



THE SOUTH AFRICAN

DIABETES PREVENTION PROGRAM

Intervention Curriculum



CELEBRATING
50
YEARS

TABLE OF CONTENTS

Purpose of the SA-DPP intervention	1
Objectives of the SA-DPP intervention	1
Target population	2
Facilitators	2
What will happen in these group meetings?	2
SESSION 1:	
Diabetes	3
SESSION 2:	
Healthy eating (part 1)	16
SESSION 3:	
Healthy eating (part 2)	26
SESSION 4:	
Physical activity	32
SESSION 5:	
Smoking, alcohol and stress	37
SESSION 6:	
The final check-in: Lifestyle changes and concluding remarks	45

THE SOUTH AFRICAN DIABETES PREVENTION PROGRAM (SA-DPP) INTERVENTION

Purpose of the SA-DPP intervention

The SA-DPP intervention is a group-based, peer support program that is designed to provide information and support for people at high risk of developing type 2 diabetes.

SA-DPP focuses on reducing the risk for developing diabetes by addressing the four main risk factors:



Unhealthy eating habits



Lack of exercise
being physically
inactive



Smoking tobacco



Drinking alcohol

The purpose of the SA-DPP peer support groups is to provide a safe place where people who are at high risk of developing type 2 diabetes can meet regularly to support each other, develop friendships, share experiences, learn from the experiences of others and improve their lifestyle.

Objectives of the SA-DPP intervention

- To prevent the development of type 2 diabetes among participants
- To facilitate weight loss for overweight participants
- To facilitate changes in diet (encourage healthy eating habits)
- To encourage and facilitate changes in physical activity levels and reduce the amount of time being inactive
- To encourage healthy lifestyle practices (stop smoking, reduce stress and if you must drink alcohol, do so sensibly)

Target population

The peer support groups will be made up of participants who are all at high risk of developing type 2 diabetes and who live within a particular area.

Facilitators

The groups will be jointly led by SA-DPP personnel and peer leaders selected from each community and trained in the SA-DPP program.

The **role of SA-DPP personnel** (nurse practitioners and/or dietitians) will be to enable and facilitate the discussion, give assignments and strengthen the peer support role of the groups.

The **role of the peer leaders** will be to support and provide the participants of the support groups with the opportunity to:

- Share their feelings with people who understand what they are going through.
- Provide a safe space to be heard.
- Address any feelings of isolation and loneliness.
- Share knowledge, coping strategies, and information about appropriate support and health services.
- Obtain up-to-date information on nutrition, healthy lifestyle behaviours and type 2 diabetes.

What will happen in these group meetings?

- Participants will be asked to attend six group meetings over a period of eight months.
- Each of the six sessions will be about 60 to 90 minutes long.
- The first five sessions will take place over the first eight weeks (with a two-week interval in-between sessions), and the last session will be at eight months.
- At each group meeting, different aspects of how to reduce the risk of developing type 2 diabetes will be discussed. Topics discussed will include healthier eating habits, increasing physical activity and reducing sedentary time, smoking and alcohol use, and reducing stress.



SESSION 1

DIABETES

What is diabetes?

Diabetes is a disease where there is too much glucose (sugar) in the blood.

The body needs glucose (blood sugar) as its main source of fuel or energy. The body makes glucose from foods containing carbohydrates such as bread, maize meal, breakfast cereals, rice, pasta, potatoes, milk, yoghurt and fruit. The amount of glucose in the blood also increases when we eat sugar and foods that contain sugar, such as sweets, cakes, biscuits, and cold drinks. Like a car needs petrol to start and drive, the body uses glucose for fuel in order to work.

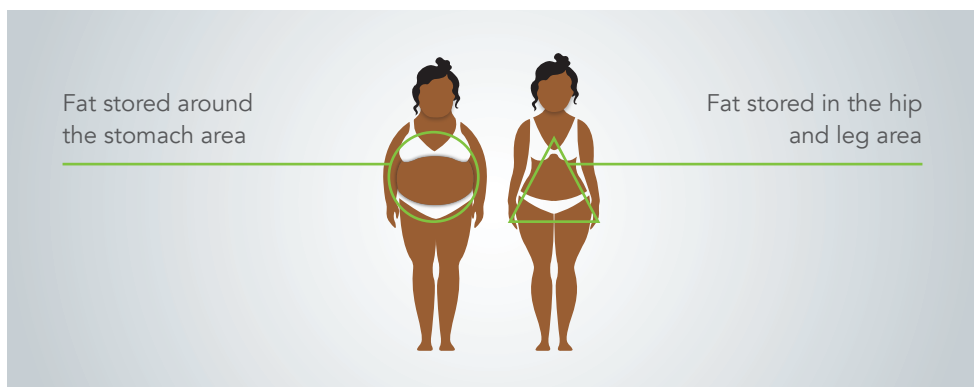
The body controls the amount of glucose (sugar) in the blood by using a hormone called insulin that is produced by an organ called the pancreas.

Like a taxi carrying passengers from one place to another, insulin moves the glucose from the blood to different parts of the body.

If there is too much glucose in the blood, then it may be due to:

- 1) Too little insulin (not enough taxis), or
- 2) The insulin does not work properly (taxis broken down).

Too much glucose (high sugar levels) in the blood can damage many parts of the body, including the heart, eyes, kidneys, and nerves; and ultimately cause health problems.



Different types of diabetes

There are two main types of diabetes, known as “type 1 diabetes” and “type 2 diabetes”.

These are two different health conditions, and it is important to understand the difference between the two:

TYPE 1 DIABETES

- This is an auto-immune disease; the immune system (body's defence system) attacks the insulin producing cells in the pancreas (organ in the body that produces insulin).
- The pancreas no longer produces insulin; this means that there is no insulin to help move the glucose from the blood to our bodies.
- People with type 1 diabetes need to take insulin by injection every day, and lead a healthy lifestyle.
- It is not associated with an unhealthy lifestyle and it cannot be prevented.
- Is typically diagnosed first in younger individuals.

TYPE 2 DIABETES

- This is a chronic condition that develops over a long period because of an unhealthy lifestyle.
- The pancreas does produce some insulin, but not enough; or the insulin is no longer effective.
- Can be controlled by healthy eating and regular physical activity; sometimes medication is needed later on.
- Eating healthier foods and being more active can prevent or reduce the risk of developing type 2 diabetes.
- Is typically diagnosed later in life.

Type 2 is the most common form of diabetes, affecting 85-90% of all people with diabetes.

Who is most likely to get type 2 diabetes?

Type 2 diabetes is most common in people who

1. have a family history of type 2 diabetes; i.e. if your mother/father or siblings had/have diabetes,
2. are inactive and overweight,
3. more fat around their stomach than their hips and legs.

Who should be tested for type 2 diabetes?

It is strongly suggested that the following individuals should be tested for diabetes:

- Individuals who are older than 45 years
- Individuals who are younger than 45 years AND are overweight or obese AND have one or more of the risk factors listed below

Risk factors for type 2 diabetes

“Risk factors” are things (characteristics) that increase our chance of developing a disease. Some risk factors are within our control; these are referred to as modifiable risk factors as we can do something about them. However, some risk factors are not within our control; these are referred to as non-modifiable risk factors as we cannot do anything about them. The risk factors for type 2 diabetes are listed below.



Risk factors which we cannot change (non-modifiable)

- Having a parent, brother or sister with diabetes (family history)
- Age – the risk increases as we get older
- Women who developed diabetes when pregnant (this is called gestational diabetes) and gave birth to a large baby (weighing more than 4.5 kg)



Risk factors which we can change (modifiable)

- Being overweight or obese
- Eating an unhealthy diet
- Being physically inactive/doing no exercise
- Smoking
- Drinking too much alcohol
- Being stressed all the time
- Having high blood pressure
- Having high blood cholesterol levels

Symptoms (signs) of type 2 diabetes shown below

		
Being extremely thirsty	Always being hungry and having an increased appetite	Need to go to the toilet more often, especially at night
		
Vision is blurry	Being lethargic, tired and drowsy	Losing weight without trying to

If you experience any of these symptoms on a regular basis you need to go to the clinic or your doctor to get tested.

