Session 01

Understanding pre-diabetes

Highlights

Introduction

This session will provide you with lots of information about pre-diabetes in an accessible way. It will explain how each of the different elements of the DPP works towards supporting you to live a future free of Type 2 diabetes.

The Momenta DPP is about making small changes to your lifestyle, that add up to make a big difference to your wellbeing.

Research tells us that people need at least nine months to learn and practice the skills that they need to improve their lifestyle to reduce their diabetes risk.

We look forward to supporting you on your journey.

Note: This booklet contains highlighted extracts from Session 01 of your main *Workbook*. You will receive your complete set of resources after attending the first session. These include a full programme *Workbook* and *Lifestyle logbook*, *Momenta-in-my-Pocket* label reader and a pedometer. The full *Workbook* has additional Session 01 content including Quick Wins, Map of Motivation and the Momenta Step Challenge map. It also has a helpful Introduction section.

Our focus in this session

- Understanding pre-diabetes and how it develops
- Learning how the Momenta DPP works to prevent you from developing Type 2 diabetes

Quiz: Understanding pre-diabetes

Tick the correct answer to the questions below:

1. What proportion of the UK population has pre-diabetes??

   ☐ 20% ☐ 35% ☐ 50%

2. What is the main cause of pre-diabetes?

   ☐ Genetics
   ☐ Low levels of physical activity
   ☐ Being overweight
   ☐ Unhealthy diet
   ☐ All of these

3. Which of the following are complications of Type 2 diabetes?

   ☐ Kidney disease or kidney failure, requiring dialysis
   ☐ Stroke and heart attacks
   ☐ Vision loss or blindness
   ☐ Weakened immune system, higher risk of infections
   ☐ Erectile dysfunction
   ☐ Nerve damage, also called neuropathy, that causes pain, or less sensation in your feet, legs and hands
   ☐ Slow wound-healing, rare potential for amputation
   ☐ All of the above

4. What percentage of cases of Type 2 diabetes can be prevented by making lifestyle changes, such as being more active and eating a healthier diet?

   ☐ 5% ☐ 10% ☐ 20% ☐ 50%

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5. Out of 100 people with pre-diabetes who made **ALL** of the changes recommended by their doctor, how many went on to develop Type 2 diabetes one year later?

