

# Learning objectives



## **Module 1: Introduction**

- Recognise why it is important to follow this course
- Recognise that diabetes is a significant health problem in Australia
- Recognise the link between diabetes and physical activity (as modifiable risk factor and way to manage diabetes).

## **Module 2: Exercise guidelines**

- Identify and describe the physiological effects and benefits that exercise has on chronic disease management, control and prevention.
- Describe the Australian Guidelines for Physical Activity.
- Describe the physical activity recommendations relating to aerobic activity, resistance training and weight loss.

## **Module 3: Diabetes risks and prevention**

- Name the (modifiable and non-modifiable) risk factors for developing type 2 diabetes
- Recall how to identify people at risk of type 2 diabetes
- Describe the AUSDRISK tool and how to use it
- Describe how people (at risk) can delay the onset of type 2 diabetes
- Understand the key components of successful lifestyle modification programs in preventing diabetes

## **Module 4: Understanding diabetes**

### *Chapter 1: Overview of diabetes*

- Describe what diabetes is
- Describe normal glucose metabolism
- Name the key signs and symptoms of diabetes

### *Chapter 2: Type 2 diabetes*

- Name the three main types of diabetes
- Describe the key features of type 2 diabetes, including the prevalence, cause, presentation and management

### *Chapter 3: Other types of diabetes*

- Describe the key features of type 1 diabetes, including the prevalence, cause, presentation and management
- Describe the key features of gestational diabetes

## **Module 5: Living with diabetes**

### *Chapter 1 –Diabetes management*

- Describe in which ways diabetes can be managed.
- Recall the impact of physical activity in preventing or delaying type 2 diabetes.

- Describe the impact of physical activity in preventing or delaying the risk of diabetes-related complications.
- Describe the link between physical activity and low blood glucose levels.

#### *Chapter 2 – Monitoring*

- Describe the benefits of blood glucose monitoring for people living with diabetes.
- Recall what *target* blood glucose levels are, how they are set and that they may differ for individuals.
- Recall the general target blood glucose levels for people with type 1 and type 2 diabetes.
- Recall what is considered a low blood glucose level ('hypoglycaemia' or 'hypo') and what is considered a high blood glucose level ('hyperglycaemia').
- Describe the key factors affecting blood glucose levels.
- Describe the most useful times to check blood glucose levels.
- Recall what the HbA1c test is and what the general target range is.

#### *Chapter 3 – Healthy eating*

- Describe the benefits of healthy eating for people living with diabetes.
- Recognise that modest weight loss in people who are overweight can significantly improve diabetes by reducing insulin resistance.
- Describe the recommendations by the Australian Guide to Healthy Eating.
- Describe the plate model for planning a healthy, balanced meal with appropriate portion sizes, including the right amount of carbohydrates.
- Describe what a carbohydrate is, how it impacts BGLs and its role in healthy eating.
- Describe what the glycemic index (GI) is and what the difference between low- and high GI foods are.
- Describe the impact alcohol has on diabetes management and weight management, and what the NHMRC low risk drinking guidelines are.

#### *Chapter 4 - Medications*

- Recognise why a person would need medication to manage their diabetes.
- Describe the difference between insulin and other diabetes medications.

#### *Chapter 5 – Mental health*

- Recognise why a person with or at risk of diabetes may be at risk of mental health problems such as diabetes distress (or burnout), anxiety or depression.
- Describe the referral options to provide support.

#### *Chapter 6 – Screening for complications*

- Describe in which ways complications can be prevented:
  - Trying to keep blood glucose levels within target range
  - Annual Cycle of Care checks
- Describe what the Annual Cycle of Care is and how it can reduce the risk of chronic complications.

- Describe the tests and reviews involved in the Annual Cycle of care, including frequency of screening and target ranges.
- Describe the importance of daily foot care, including podiatry checks
- Recognise your role in encouraging your client to notify their doctor if you notice any concerning changes.

### **Module 6: Diabetes and exercise**

- Understand the benefits of aerobic, resistance and other types of physical activity for the person with diabetes
- Explain the relationship between blood glucose levels & different types of physical activity, specifically aerobic, resistance and High intensity interval training (HIIT)
- List common variables affecting blood glucose response to exercise
- Identify safe blood glucose ranges for exercise and detail the risks of commencing exercise outside of these ranges.
- Summarise the exercise-related safety precautions for people with diabetes.
- Outline the extra precautions that would need to be considered during a pre-screening assessment for the person with diabetes.
- Recognise when a client with diabetes should avoid exercise, cease exercise and be referred to an Accredited Exercise Physiologist.