When the blood glucose (sugar) is stabilised by treatment, these symptoms go away.

Can type 2 diabetes be prevented?

YES!! People at risk of type 2 diabetes can prevent or delay its development by following a healthy lifestyle. See Table 2 for lifestyle changes that are needed to reduce the risk of developing type 2 diabetes.

Summary of lifestyle changes that are needed to reduce the risk of developing type 2 diabetes



Achieve and maintain a healthy body weight

- If you need to lose weight, set a realistic goal.
- To lose weight, you need to make dietary changes and exercise more.



Make healthier food choices

- Eat a variety foods.
- Eat more vegetables and salads.
- Eat smaller portions of starchy foods.
- Use fats sparingly and limit the intake of fatty foods.
- Eat lean meat, rather than fatty meat.
- Limit the intake of salty foods and do not add extra salt to food
- Use sugar sparingly and limit the intake of sugar sweetened foods and beverages.
- Eat takeaways, deep fried and fast foods less often.
- Drink 8 glasses of clean water every day.



Be more active

- Aim for 30 minutes of physical activity on most days.
- Gradually build up your physical activity level; e.g. walk a bit longer and a bit faster every day.



Stop smoking

- Set yourself a goal to stop smoking.



Avoid alcohol

- Drink alcoholic drinks in small amounts on special occasions only or not at all.

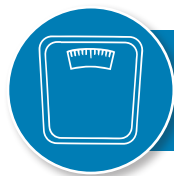


Reduce your stress levels

- Find activities that will help you to relax.

What is BMI and why is it important to your health?

BMI stands for **body mass index**. It is used to see whether an individual is underweight, normal weight, overweight or obese. BMI is calculated by dividing your weight (measured in kg) by your height (measured in metres) squared



$$\text{BMI} = \text{weight (kg)} / \text{height (m)}^2$$

If you know your height and weight, you can easily work out your BMI by using the chart on page 14 and following these instructions.

- Find your height in top row,
- Find your weight in the left-hand column; move across this row until you cross the column that indicates your height.
- The number in the block is your BMI. The colour of this block will show whether you are underweight, normal weight, overweight, or obese.
 - Blue means that you are underweight (BMI of less than 18.5 kg/m²)
 - Green means that you are normal weight BMI of 18.5 – 24.9 kg/m²)
 - Yellow means that you are overweight (BMI of 25.0 – 29.9 kg/m²)
 - Red means that you are obese (BMI 30 kg/m² or more)

Take these two people for example, can you tell whose BMI is greater?



Tom	
Weight	78 kg
Height	185 cm
BMI	22.8 kg/m ²
Colour on BMI Chart	Green
Rating	Normal



Ed	
Weight	78 kg
Height	160 cm
BMI	30.5 kg/m ²
Colour on BMI Chart	Red
Rating	Obese

Achieve and maintain a healthy weight

People who are overweight or obese have a higher risk of developing type 2 diabetes, high blood pressure, heart disease, stroke, and certain forms of cancer. Also, people who are overweight or obese usually have less energy, feel tired more often, and suffer from back pain and pain in the joints (arthritis).

If you are overweight or obese, losing weight will reduce your risk of developing type 2 diabetes and the other diseases mentioned above.

To achieve and maintain weight loss, goals need to be realistic and manageable.

Set a realistic weight loss goal

An example of a reasonable weight loss goal is aiming to lose:

- Half a kilogram (500 g) of weight in a week OR
- Two kilograms (2 kg) per month

This means that if you weigh 80 kg and you lose 2 kg per month over 6 months, your weight loss will be 12 kg (2 kg x 6 months) and your goal weight will be 68 kg (80 kg – 12 kg).

Set manageable weight loss goals

Changes made to dietary intake and physical activity need to be manageable and maintained over a long period of time, as this will enable these changes to become permanent habits. General guidelines for losing weight include the following:

- Make healthier food choices (e.g. eating less fast foods and more fresh foods such as fruits and vegetables)
- Eat smaller portions
- Exercise regularly

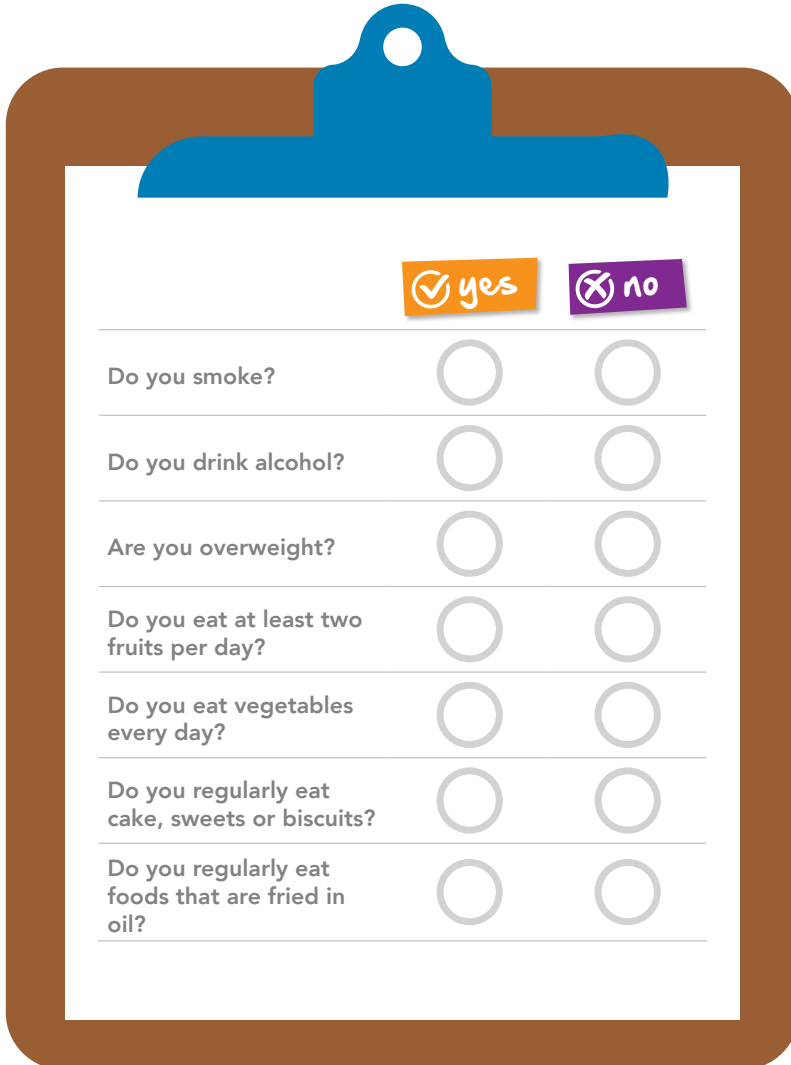
Making targets and goals for changing unhealthy habits

Most times people do not see themselves as being unhealthy, overweight or needing to improve their health. If you don't take the time to assess your health and your lifestyle, then being the best you can be may not be possible. That's why, before change can occur you have to recognise possible problems then you can change for the better.

So how do you go about changing your life for the better?

You may have one or more areas in your life that need to be improved to lead a healthier life. You should identify your specific problem areas by examining your eating habits, weight status, stress levels, smoking and/or drinking alcohol.

Example of how to recognise your problem areas



		
Do you smoke?	☐	☐
Do you drink alcohol?	☐	☐
Are you overweight?	☐	☐
Do you eat at least two fruits per day?	☐	☐
Do you eat vegetables every day?	☐	☐
Do you regularly eat cake, sweets or biscuits?	☐	☐
Do you regularly eat foods that are fried in oil?	☐	☐

Let's say you wanted to eat less sugar and sugar sweetened foods and drinks – a plan needs to be devised in order to help achieve your goal. However, many factors will contribute to you achieving this goal.

Now think of a circle. Many parts or slices make up a circle, and every circle has different numbers of parts/slices. The same applies to you and your goals – not everyone will respond the same and everyone will need to take a different number of steps to achieve their goals.