☐ None of them ☐ Ten of them

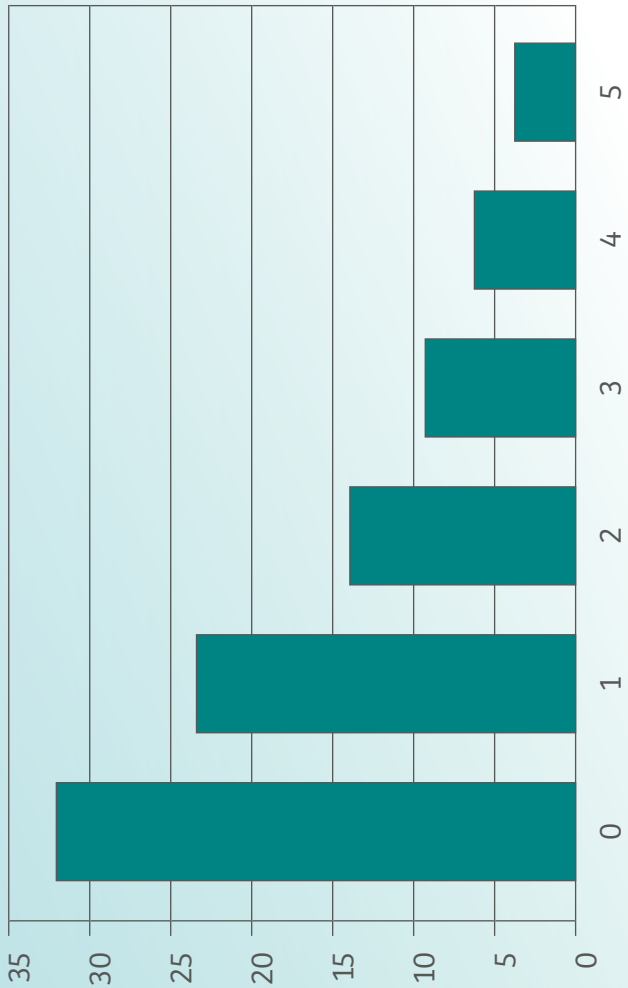
☐ Thirty of them ☐ Fifty of them

The changes requested by the doctors referred to in question 5 were:

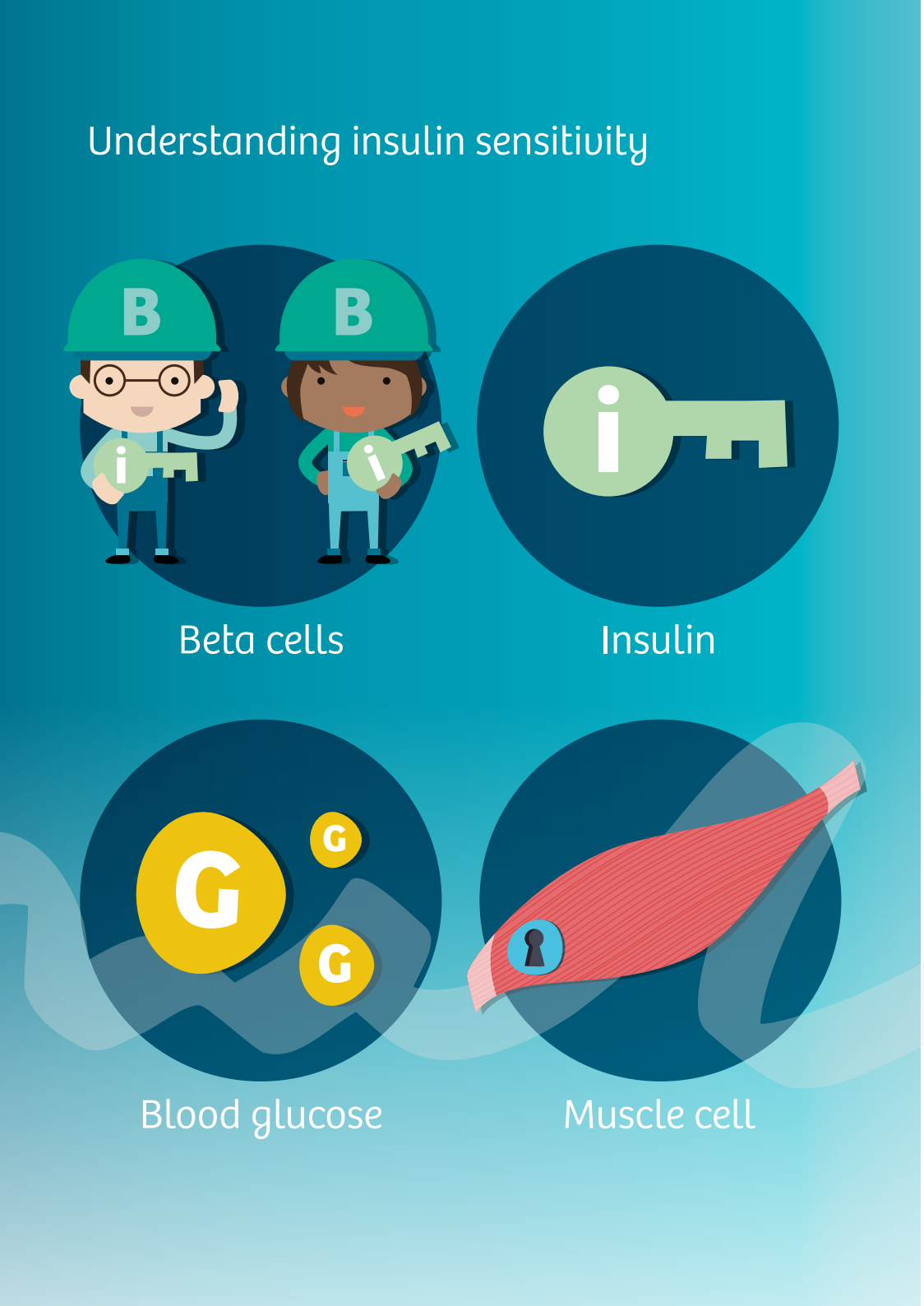
1. Lose weight
2. Eat less fat
3. Limit foods high in saturated fat
4. Eat more fibre
5. Be more physically active

