ○ Changing goals and motivation levels ○ Client needs, objectives, likes and dislikes ○ Technical difficulty adjustments of exercises ○ Medical professional or AHP feedback • Conduct periodic ongoing evaluation of outcomes from fitness programs in accordance with the established program goals and industry best practice • Complete and update client records, noting privacy requirements: ○ Pre-exercise screening documents ○ Prescribed programs (including modifications) ○ Client consent ○ Copies of any communications	
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Outcome for Practical Tasks	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	