Your goals need to be specific, measurable, achievable, realistic and time-bound (we call this **SMART** goals). You can also change your goals as you go along.

The same is true for your goal(s). The whole circle would be your end goal and all the slices or parts of the circle are the steps to get to your end goal. For example, these may be the steps required to reduce your sugar intake.

S M A R T



SMART goals are...

- S**PECIFIC
Be specific in **what** you want to achieve; **why** you want to achieve it; and by **when** you want to achieve it.
- M**EASURABLE
You need to be specific on how you will measure the goal or progress towards the goal
- A**CHIEVABLE
The goal must motivate you to aim high, but it must not be out of your reach. You may need to find ways or learn new skills to help you reach your goal. Whether you will achieve your goal also depends on how important the goal is and to what measures you are willing to go to succeed.
- R**EALISTIC
The goal should be in line with the skills, competencies and time that is available to you.
- T**IME-BOUND
The goal must include a realistic timeline of when your goal should be accomplished. If it will take a long time to achieve, then set milestones that should be reached every week or bi-weekly.

How can the SA-DPP intervention help you to improve your health and reduce your risk of developing type 2 diabetes?

The SA-DPP intervention will provide information and support you to do the following:

1. Make healthy food choices (**session 2 and 3**). By making wise food choices, you can help control your body weight, blood glucose and blood pressure.
2. Eat balanced meals and control portion sizes (**session 2**).
3. Increase your physical activity. Aim for at least 30 – 45 minutes of activity most days of the week (**session 4**).
4. Manage your lifestyle by not smoking, managing your stress levels, and if you need to drink alcohol – do so sensibly (**session 5**).
5. Keep a food and exercise diary to monitor your progress and keep you on track to reach your goals (**session 6**).

At each group meeting, different aspects of how to reduce the risk of developing type 2 diabetes will be discussed.

BMI CHART

cm	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166
Kg																	
55	24.4	24.1	23.8	23.5	23.2	22.9	22.6	22.3	22.0	21.8	21.5	21.2	21.0	20.7	20.4	20.2	20.0
56	24.9	24.6	24.2	23.9	23.6	23.3	23.0	22.7	22.4	22.2	21.9	21.6	21.3	21.1	20.8	20.6	20.3
57	25.3	25.0	24.7	24.3	24.0	23.7	23.4	23.1	22.8	22.5	22.3	22.0	21.7	21.5	21.2	20.9	20.7
58	25.8	25.4	25.1	24.8	24.5	24.1	23.8	23.5	23.2	22.9	22.7	22.4	22.1	21.8	21.6	21.3	21.0
59	26.2	25.9	25.5	25.2	24.9	24.6	24.2	23.9	23.6	23.3	23.0	22.8	22.5	22.2	21.9	21.7	21.4
60	26.3	26.3	26.0	25.6	25.3	25.0	24.7	24.3	24.0	23.7	23.4	23.1	22.9	22.6	22.3	22.0	21.8
61	27.1	26.8	26.4	26.1	25.7	25.4	25.1	24.7	24.4	24.1	23.8	23.5	23.2	23.0	22.7	22.4	22.1
62	27.6	27.2	26.8	26.5	26.1	25.8	25.5	25.2	24.8	24.5	24.2	23.9	23.6	23.3	23.1	22.8	22.5
63	28.0	27.6	27.3	26.9	26.6	26.2	25.9	25.6	25.2	24.9	24.6	24.3	24.0	23.7	23.4	23.1	22.9
64	28.4	28.1	27.7	27.3	27.0	26.6	26.3	26.0	25.6	25.3	25.0	24.7	24.4	24.1	23.8	23.5	23.2
65	28.9	28.5	28.1	27.8	27.4	27.1	26.7	26.4	26.0	25.7	25.4	25.1	24.8	24.5	24.2	23.9	23.6
70	31.1	30.7	30.3	29.9	29.5	29.1	28.8	28.4	28.0	27.7	27.3	27.0	26.7	26.3	26.0	25.7	25.4
71	31.6	31.1	30.7	30.3	29.9	29.6	29.2	28.8	28.4	28.1	27.7	27.4	27.1	26.7	26.4	26.1	25.8
72	32.0	31.6	31.2	30.8	30.4	30.0	29.6	29.2	28.8	28.5	28.1	27.8	27.4	27.1	26.8	26.4	26.1
73	32.4	32.0	31.6	31.2	30.8	30.4	30.0	29.6	29.2	28.9	28.5	28.2	27.8	27.5	27.1	26.8	26.5
74	32.9	32.5	32.0	31.6	31.2	30.8	30.4	30.0	29.6	29.3	28.9	28.5	28.2	27.9	27.5	27.2	26.9
75	33.3	32.9	32.5	32.0	31.6	31.2	30.8	30.4	30.0	29.7	29.3	28.9	28.6	28.2	27.9	27.5	27.2
76	33.8	33.3	32.9	32.5	32.0	31.6	31.2	30.8	30.4	30.1	29.7	29.3	29.0	28.6	28.3	27.9	27.6
77	34.2	33.8	33.3	32.9	32.5	32.0	31.6	31.2	30.8	30.5	30.1	29.7	29.3	29.0	28.6	28.3	27.9
78	34.7	34.2	33.8	33.3	32.9	32.5	32.1	31.6	31.2	30.9	30.5	30.1	29.7	29.4	29.0	28.7	28.3
79	35.1	34.6	34.2	33.7	33.3	32.9	32.5	32.0	31.6	31.2	30.9	30.5	30.1	29.7	29.4	29.0	28.7
80	35.6	35.1	34.6	34.2	33.7	33.3	32.9	32.5	32.0	31.6	31.3	30.9	30.5	30.1	29.7	29.4	29.0
81	36.0	35.5	35.1	34.6	34.2	33.7	33.3	32.9	32.4	32.0	31.6	31.2	30.9	30.5	30.1	29.8	29.4
82	36.4	36.0	35.5	35.0	34.6	34.1	33.7	33.3	32.8	32.4	32.0	31.6	31.2	30.9	30.5	30.1	29.8
83	36.9	36.4	35.9	35.5	35.0	34.5	34.1	33.7	33.2	32.8	32.4	32.0	31.6	31.2	30.9	30.5	30.1
84	37.3	36.8	36.4	35.9	35.4	35.0	34.5	34.1	33.6	33.2	32.8	32.4	32.0	31.6	31.2	30.9	30.5
85	37.8	37.3	36.8	36.3	35.8	35.4	34.9	34.5	34.0	33.6	33.2	32.8	32.4	32.0	31.6	31.2	30.8
86	38.2	37.7	37.2	36.7	36.3	35.8	35.3	34.9	34.4	34.0	33.6	33.2	32.8	32.4	32.0	31.6	31.2
87	38.7	38.2	37.7	37.2	36.7	36.2	35.7	35.3	34.9	34.4	34.0	33.6	33.2	32.7	32.3	32.0	31.6
88	39.1	38.6	38.1	37.6	37.1	36.6	36.2	35.7	35.3	34.8	34.4	33.9	33.5	33.1	32.7	32.3	31.9
89	39.6	39.0	38.5	38.0	37.5	37.0	36.6	36.1	35.7	35.2	34.8	34.3	33.9	33.5	33.1	32.7	32.3
90	40.0	39.5	39.0	38.4	37.9	37.5	37.0	36.5	36.1	35.6	35.2	34.7	34.3	33.9	33.5	33.1	32.7
91	40.4	39.9	39.4	38.9	38.4	37.9	37.4	36.9	36.5	36.0	35.5	35.1	34.7	34.3	33.8	33.4	33.0
92	40.9	40.3	39.8	39.3	38.8	38.3	37.8	37.3	36.9	36.4	35.9	35.5	35.1	34.6	34.2	33.8	33.4
93	41.3	40.8	40.3	39.7	39.2	38.7	38.2	37.7	37.3	36.8	36.3	35.9	35.4	35.0	34.6	34.2	33.7
94	41.8	41.2	40.7	40.2	39.6	39.1	38.6	38.1	37.7	37.2	36.7	36.3	35.8	35.4	34.9	34.5	34.1
95	42.2	41.7	41.1	40.6	40.1	39.5	39.0	38.5	38.1	37.6	37.1	36.6	36.2	35.8	35.3	34.9	34.5
96	42.7	42.1	41.6	41.0	40.5	40.0	39.4	38.9	38.5	38.0	37.5	37.0	36.6	36.1	35.7	35.3	34.8
97	43.1	42.5	42.0	41.4	40.9	40.4	39.8	39.3	38.9	38.4	37.9	37.4	37.0	36.5	36.1	35.6	35.2
98	43.6	43.0	42.4	41.9	41.3	40.8	40.3	39.8	39.3	38.8	38.3	37.8	37.3	36.9	36.4	36.0	35.6
99	44.0	43.4	42.8	42.3	41.7	41.2	40.7	40.2	39.7	39.2	38.7	38.2	37.7	37.3	36.8	36.4	35.9
100	44.4	43.9	43.3	42.7	42.2	41.6	41.1	40.6	40.1	39.6	39.1	38.6	38.1	37.6	37.2	36.7	36.3