The 14 Momenta DPP behaviours will help you to achieve this in a gradual and sustainable way, so that you too, can dramatically reduce your risk of developing Type 2 diabetes.

Tuomilehto graph



(Graph adapted from Tuomilehto et al. NEJM, 2001)



A. The Blood Sugar Story: The characters

Beta cells

The cells in an organ called the pancreas that produce, store and release insulin.

Insulin

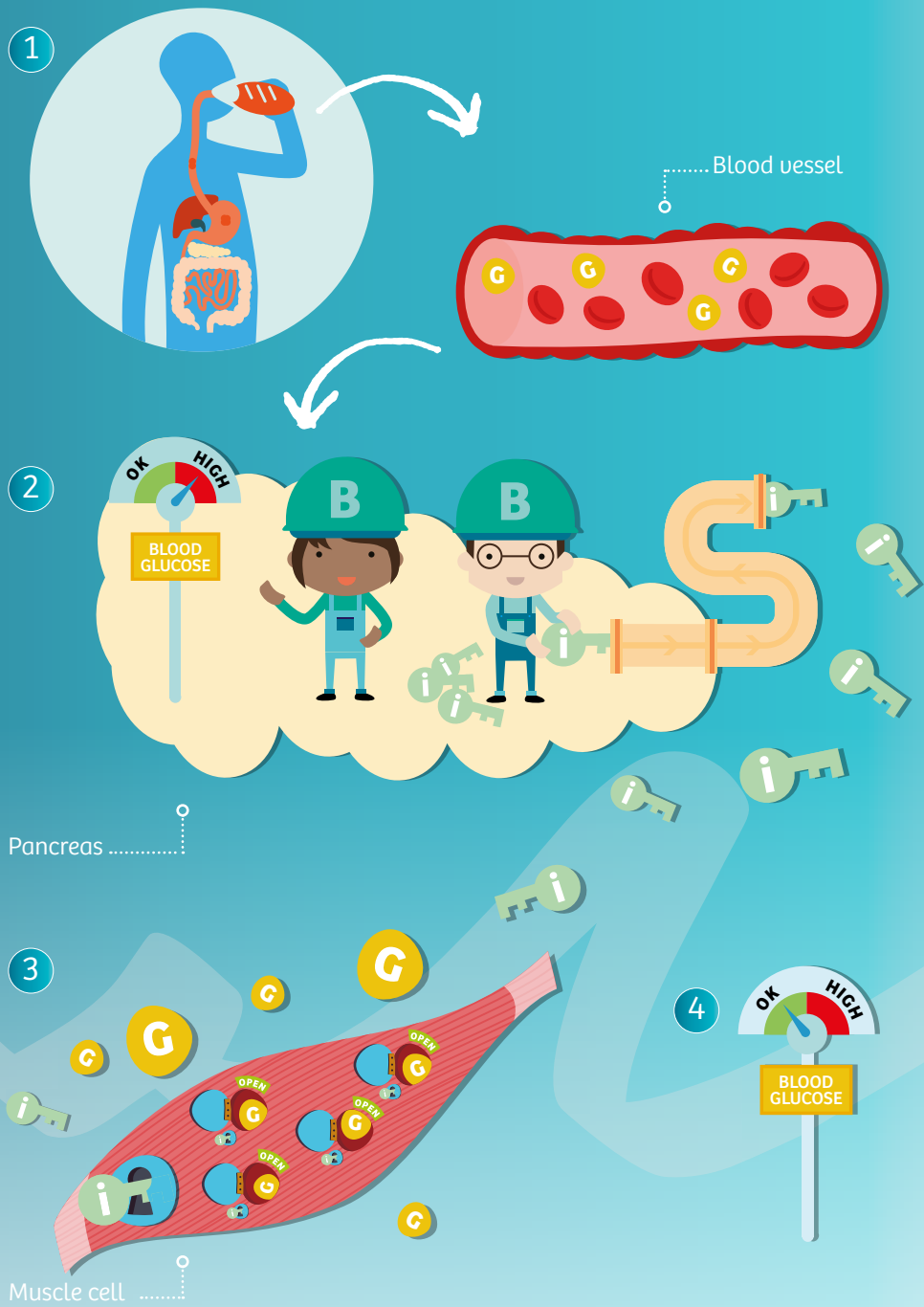
The hormone that helps cells take blood glucose (sugar) out of your blood and into your cells so that it can be used.