### **Module 7: Acute complications and exercise**

- Describe hypoglycaemia, who is at risk and the signs and symptoms.
- Describe strategies to prevent hypoglycaemia before/during/after exercise.
- Describe the action plan for mild – moderate hypoglycaemia and for severe hypoglycaemia.
- Describe hyperglycaemia, who is at risk and the signs and symptoms.
- Describe the strategies to manage hyperglycaemia before and during exercise.
- Identify hyperglycaemic emergencies.

### **Module 8: Hypertension, dyslipidaemia and exercise**

#### *Chapter 1: Hypertension and exercise*

- Describe how hypertension can contribute to the development of diabetes-related complications
- Describe the benefits of exercise for people living with hypertension
- Describe the exercise guidelines, considerations and precautions for a person with mild, moderate or severe hypertension.

#### *Chapter 2: Dyslipidaemia and exercise*

- Describe how dyslipidaemia can contribute to the development of diabetes related complications
- Describe the benefits of exercise for people living with dyslipidaemia.
- Describe the exercise guidelines, considerations and precautions for a person with dyslipidaemia.

## **Module 9: Microvascular complications and exercise**

### *Chapter 1 – Chronic microvascular complications for diabetes*

- Describe the chronic microvascular complications of diabetes

### *Chapter 2 – Retinopathy*

- Describe the exercise guidelines, considerations and precautions for a person with retinopathy.

### *Chapter 3 – Nephropathy*

- Describe the exercise guidelines, considerations and precautions for a person with nephropathy.

### *Chapter 4 – Peripheral neuropathy*

- Describe the exercise guidelines, considerations and precautions for a person with peripheral neuropathy.

### *Chapter 5 – Autonomic neuropathy*

- Describe the exercise guidelines, considerations and precautions for a person with autonomic neuropathy.

## **Module 10: Macrovascular complications and exercise**

- Describe the chronic macrovascular complications of diabetes.
- Describe the benefits of exercise when living with one of these macrovascular complications.

### *Chapter 1 – Cardiovascular disease*

- Describe the exercise guidelines, considerations and precautions for a person with cardiovascular disease.

### *Chapter 2 – Coronary artery disease*

- Describe the exercise guidelines, considerations and precautions for a person with coronary artery disease (CAD).
- Describe the steps to take in emergency for angina and heart attack.

### *Chapter 3 – Stroke*

- Describe the exercise guidelines, considerations and precautions for a person living with or at risk of stroke.
- Describe how to recognise a stroke (using the FAST test) and the steps to take.

### *Chapter 4 – Peripheral vascular disease*

- Describe the exercise guidelines, considerations and precautions for a person with peripheral vascular disease (PVD).

## **Module 11: Musculoskeletal conditions and exercise**

- Describe the musculoskeletal conditions and how some are related to diabetes.

### *Chapter 1 - Arthritis*

- Identify the differences between osteoarthritis and rheumatoid arthritis
- Describe the exercise guidelines and considerations for a person with arthritis

### *Chapter 2 – Hand*

- Describe the exercise guidelines and considerations for a person with limited joint mobility or diabetes cheiroarthropathy
- Describe the exercise guidelines and considerations for a person with Dupuytren's contracture
- Describe the exercise guidelines and considerations for a person with flexor tenosynovitis or trigger finger
- Describe the exercise guidelines and considerations for a person with carpal tunnel syndrome

### *Chapter 3 – Feet*

- Describe the exercise guidelines and considerations for a person with diabetes osteoarthropathy or "Charcot's foot"

### *Chapter 4 – Shoulder*

- Describe the exercise guidelines and considerations for a person with adhesive capsulitis or frozen shoulder

### *Chapter 5 – Spine*

- Describe the exercise guidelines and considerations for a person with diffuse idiopathic skeletal hyperostosis (DISH) or Forestier's disease

## **Module 12: Talking the talk**

- Describe the type of language used to engage and support people living with diabetes
- Describe the types of positive words that can be used to encourage a positive interaction with the person living with diabetes

## **Module 13: Putting it into practice**

- Have a supportive conversation with a person living with or at risk of diabetes (and other complications) and create a safe and effective Exercise Plan with that person.