167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	184	185
19.7	19.5	19.3	19.0	18.8	18.6	18.4	18.2	18.0	17.8	17.6	17.4	17.2	17.0	16.8	16.2	16.1
20.1	19.8	19.6	19.4	19.2	18.9	18.7	18.5	18.3	18.1	17.9	17.7	17.5	17.3	17.1	16.5	16.4
20.4	20.2	20.0	19.7	19.5	19.3	19.0	18.8	18.6	18.4	18.2	18.0	17.8	17.6	17.4	16.8	16.7
20.8	20.5	20.3	20.1	19.8	19.6	19.4	19.2	18.9	18.7	18.5	18.3	18.1	17.9	17.7	17.1	16.9
21.2	20.9	20.7	20.4	20.2	19.9	19.7	19.5	19.3	19.0	18.8	18.6	18.4	18.2	18.0	17.4	17.2
21.5	21.3	21.0	20.8	20.5	20.3	20.0	19.8	19.6	19.4	19.2	18.9	18.7	18.5	18.3	17.7	17.5
21.9	21.6	21.4	21.1	20.9	20.6	20.4	20.1	19.9	19.7	19.5	19.3	19.0	18.8	18.6	18.0	17.8
22.2	22.0	21.7	21.5	21.2	21.0	20.7	20.5	20.2	20.0	19.8	19.6	19.4	19.1	18.9	18.3	18.1
22.6	22.3	22.1	21.8	21.5	21.3	21.0	20.8	20.6	20.3	20.1	19.9	19.7	19.4	19.2	18.6	18.4
22.9	22.7	22.4	22.1	21.9	21.6	21.4	21.1	20.9	20.7	20.4	20.2	20.0	19.8	19.5	18.9	18.7
23.3	23.0	22.8	22.5	22.2	22.0	21.7	21.5	21.2	21.0	20.7	20.5	20.3	20.1	19.8	19.2	19.0
25.1	24.8	24.5	24.2	23.9	23.7	23.4	23.1	22.9	22.6	22.3	22.1	21.8	21.6	21.4	20.7	20.5
25.5	25.2	24.9	24.6	24.3	24.0	23.7	23.5	23.2	22.9	22.7	22.4	22.2	21.9	21.7	21.0	20.7
25.8	25.5	25.2	24.9	24.6	24.3	24.1	23.8	23.5	23.2	23.0	22.7	22.5	22.2	22.0	21.3	21.0
26.2	25.9	25.6	25.3	25.0	24.7	24.4	24.1	23.8	23.6	23.3	23.0	22.8	22.5	22.3	21.6	21.3
26.5	26.2	25.9	25.6	25.3	25.0	24.7	24.4	24.2	23.9	23.6	23.4	23.1	22.8	22.6	21.9	21.6
26.9	26.6	26.3	26.0	25.6	25.4	25.1	24.8	24.5	24.2	23.9	23.7	23.4	23.1	22.9	22.2	21.9
27.3	26.9	26.6	26.3	26.0	25.7	25.4	25.1	24.8	24.5	24.3	24.0	23.7	23.5	23.2	22.4	22.2
27.6	27.3	27.0	26.6	26.3	26.0	25.7	25.4	25.1	24.9	24.6	24.3	24.0	23.8	23.5	22.7	22.5
28.0	27.6	27.3	27.0	26.7	26.4	26.1	25.8	25.5	25.2	24.9	24.6	24.3	24.1	23.8	23.0	22.8
28.3	28.0	27.7	27.3	27.0	26.7	26.4	26.1	25.8	25.5	25.2	24.9	24.7	24.4	24.1	23.3	23.1
28.7	28.3	28.0	27.7	27.4	27.0	26.7	26.4	26.1	25.8	25.5	25.2	25.0	24.7	24.4	23.6	23.4
29.0	28.7	28.4	28.0	27.7	27.4	27.1	26.8	26.4	26.1	25.9	25.6	25.3	25.0	24.7	23.9	23.7
29.4	29.1	28.7	28.4	28.0	27.7	27.4	27.1	26.8	26.5	26.2	25.9	25.6	25.3	25.0	24.2	24.0
29.8	29.4	29.1	28.7	28.4	28.1	27.7	27.4	27.1	26.8	26.5	26.2	25.9	25.6	25.3	24.5	24.3
30.1	29.8	29.4	29.1	28.7	28.4	28.1	27.7	27.4	27.1	26.8	26.5	26.2	25.9	25.6	24.8	24.5
30.5	30.1	29.8	29.4	29.1	28.7	28.4	28.1	27.8	27.4	27.1	26.8	26.5	26.2	25.9	25.1	24.8
30.8	30.5	30.1	29.8	29.4	29.1	28.7	28.4	28.1	27.8	27.5	27.1	26.8	26.5	26.3	25.4	25.1
31.2	30.8	30.5	30.1	29.8	29.4	29.1	28.7	28.4	28.1	27.8	27.5	27.2	26.9	26.6	25.7	25.4
31.6	31.2	30.8	30.4	30.1	29.7	29.4	29.1	28.7	28.4	28.1	27.8	27.5	27.2	26.9	26.0	25.7
31.9	31.5	31.2	30.8	30.4	30.1	29.7	29.4	29.1	28.7	28.4	28.1	27.8	27.5	27.2	26.3	26.0
32.3	31.9	31.5	31.1	30.8	30.4	30.1	29.7	29.4	29.1	28.7	28.4	28.1	27.8	27.5	26.6	26.3
32.6	32.2	31.9	31.5	31.1	30.8	30.4	30.1	29.7	29.4	29.0	28.7	28.4	28.1	27.8	26.9	26.6
33.0	32.6	32.2	31.8	31.5	31.1	30.7	30.4	30.0	29.7	29.4	29.0	28.7	28.4	28.1	27.2	26.9
33.3	33.0	32.6	32.2	31.8	31.4	31.1	30.7	30.4	30.0	29.7	29.4	29.0	28.7	28.4	27.5	27.2
33.7	33.3	32.9	32.5	32.1	31.8	31.4	31.0	30.7	30.3	30.0	29.7	29.3	29.0	28.7	27.8	27.5
34.1	33.7	33.3	32.9	32.5	32.1	31.7	31.4	31.0	30.7	30.3	30.0	29.6	29.3	29.0	28.1	27.8
34.4	34.0	33.6	33.2	32.8	32.4	32.1	31.7	31.3	31.0	30.6	30.3	30.0	29.6	29.3	28.4	28.0
34.8	34.4	34.0	33.6	33.2	32.8	32.4	32.0	31.7	31.3	31.0	30.6	30.3	29.9	29.6	28.7	28.3
35.1	34.7	34.3	33.9	33.5	33.1	32.7	32.4	32.0	31.6	31.3	30.9	30.6	30.2	29.9	28.9	28.6
35.5	35.1	34.7	34.3	33.9	33.5	33.1	32.7	32.3	32.0	31.6	31.2	30.9	30.6	30.2	29.2	28.9
35.9	35.4	35.0	34.6	34.2	33.8	33.4	33.0	32.7	32.3	31.9	31.6	31.2	30.9	30.5	29.5	29.2



SESSION 2

HEALTHY EATING PART 1



The type and amount of food that we eat has a big influence on our overall health. Eating a healthy balanced diet (explained below) will reduce the risk of developing type 2 diabetes. Importantly, there is no need to buy special or expensive foods to reduce the risk of developing type 2 diabetes

Follow these healthy eating guidelines

- Eat three meals per day; namely breakfast, lunch and supper.
- If you eat a snack in-between meals, choose healthy options such as fresh fruit, crunchy vegetables, unflavoured yoghurt, nuts, or dairy products.
- Sit down when you eat; don't eat and drink on the go; this will improve your awareness of what you are eating and drinking.
- Don't do other activities while you eat, such as watching television
- Encourage the whole family to eat healthy and practice mindful eating.
- Take small bites and enjoy the taste of the food; put down your utensils between bites.
- Eat when you are hungry, not because you are lonely, sad or angry
- Be aware of the food that you eat

Eat a variety of foods

Different foods provide different nutrients. It is therefore important to eat a variety of foods.