Blood glucose (sugar)

When you eat food your body turns the carbohydrates in it into blood glucose (a type of sugar), so that you can use it to give you energy.

Muscle cells

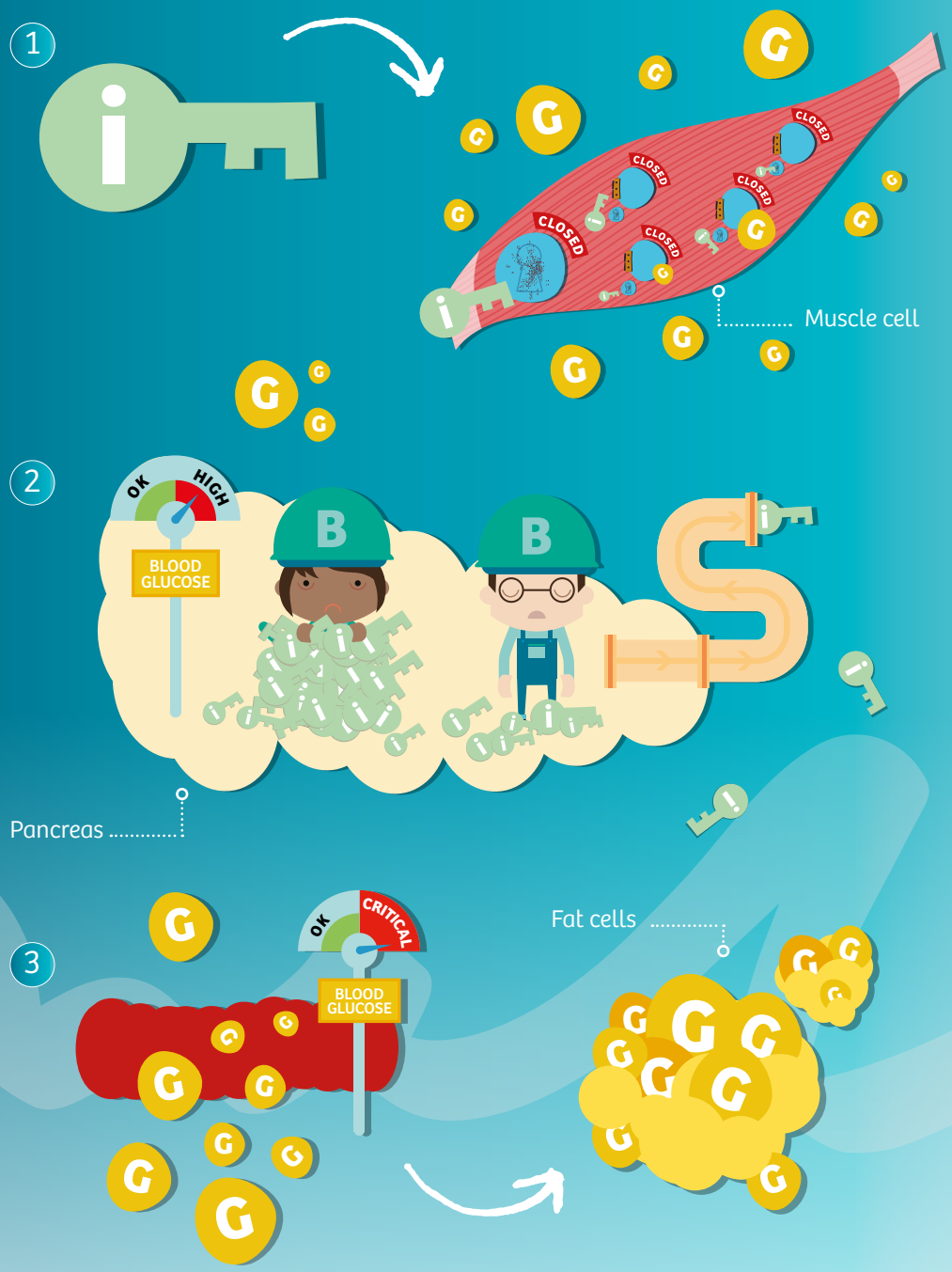
The cells in your body that use most blood glucose.