What does variety of foods mean?

- Eat different types of foods, such as fruits, vegetables, milk and milk products, starchy foods (preferably whole grains), and protein rich foods (animal proteins and plant proteins).
- Eat foods that have different colours, textures, flavours and shapes.
- Add further variety to your meals by preparing foods in different ways.



Remember: The body makes glucose from foods containing carbohydrates

Make starchy foods part of most meals

Starchy foods are the most common form of carbohydrates in the diet. Starchy foods provide the body with energy, vitamins and minerals and roughage (fibre). Foods in this group come from grains like rice, wheat, oats, rye, barley and maize. Starchy vegetables, namely potato and sweet potato also fall in this group.

Eat wholegrain starchy foods that are high in fibre as this will help to lower your risk of developing type 2 diabetes.

Examples of starchy foods that are high in fibre are whole-wheat bread, whole-wheat pasta, brown and unrefined rice, high-fibre breakfast cereals such as All Bran and Weetbix, and high-fibre porridges such as oats.

Limit the intake of, or preferably avoid, refined and processed starchy foods such as white bread or sugar sweetened breakfast cereals, as they contain very little or no fibre.



In South Africa, maize meal and bread are fortified with a number of important micronutrients (vitamins and minerals); make sure that you buy maize meal and bread that has the fortification logo on the package.

Healthier starchy foods	Starchy foods to avoid
Brown and wholewheat bread	White bread
Brown rice	White rice
Wholegrain pasta	White pasta
Bran muffin	Sweet muffin, scone, cake, biscuits
Maize meal porridge, oats High fibre breakfast cereal, e.g. All Bran, Weetbix	Sugar-sweetened breakfast cereal, e.g. Coco-pops, Fruit loops
Mealie, potato, sweet potato	Fried potato chips ("slap" chips)

Portion sizes for starchy foods should be small; even the healthier starchy foods should not be eaten freely.

Eat plenty of vegetables and fruit

Vegetables and fruit are rich sources of vitamins, minerals, water and fibre which help to keep us healthy and prevent diseases.

Eat three or more servings of vegetables and two to three fruit each day. **(5 servings of fruit and vegetables per day – STRIVE FOR 5).**

In general, $\frac{1}{2}$ cup cooked or one cup uncooked vegetables is one serving. A serving of fruit equals the size of a tennis ball or two small golf balls (e.g. one apple or two apricots).

Eat dark-green leafy vegetables (spinach, marogo) or dark-yellow vegetables (carrot, butternut, pumpkin) every day.

Eat a wide variety of vegetables and fruit from week to week.

Avoid canned vegetables like chakalaka, tomato onion mix, as they may contain a lot of salt.

Tips to eat more vegetables

- Use fresh vegetables to make soup, rather than packet soup.
- Add extra vegetables to main dishes (e.g. stews, curries).

Tips to eat more fruit

- Avoid canned fruit in syrup, as it contains a lot of sugar. Rather have canned fruit in juice or water, or better still, have fresh fruit.
- Eat fresh fruit rather than drinking fruit juice.
- Fruit juice consumption should be limited as it contains very little fibre and a lot of sugar, and if taken, it should be diluted with water (even 100% fruit juice).

Tips for when buying vegetables and fruit

- Buy vegetables that are in season.
- Frozen vegetables are often cheaper than fresh vegetables.
- Fruits sold at markets are often cheaper than at supermarkets.
- Grow your own vegetables to save money.

Eat dry beans, split peas, lentils and soya regularly

Dried beans, split peas, lentils (lensies) and soya are known as legumes or pulses. Legumes and pulses are plant-based foods and are high in protein and contain almost no fat. These foods are also high in fibre and therefore helps to control blood glucose levels. Eating legumes regularly (at least three times per week) may lower your risk of type 2 diabetes.



BUTTER BEANS



SOUP MIX



SPLIT PEAS



**RED SPECKLED
BEANS**



**BROWN
LENTILS**

Adding legumes to a meal will increase the amount of nutrients provided by the meal. As legumes are high in protein they can be used instead of meat, chicken and fish.

Importantly, legumes are generally affordable to buy.

Buy dried legumes (beans, split peas, lentils, soya), soak overnight and then cook them. Avoid canned legumes such as baked beans, as they may contain a lot of salt.

Tips to eat more legumes

- Use legumes as an ingredient in mixed dishes, such as samp-and-beans, rice-and-beans.
- Add legumes to main dishes (e.g. stews, curries), soups and pasta dishes.
- Use legumes instead of meat on some days.

Have milk, maas or yoghurt every day

Milk and other dairy products, such as maas and yoghurt, contain calcium, which is needed for strong bones. Milk and dairy products are also needed for strong teeth and muscles.

- Have milk, maas or yoghurt every day.
- Avoid dairy products that have a high fat content such as cream, ice cream and milk shakes.
- Cheese has a lot of fat and should thus be eaten in small amounts.
- Use fat free or low-fat milk and milk products, rather than full cream or double cream products.
- Avoid dairy products that are sweetened such as flavoured yoghurt and flavoured milk.
- Make your own fruit yoghurt by adding sliced fruit to plain white yoghurt.
- Cremora and Ellis Brown should not be used in the place of milk.

Fish, chicken, lean meat or eggs can be eaten daily

These foods are the best sources of protein and also have lots of minerals that are needed for our immune system and muscles. Even though the statement says that these foods could be eaten daily, it does not mean that it should be eaten daily.

Most of the fat in animal source foods is saturated fat, which is an unhealthy type of fat. Eating too much of this unhealthy type of fat will increase your risk for type 2 diabetes.

- Eat small portions when eating animal foods.
- Eat lean meats or cut away visible fats before cooking the meat.
- Remove the skin from chicken before cooking.
- Limit the intake of processed meats (polony, vienna, frankfurter, tinned corned meat) as they are high in saturated fats and salt.
- Eat fish more often (aim for 3 times per week).

Use fats sparingly. Choose vegetable oils, rather than hard fats.

Fats and oils provide a lot of energy and eating too much can cause weight gain and associated health problems. However, we do need to have some fat in our diets.

It is important to choose the right kind of fat, and to limit the amount of fat that we eat.

Choose the right kind of fat:

Fats that come from plants are healthier. Examples of healthier fats are fat found in plant foods like avocado pears, olives, nuts and seeds, as well as vegetable oils (e.g. sunflower oil) and soft (tub) margarines.

- Coconut oil should be limited, even though it is a plant source of fat.
- Hard (brick) margarines and oils that are re-used for frying contain trans fats, which is an unhealthy type of fat, and should be avoided.
- Fats from animal foods also contain an unhealthy type of fat (saturated fats) and should be limited. Examples include butter, fat on meat, bacon and chicken skin.

Limit the amount of fat you eat by doing the following:

- Cut down on the amount of oil used when cooking.
- Boil, grill, steam, stew or poach food, rather than frying.
- Avoid foods that are deep-fried.
- Avoid readymade foods that are high in fat, like pies, samosas, fatcakes
- Spread margarine on bread thinly (you should still be able to see the bread).

Use sugar and foods and drinks high in sugar sparingly

Sugar provides a lot of energy (calories). Eating too much sugar can cause weight gain and will also lead to high blood glucose levels. For individuals who are at risk of developing type 2 diabetes, it is very important to restrict sugar intake. Eating sugar or foods containing sugar will raise the sugar levels in the blood very quickly.

Be aware that sugar is hidden in many foods like cold-drinks, milkshakes, cakes and biscuits, fruit canned in syrup, etc.

Tips to eat less sugar



- Do not add sugar when preparing foods (e.g. vegetables).
- Use fresh tomatoes in dishes, rather than canned tomatoes or tomato paste.
- Reduce the amount of sugar added to tea and coffee.
- Reduce the amount of sugar added to porridge and cereals; or preferably do not add any sugar to porridge and cereals.
- Avoid sugar-sweetened breakfast cereals; rather have high fibre unsweetened breakfast cereals.
- Limit the use of jams, syrups and honey.
- Avoid sugar-sweetened cold drinks; rather drink clean water.
- Limit the intake of fruit juice; when taken, dilute with water.
- Avoid sweetened yoghurt, flavoured milk and milkshakes; make your own flavoured yoghurt by adding pieces of fresh fruit to unflavoured yoghurt.
- Avoid cakes, biscuits, pastries; eat these on special occasions only (e.g. your birthday).
- Avoid sweets, chocolates, fudge, toffees.
- Avoid fruit canned in syrup; rather eat fresh fruit.
- Replace sweet desserts with fresh fruit salad.



Aim to reduce your sugar intake. Use one teaspoon less at a time.

Use salt and foods high in salt sparingly

Eating too much salt and salty foods may increase your risk of developing high blood pressure and other diseases. Salt does not just come from the amounts we add to the pot or plate. Many processed foods are high in salt.

Tips to eat less salt



- Use salt sparingly during food preparation.
- Do not add extra salt to your food at the table.
- Use herbs and spices to flavour food, instead of salt.
- Avoid the use of stock cubes, soup powder and gravy powder, as they are high in salt.
- Use spreads such as Marmite, Bovril, Oxo, cheese spread, fishpaste and peanut butter in small amounts, as they are high in salt.
- Avoid processed foods such as polony, viennas, russians, salami and bacon.
- Avoid the intake of salty snacks such as potato chips, salty biscuits, biltong and dried sausage.
- Avoid the intake of salted peanuts and nuts and salted popcorn; rather use unsalted peanuts and nuts and unsalted popcorn.
- Avoid the intake of smoked or dried fish.
- Avoid the intake of processed cheese; and limit your intake of hard cheese (cheddar, gouda) to 30g (a small matchbox size) to not more than three times a week.

Drink lots of clean, safe water

Without water, our bodies will not be able to function. Drink at least 8 glasses of clean water a day for your body to work well and to stay hydrated. If needs be, boiling the water may ensure that it is clean and safe.

Tips to drink more water

- Keep a bottle of water with you at all times.
- Drink a glass of water with your meals.
- Have a glass of water first thing in the morning.
- Flavour water by adding a slice of lemon or cucumber.
- Tap water is free!!





SESSION 3

HEALTHY EATING PART 2

Eat right



Just like a car needs petrol to drive, our bodies need energy to function. We get this energy from the food that we eat. It is important that we eat the right amount and type of food. If we eat too much and exercise too little, the extra energy will be stored in the body as fat and add extra weight to our bodies.

By eating healthier you will reduce your risk of developing type 2 diabetes.

Eat small frequent meals throughout the day.

If you need to lose weight, use a smaller plate than usual to help control portion sizes.

When you are planning your meal, you need to consider the following:

- how the plate of food looks
- the portions you dish up
- the types of foods you use, and
- how you prepare it.

Different foods provide different nutrients. It is therefore important that all meals must have variety.



Plate A is more colourful and has a bigger variety of different foods; while plate B is bland (has little colour) and has only two different types of foods. The less colour or fewer types of foods there are on the plate, the less nutrients there will be.

Healthy food plate

Using the plate model can be very helpful with planning your meals and to help you to eat a variety of foods.

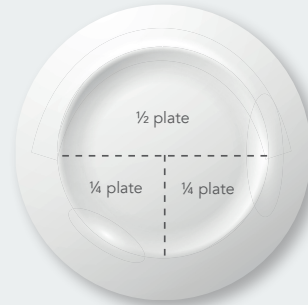
STEP

1

Divide the plate into 3 sections.

The 1st section should be half the plate.

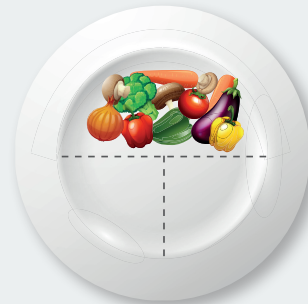
The next two sections should be $\frac{1}{4}$ of the plate each.



STEP

2

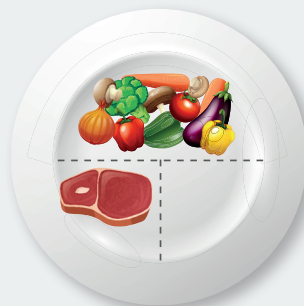
In the $\frac{1}{2}$ section add the vegetables.



STEP

3

In one of the $\frac{1}{4}$ sections
add the protein-rich
food – meat, chicken,
fish, egg or legumes.



STEP

4

In the other $\frac{1}{4}$ section,
add a starchy food.



1

Vegetables and fruit

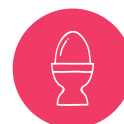
- For the main meals, half of the plate should be filled with vegetables, including at least two vegetables of different colours.
- Prepare vegetables with little, or no, added fat, sugar and salt.
- Do not fry vegetables, rather grill, steam, boil or stew them.
- Eat some vegetables raw, as a salad; but limit the use of salad dressing.
- Note that potato salad and pasta salad are made with starchy foods, and are therefore not counted as a vegetable salad.
- Fruit can be eaten with meals, or in-between as a snack.
- Have fresh fruit or fruit salad for desert, rather than a baked pudding.



2

Protein-rich foods

- For your main meals, a quarter of the plate should be filled with protein-rich foods, such as meat, chicken, fish, legumes or eggs.
- Remove all visible fat from meat before preparation.
- Remove the skin of the chicken before preparation.
- Grill, steam, boil or stew meat; do not deep-fry meat.
- Grill or steam fish; avoid deep-frying and battered fish.
- Legumes are generally more affordable than meat; replacing some of the meat with legumes in meat dishes will not only improve the nutritional value of the dish (less fat, more fibre), but it will also reduce the cost of the dish.



3

Starchy foods

- For your main meals, a quarter of the plate should be filled with starchy foods, but these should be wholegrain if possible to increase the fibre and nutrient content.
- Boil, bake or sauté sweet potatoes and potatoes; avoid deep-fried potato chips.
- When eating pasta dishes, avoid very oily sauces.



Portion Control is important!



Healthier portion



Over-sized portion



Overeating is never a good idea - even if the food is healthy.



SESSION 4

PHYSICAL ACTIVITY

Being physically active is one of the most important steps to improve health and reduce the risk of developing type 2 diabetes and other chronic diseases such as heart disease, stroke and cancer. Being physically active also helps to reduce stress.

Why should you exercise?



For those who are at high risk of developing type 2 diabetes, being physically active on a regular basis (most days of the week) has significant health benefits.

Physical activity helps to:

- Improve the body's response to insulin which can lower blood glucose (sugar) levels
- Reduce the risk of developing diabetes and its long-term complications
- Lowers blood pressure
- Lower cholesterol levels (fats in the blood)
- Lower your risk of heart disease (heart attack and stroke)
- Maintain or reduce weight

Physical activity also helps to:

- Strengthen bones and reduce the risk of developing osteoporosis
- Increase strength and flexibility of joints and muscles
- Improve mood
- Increase energy levels
- Reduce stress and tension
- Improve sleep

How much exercise is needed?