B. How is blood glucose used in the body?

1. When you eat food that contains carbohydrate, your body breaks the food down into a type of sugar called glucose and passes it into your bloodstream to carry it around your body.
2. When your pancreas notices that there is an increase in blood glucose, your beta cells produce insulin.
3. Insulin acts like a key that unlocks a door on the surface of a cell and opens it to let the blood glucose go inside.
4. Levels of blood glucose fall to normal as the extra glucose enters the cells.

In people who don't have pre-diabetes or diabetes, this works every time and blood glucose remains stable within a normal range, no matter what you eat (ie you can eat a lot of food and your blood glucose won't change very much).



C. Beta cell failure and insulin insensitivity

In pre-diabetes, three things seem to happen:

1. Over time, your body's cells get less sensitive to insulin (insulin insensitivity). It's like the locks that open the doors to your cells get rusty or blocked. This means that the insulin key doesn't work as well and blood glucose keeps getting higher.

2. As your blood glucose keeps rising, your beta cells have to work harder and harder to produce more insulin to try and get blood glucose down. Eventually they get tired and stop working properly. Your body stops producing enough insulin and your blood glucose keeps rising. High blood glucose is bad for your body because it leads to a gradual hardening of the blood vessels. This affects all your body's systems and is how diabetes leads to liver and kidney failure, blindness, nerve damage and poor circulation to your legs and feet.

3. Because your body doesn't like high blood glucose, it starts to move the extra blood glucose into fat cells. Fat cells also make your body more resistant to insulin. This means your body gets caught in a vicious cycle.

Type 2 diabetes gets diagnosed when your body regularly can't produce enough insulin to keep blood glucose at safe levels. Sometimes medical professionals refer to 'insulin insensitivity' as 'insulin resistance'. They both mean the same thing.

Your weight loss goal

We've known for a while now that people in the UK are getting heavier. Today, over 64% of adults are overweight or obese – being overweight has become the norm.

So should we be worried? Unfortunately, yes. Being overweight isn't just uncomfortable – it can have a serious impact on our health.

Excess body weight increases our risk of Type 2 diabetes, coronary heart disease and some cancers, amongst other health problems. Plus, it goes hand in hand with other health risks, like high cholesterol, high blood pressure and high blood glucose levels.

The good news is that changing your lifestyle and losing even a small amount of weight now can help decrease your risk of Type 2 diabetes. Research shows that even 5% is helpful, so we suggest you make this your initial goal. One of the most effective ways of reducing your chance of getting diabetes is to lose weight.