At least 150 minutes per week of moderate intensity physical activity (such as brisk walking, jogging or swimming)

This means you need to do at least 30 minutes of exercise per day on most days (at least 5 days a week).

Moderate intensity exercise



To achieve a level of moderate intensity physical activity, aim to increase your breathing and heart rate, and perhaps build up a light sweat. If on the other hand you're gasping and unable to talk, you are probably working too hard. Examples include brisk walking, swimming, cycling, dancing etc.

If you find it difficult to do the full 30 minutes in one session, start slow and increase the pace and amount of time spent exercising over a period of time.

Example of how to increase the amount of time spent exercising:



Start with 10 minutes three times per day; then build up to 15 minutes twice per day.

As you become fitter, you can even aim for 30 minutes in one session.

Example of how to increase the intensity of the exercise:

If you find the activity difficult, start slowly, as your body becomes stronger, start increasing the pace. For example, increase your walking pace over time so that when you are fitter, you will be able to walk further within the 30 min period.



If you are trying to lose weight, you may need to aim for 60 to 90 minutes on most days. This will depend on how active you are already, and on whether you have any injuries that limits your ability to exercise.

Vigorous intensity exercise



As an alternative to moderate intensity exercise, you may choose to do three 20-minute sessions per week of vigorous intensity exercise such as jogging, aerobics class or soccer.

Strength training



Strength training and stretching are important for healthy muscles and strong bones and for maintaining your metabolic rate. Aim to do strength training twice a week, in addition to your moderate intensity and vigorous intensity exercise. Refer to the exercise/physical activity booklet for examples of strength exercises.

Guidelines for safe exercising:

- Before starting any new activity program, check if your doctor approves.
- Do not exercise if you are unwell, as this can do more damage than good.
- If you have a chest infection, wait two weeks from recovery.
- Stop and rest if you experience chest, abdominal, neck or arm pain or tightness; or if you feel breathless, faint or light headed when exercising.
- When you go for a walk or do any aerobic exercise, wear well-fitting shoes.
- Start slowly, gradually increasing the pace and length of each session.
- Drink enough water to avoid thirst and remember you will need a bit more than usual while being active.
- It's important to stretch your legs and arms after exercise to improve flexibility.

Exercises you can try out at home. This can be done on a chair.

Spine stretch

- Sit close to the end of the chair.
- Place your feet flat on the floor.
- Your knees and your feet must be in line with your hips.
- Feel as if your back is getting taller and your neck is getting longer.
- Keep this position and breath in deeply from your nose then breath out slowly out your mouth.

Tips for making exercise part of your daily routine

- Aim to do your exercise sessions at regular times and on set days.
- Take short breaks along the way if exercising for long periods.
- Have a positive attitude towards being more active.
- Do your exercise sessions with a friend or family member or as part of a regular group as this can help you to stay motivated and make it more fun.
- Set yourself goals to stay motivated; e.g. climb a few more stairs every week.
- Choose activities or types of exercises that you will enjoy doing.
- Take the stairs instead of the lift or escalator in shopping malls.
- Be creative and try something different – perhaps a walk in the park with your children or grandchildren.
- Play a game with your children or grandchildren, like throwing a ball, playing hide-and-go-seek.
- If you have been sitting for a long time (more than 45 minutes), stand up and walk around for a few minutes.
- Gardening, doing house work and ironing also helps in being more active.
- When going to the shops, get the taxi to drop you a bit further away and walk the rest of the way.

Take home message

Being more active during the day is a good place to start. Move more and sit less.

Chair hug

- Keep your position as for the spine stretch.
- Keep your feet flat on the floor.
- Stretch your arms slowly to the back of the chair.
- Keep upright and touch your fingers or as far back you can get your arms to go.
- Hold like this for 5 seconds then release and keep position as for the spine stretch.
- Repeat this 5 times.



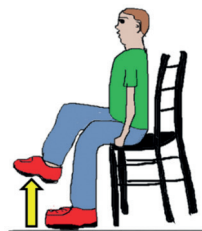
Leg ups

- Keep your position as for the spine stretch.
- Keep your one leg's foot on the floor while lifting up the other leg.
- Like marching in a parade change legs.
- Do this as fast as you can manage for 30 seconds – one foot at a time.



Marching band

- Keep in position as for the spine stretch.
- Now lift your right leg and your left arm up.
- Then switch. You are now marching.
- Don't do this too fast.
- Do this for 1 minute.



Time to cool down

- Slowly move your legs in circles.
- Move your fingers like you sprinkling water onto someone's face.
- Do this for 1 minute. Then relax.





SESSION 5

SMOKING, ALCOHOL & STRESS

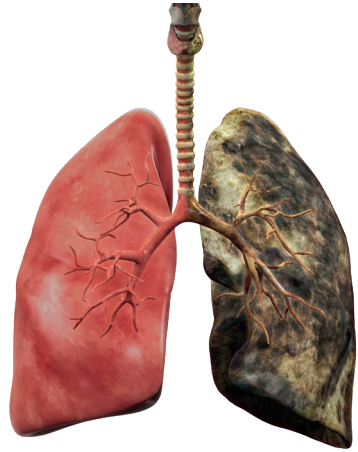
Smoking

It is no secret that smoking is bad for your health.

- Smoking is a risk factor for cardiovascular disease, which is linked to diabetes.
- Not smoking therefore plays an important role in preventing the long-term complications associated with type 2 diabetes.

Other negative health effects of smoking are:

- Increased risk for a heart attack, stroke and cancer (particularly lung, mouth and throat cancer).
- Contribute to nerve and blood vessel damage.
- Make blood vessels thinner and then you get less oxygen moving around in your body.
- Increase the risk for erectile dysfunction (also known as impotence).
- Kidney damage.
- Damage to teeth and gums.
- Secondary smoke has an effect on those around you (consider your young children)?



If you don't smoke, that's great. Make a plan to never start. If you do smoke, there is something you can do: challenge yourself to quit smoking.

Why is it so hard to quit?

Tobacco contains nicotine, which is an addictive substance. Nicotine causes physical and psychological dependence, and it is therefore very difficult for smokers to quit the habit of smoking.

Understand why you smoke

People smoke for different reasons. If you are a smoker and planning to quit smoking, you need to understand why you smoke in order to address the challenges you may experience while quitting. Some examples are given below.

If you are smoking because it gives you more energy:

Other ways to increase your energy levels:

- Do more physical activity
- Eat healthier foods
- Get more sleep
- Avoid boredom

If you are smoking because having a cigarette in your hand makes you feel more at ease:

Other ways to feel more relaxed:

- Listen to music
- Take up a hobby
- Do something active, such as going for a walk
- Do something that you cannot do while you are smoking

If you smoke because you are stressed:

Think about the reasons why you feel stressed; try to find ways to deal with them or discuss it with your doctor.

If you smoke to reduce your appetite or think that you may gain weight if you quit:

Consider increasing your physical activity and talk to your group members or a member of the expert panel about how to minimise weight gain during this process.

Steps to help you quit smoking

STEP

1

Know the benefits of quitting

- Write down the benefits of quitting.



Note: You can use one of these steps or a combination of them.

STEP

2

Prepare to quit

You can also use a nicotine patch, gum, inhaler, or spray; or ask your doctor for a prescription medicine.

- ▶ Set a quit date; and tell your friends and family. Make this a time when your life is fairly calm and stress levels are low but don't wait forever as there is really never a BEST time to start just a good time.
- ▶ Think of your reasons for quitting and write them down. Put the list where you will see it every day and in multiple places (on your mirror in the bathroom, next to your bed, at work, on your mobile phone).
- ▶ Throw away your cigarettes, matches, lighters, and ashtrays (ALL of them).
- ▶ Ask others for their help and understanding (build a strong support structure).
- ▶ Ask a friend who smokes to consider quitting with you (be a positive influence for one another).



STEP

3

Choose a quitting strategy

- ▶ Taper off your smoking habit. Quit smoking gradually by cutting back over several weeks.



If you need counselling ask your doctor or speak to your health worker

If you stop smoking, it will:

- Reduce your risk for heart attack, stroke, cancer and cardiovascular disease.
- Reduce your risk for developing problems with your blood vessels and the risk for blood clots.
- Reduce your risk of developing cataracts and severe eye disease.
- Improve your sense of taste.
- Ease coughing.
- Improve your ability to participate in and enjoy physical activity (without feeling breathless).
- Give you a feeling of control and independence without having to rely on cigarettes to feel at ease.
- Save you money and/or allow you to spend it on other things you enjoy.

Alcohol

Drinking too much alcohol increases the risk for diabetes, hypertension and cardiovascular disease. To reduce the risk of developing type 2 diabetes, it is important that you significantly reduce or avoid alcohol.

Drinking alcohol can cause your blood sugar levels to rise.

Alcohol contains a lot of calories. Therefore, drinking alcohol may prevent you from losing weight, as part of your diabetes prevention programme.

Health Consequences of Alcohol

The following bullet points outline the negative health implications that alcohol can have:

- Contributes to weight gain
- Increases blood pressure
- Increases the risk of cardiovascular diseases (coronary heart disease, stroke, hypertension)
- Increases the risk of certain cancers
- Impairs the immune system (meaning that the body will struggle more to fight off any infections)
- Damages the liver which may lead to alcoholic fatty liver, hepatitis and cirrhosis (liver diseases)
- May lead to malnutrition (over- or underweight) which may occur due to poor dietary intake and a disturbance in the absorption of nutrients from the gastrointestinal (digestive) tract into the blood

- Reproductive problems such as impotence and struggling to fall pregnant
- Increases the risk of birth defects as drinking during pregnancy can cause brain damage and other serious problems to the baby. Because it is not yet known whether any amount of alcohol is safe for a developing baby, women who are pregnant or may become pregnant should not drink at all.
- Behavioural consequences of alcohol:
 - Contributes to 50% of all motor vehicle fatalities
 - Contributes to unsafe sex and increased risk of HIV infection and the progression to AIDS
 - Contributes to risky behaviour and accidental death (drowning etc.)

What is responsible drinking?

Alcohol can be consumed; however, this should be done in the appropriate quantities. Guidelines for alcohol consumption for men is two standard drinks per day and for women is one standard drink per day.

What counts as a standard drink?

A "standard" drink is any drink that contains about 14 grams of "pure" alcohol. Drinks can therefore be served in different amounts (beer vs. tot), but each will contain approximately the same amount of alcohol (14 g pure alcohol) and counts as one single drink. Refer to the box below:

- No more than two alcoholic beverages per day for men and no more than one alcoholic beverage for women

Quantities of different drinks that are the same as ONE standard drink



1 glass wine
(125ml)



1 single measure
spirits (25ml)



1 bottle beer/
cider (330ml)



1 can beer/cider
(330ml)



1 carton iJuba (1l)

The number of standard drinks in commonly quantities of alcohol

				
1 bottle spirits (750ml)	1 bottle wine (750ml)	1/2 bottle spirit (375ml)	1 quart beer/cider	Double measure spirit (50ml)
30	6	16	2	2

- Drink SLOWLY (do not keep the drink in your hands at all times – rather put it down and have breaks between sips AND drink PLENTY of water)
- DO NOT DRINK AND DRIVE
- Concentrate on consuming healthy snacks with alcohol
- Remember that you are in charge of your own consumption and you alone are responsible for reaching your weight loss goals and reducing your risk for developing type 2 diabetes therefore IGNORE peer pressure – you are making the right decisions for you and for your health – take charge today!

Stress

Chronic stress is related to diabetes. Therefore, your ability to manage and reduce stress plays a big role in reducing your risk of developing type 2 diabetes.

Stress can lead to feelings of tiredness and this may affect your willingness to exercise. Stress may also make you want to eat more (this is called comfort eating).

To reduce the risk of developing type 2 diabetes and to maintain an effective weight management, you need to be able to manage stress.

Tips on how to manage stress.

How to manage stress

Identify and face the problem

Accept that you are stressed and decide what (and whether) you can do about (anything) it.

Think positively

Remind yourself that you have managed to get through bad times before and will again.

Seek help

Talk to your family and friends about how you feel.
Your doctor or counsellor can also help.

Keep active

Add some extra physical activity to your routine and maybe try some additional relaxation methods. Simple deep breathing can really help break a pattern of built-up stress.

Enjoy life

Spend time having fun, doing things that you enjoy and help you to relax in the company of family and friends.
Try to eat well and make healthy food choices, and take time to enjoy your meals.

Be aware of how your body is feeling

Seek help from your health care provider if you do experience any negative changes in your health.

Talk to your doctor

Have your blood pressure checked and discuss whether your medication needs adjusting during this time of stress.

How NOT to manage stress

Do **NOT** ignore the signs and pretend that nothing is wrong, it only makes things worse.

Do **NOT** allow negative thinking to rule your life, as this is counterproductive.

Do **NOT** think that you have to handle it all on your own.

Do **NOT** bottle-up all your feelings.

Do **NOT** sit around the house doing nothing hoping that it will get better on its own.

Do **NOT** hide away from people who care for you.

Do **NOT** use alcohol or other drugs to make yourself feel better.

Do **NOT** use food to comfort yourself.

Do **NOT** ignore your health or any symptoms that may indicate a health problem.

Do **NOT** think that getting professional help is a sign of weakness, or that your doctor is not interested in your health.



SESSION 6

THE FINAL CHECK-IN

LIFESTYLE CHANGES & CONCLUDING REMARKS



Congratulations!

You made it to the end of the eight-month program

We would like to know about your experience of the programme, including your successes and challenges. To do this, think back on the goals you made at the end of each session. Compare to the goals you set:

- 1) which goals did you reach?
- 2) what worked for you?
- 3) which goals did you not accomplish?
- 4) what were the challenges you experienced?

Use the table (also in workbook) below to answer the questions above.

Goals reached

Goals that still need to be addressed

What worked for you?

Challenges experienced

Remember:



Reaching even one of the goals you set means that you should be congratulated! Any change (even small) is good, BUT in order to further reduce your risk of developing type 2 diabetes, you will need to try to address all the risk factors associated with type 2 diabetes.

If you struggled in some aspect to change your lifestyle, do not worry. Now is the time to modify your goals so that they are achievable and will still improve your lifestyle in the LONG-TERM.

Some pointers to help you make long-term lifestyle changes

- Don't underestimate your abilities; accept yourself as a unique person with endless potential.
- Goals must be positive experiences with realistic outcomes.
- Be creative! Goals can include an element of fun and excitement.
- Goals are not cast in stone; you are always able to change a goal to be more suitable or achievable.
- Keep track of your current habits (both healthy and unhealthy); build onto your healthy habits, and take action to change your unhealthy habits.
- Find family and friends who will support and encourage you.
- Success keeps most people motivated. Stick up a list of your goals in a visible place so that you are continually reminded of your goals.
- Celebrate or reward yourself for each goal that you have successfully completed. Each little success adds up and will improve motivation and your general health; pat yourself on the back and FEEL GOOD about your ability to make changes.
- Change the things that prevent you from reaching your goals; and learn from others on how to make changes towards a healthier lifestyle.

Reminder: Tips for a healthier lifestyle



Eat the right amount of food and avoid overeating



Eat more beans and lentils



Exercise regularly



Drink about 8 glasses of clean water every day



Eat more fruit and vegetables



Set targets to achieve your health and well-being goals



Say no to sugar sweetened cold drinks



Do not smoke



Avoid eating chips and salty snacks



Limit intake of alcoholic drinks



Do not add extra salt to food



Avoid eating cakes and biscuits



Give yourself time to relax!

Concluding remarks

A support system can really assist you to improve your lifestyle. We hope that you have found the support of the people involved in the program meaningful. Support is key to making long term lifestyle changes. Remember that having a partner, community, or developing phone buddies (SMS/WhatsApp group) are steps that may help you continue to make meaningful changes to your lifestyle.

We hope that even though this program has come to an end, that you will use the knowledge gained and continue to make changes to reduce your risk of developing type 2 diabetes.

The most important concept to remember when needing to make lifestyle changes is that:



You must take
responsibility for
your own destiny



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