Your end goal

Every large weight loss starts with that initial 5%! It's fine to have a bigger goal in mind, but work towards it with smaller, more realistic goals along the way. We'll help you set and reward each mini-milestone to keep you motivated. Using the Momenta principles you might lose considerably more.

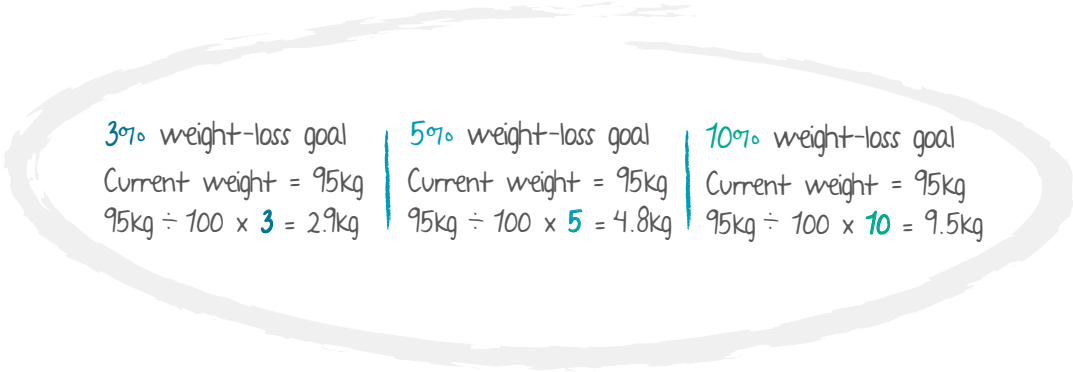
The potatoes analogy

Worried your weight loss goal is too small? Imagine a 1kg bag of potatoes. If your 5% goal is 5kg that's five bags of potatoes. Imagine carrying those around with you all day and how it might affect your energy levels or breathing.

Activity: Your initial weight loss goal

Work out your 3%, 5% and 10% weight loss goals. To calculate the percentages, divide your weight (in kilograms) by 100 and then multiply this by 3, 5 or 10.

For example:
Dave weighs 95kg. His 5% target loss is 4.8kg (goal weight 90.2kg) and his 10% target loss is 9.5kg (goal weight 85.5kg).



Write **just** your 5% weight loss goal **(in kilograms)** in the box below.

My initial 5% weight loss goal:

kg

Top tip!

Divide your weight in pounds by 2.2 to convert it to kilograms. Remember there are 14lbs in a stone

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SMART Goal

Weight loss target

Set your initial weight loss goal. Talk to your Momenta coach and the rest of your group if you need any support with this.

Think about how your goal will benefit you

Bronze	I will aim to hit my six month weight loss target of 3%	☐
Silver	I will aim to hit my six month weight loss target of 5%	☐
Gold	I will aim to hit my six month weight loss target of 10%	☐
Other	....	☐

SMART Goal

Monitoring food intake: Keeping a food diary

Set your goal for the next week. Talk to your Momenta coach and the rest of your group if you need any support with this.

Momenta is about starting where you are now, and progressing at your own pace

Bronze	I will keep a record of what I eat and drink on 1-3 days a week	☐
Silver	I will keep a record of what I eat and drink on 4-6 days a week	☐
Gold	I will keep a record of what I eat and drink every day	☐
Other	....	☐

Note: You can find a blank *Food diary* template to print at **www.discovermomenta.com/diabetes-prevention-3** under Diabetes Prevention - or ask your Coach.

Plan for change

Working towards this goal is important to me because:

Eg It will help me to identify my current eating and drinking habits

The plans I need to put in place to help me achieve my goal are:

Things that stand in the way of me achieving my goal are:

Solutions I could use to overcome these barriers are:

I could get further support from:

Eg help from friends, family and others on Momenta

I will review my goal on: