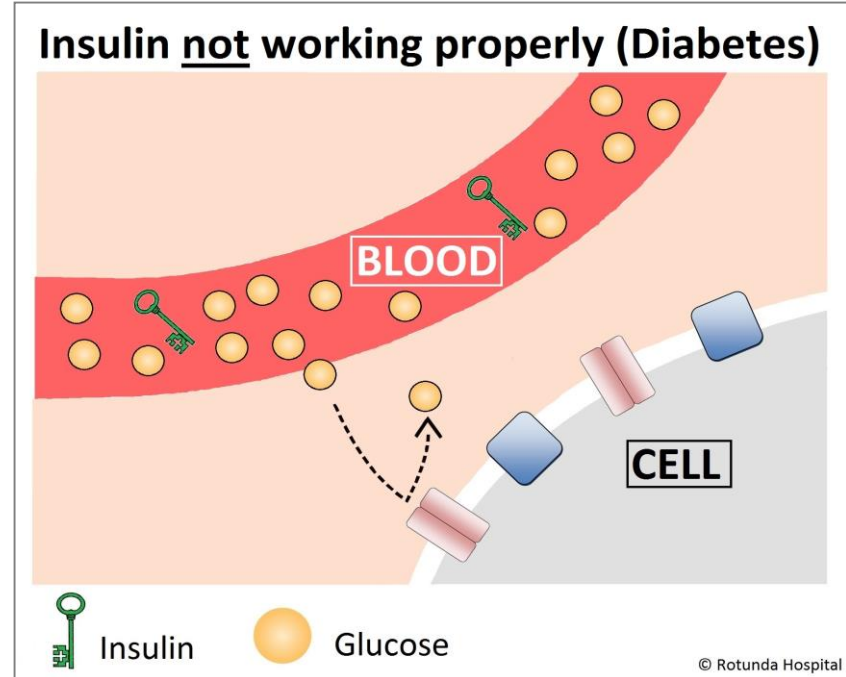
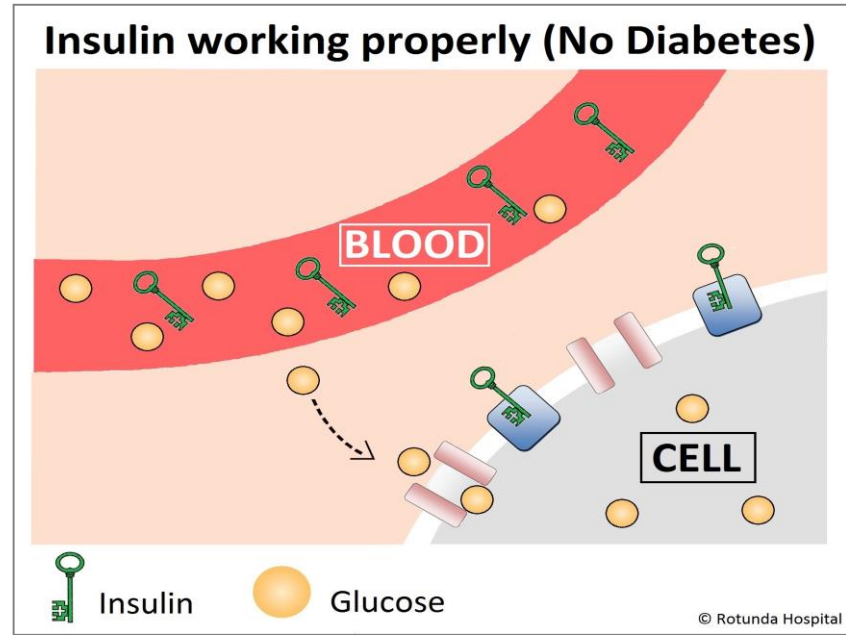




**THE  
ROTUNDA  
HOSPITAL**  
DUBLIN

# Welcome to the Gestational Diabetes Education Class

WHY ME?



# What is gestational diabetes?



## **Gestational Diabetes:**

- Is not your fault
- Is not caused by eating too much sugar in early pregnancy

# Emotional Journey

At Diagnosis



scared concerned nervous guilty frustrated afraid  
stressed tired surprised anxious confused  
disappointed upset worried shocked  
upset worried

Weeks After Diagnosis



ok informed understanding alright  
used to it difficult coping  
supported fine ready for it to be gone  
grand routine tough in good hands  
grand routine tough in good hands  
grand routine tough in good hands

After Delivery of Baby

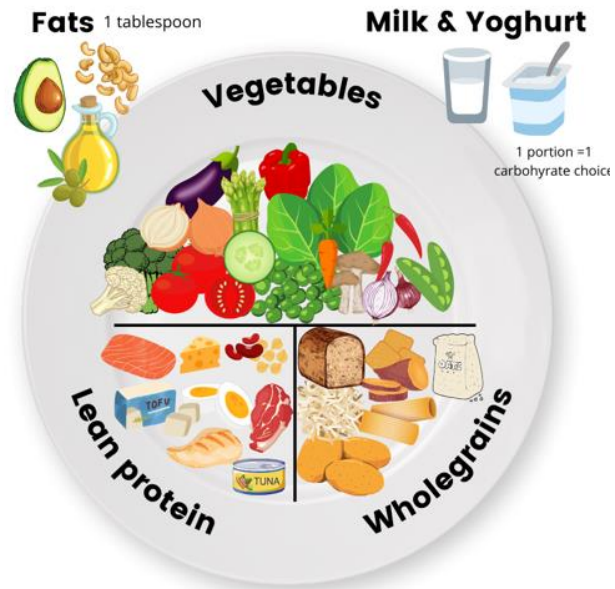


happy manageable energised  
afraid for the future health conscious  
relieved supported  
informed glad it's over it was hard  
informed glad it's over it was hard  
informed glad it's over it was hard

# A Treatment Plan for GDM

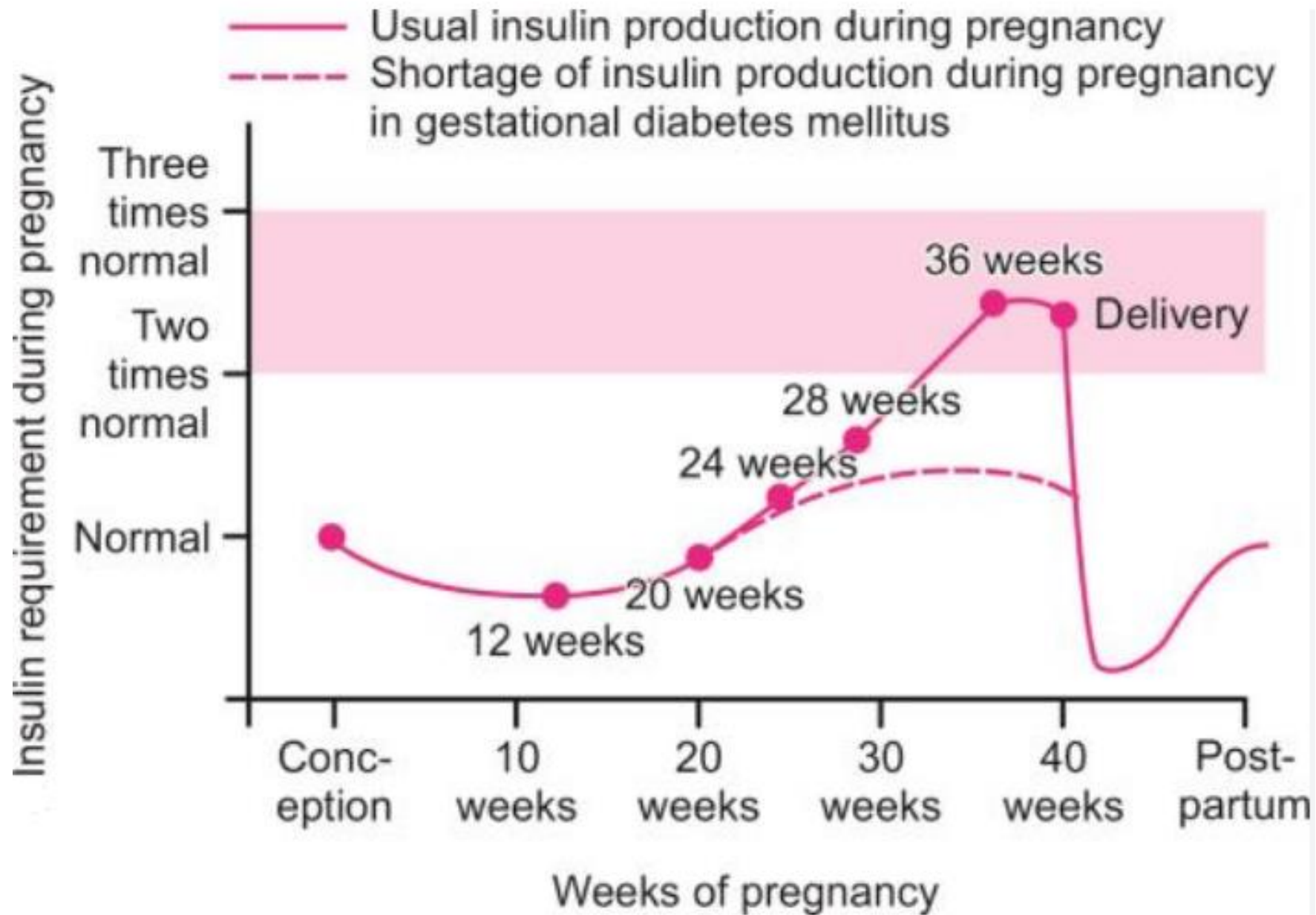
For most women, gestational diabetes can be managed with:

## FOOD CHOICES



## PHYSICAL ACTIVITY





# Physical activity for pregnant women

- Helps to control weight gain
- Helps reduce high blood pressure problems
- Helps to prevent diabetes of pregnancy
- Improves fitness
- Improves sleep
- Improves mood

**Not active?**  
Start gradually

**Already active?**  
Keep going



Do **muscle strengthening** activities twice a week

**Every activity counts**, every minute counts, more is better

No evidence of harm

Listen to your body and adapt 

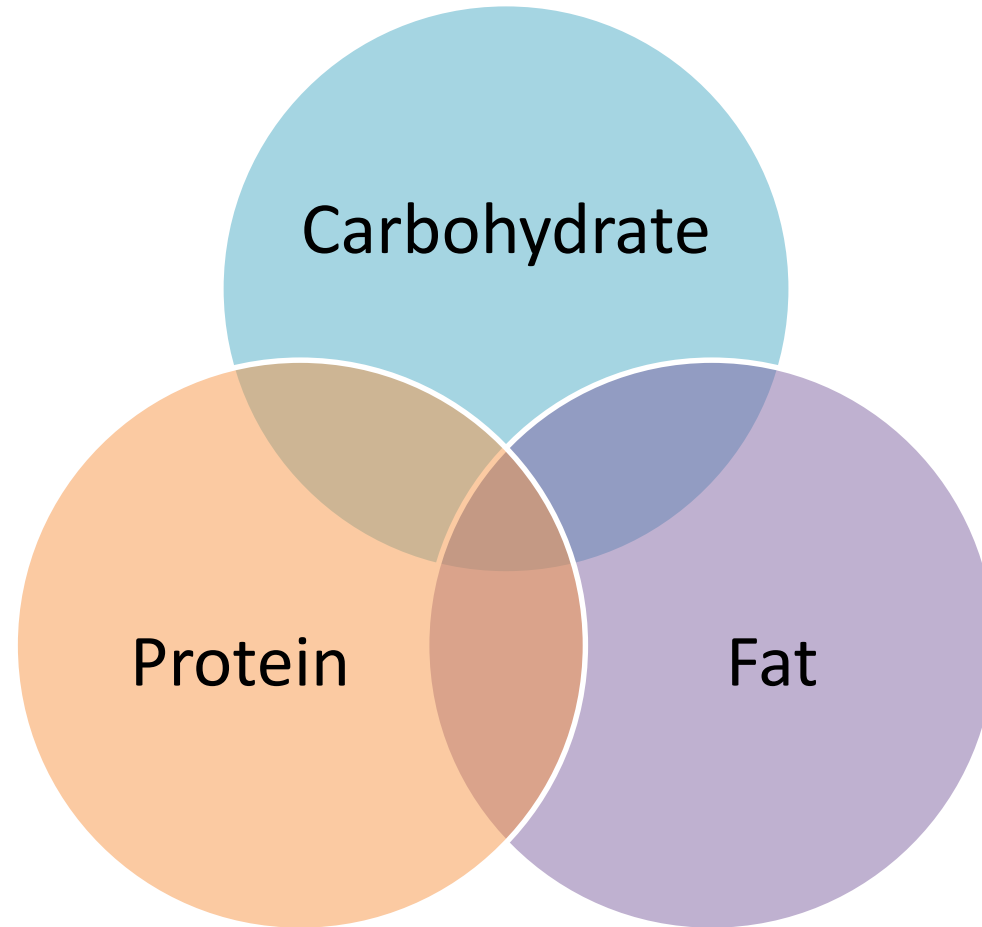
Don't bump the bump

<https://rotunda.ie/diabetes/>



The Bump Room

# Nutrients in Food



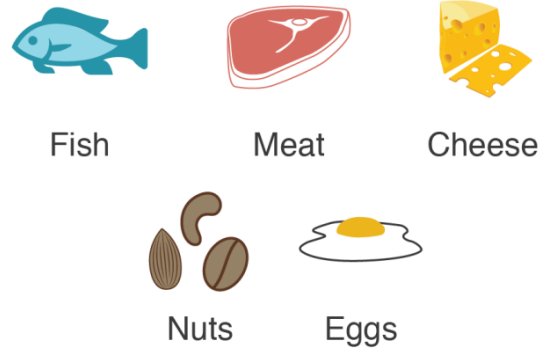


# Carbohydrate-free foods

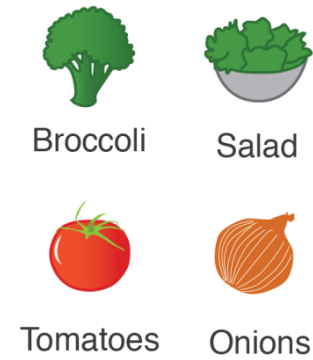
Fat



Protein

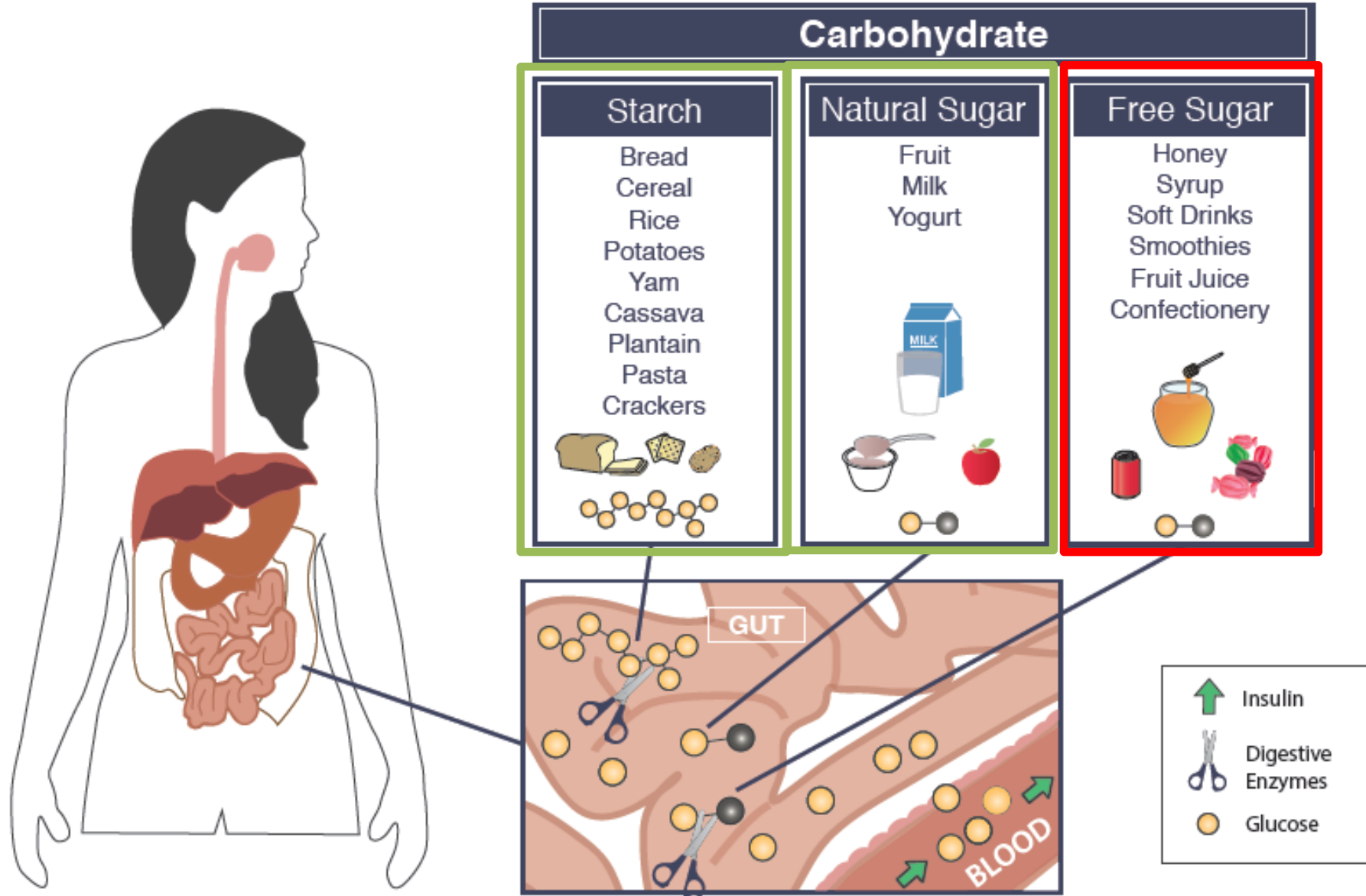


Water/Vitamins



Does **NOT** turn into Glucose

# Where does glucose come from?



# Carbohydrate and blood glucose levels

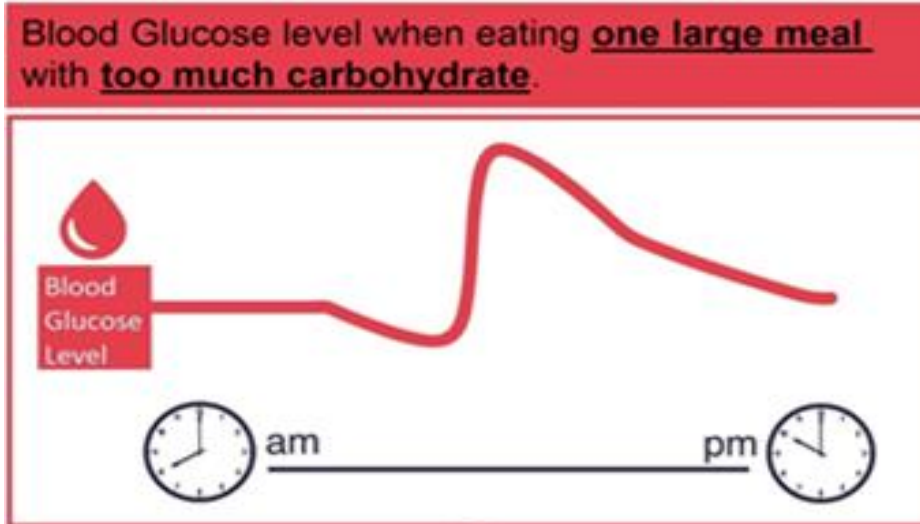
Management of diabetes does not mean cutting out all carbohydrate

The key to managing your blood glucose levels is to:

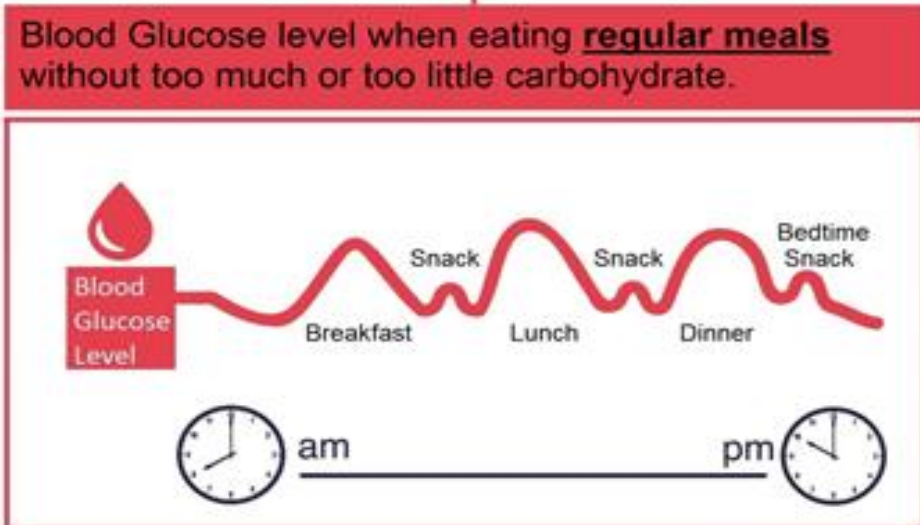
1. Eat **regular meals** and **snacks** containing carbohydrate
2. Choose the **right type** of **carbohydrate** foods
3. Watch your **carbohydrate portion** size



# Step 1: Eat regular meals and snacks with some carbohydrate

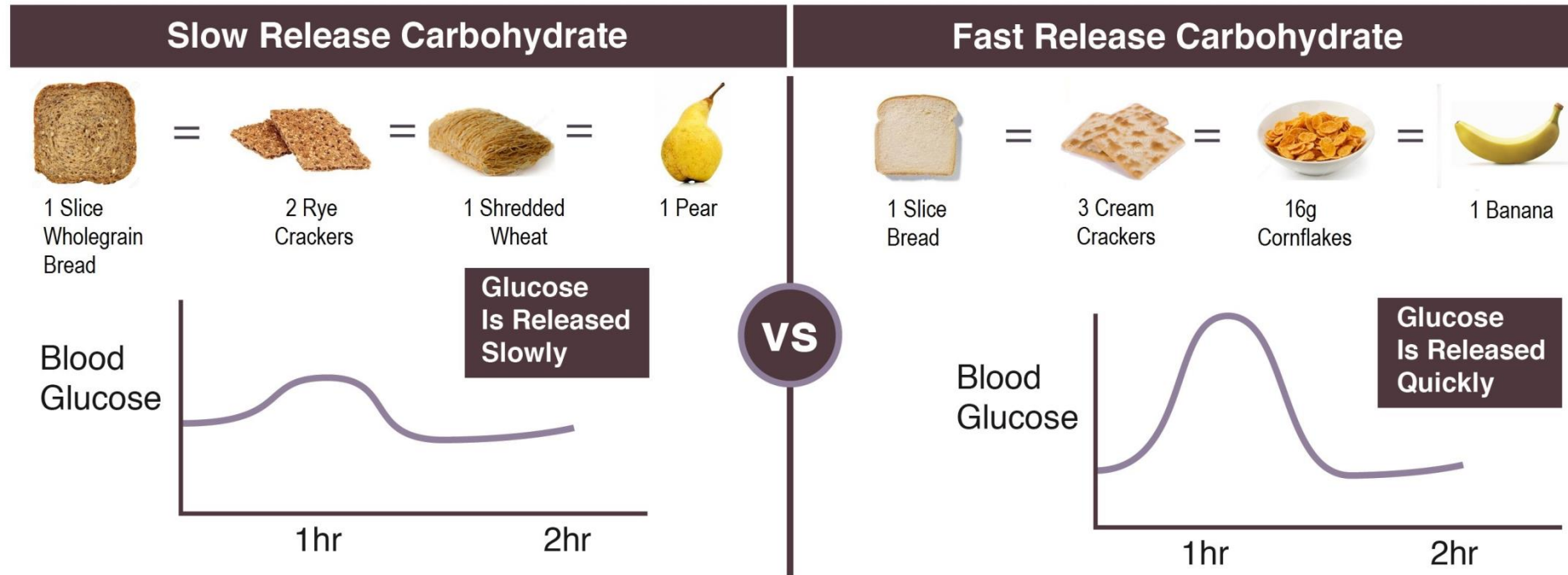


VS



- ✓ Breakfast within 1 hour of waking (small amount of carbohydrate)
- ✓ Regular meals (5-6 hours apart)
- ✓ 3 regular snacks each day between your meals
- ✓ Avoid large amounts of carbohydrate at your evening meal
- ✓ Evening/bedtime snack (aim no more than 10 hours fast overnight)

# Step 2: Choose Slow-Release Carbohydrate Foods



© Rotunda Hospital



Choose these foods.



Limit or avoid these foods

# Step 2: Choose Slow-Release Carbohydrate Foods

✓ Try to choose these foods at most of your meals.

BETTER carbohydrate choices	
<b>Bread</b>	<ul style="list-style-type: none"> <li>Wholegrain, multiseed, stoneground, rye, "Low GI", sourdough: for example, McCambridge® "Wholewheat" or "High Fibre and multiseed"; Johnson Mooney &amp; O'Brien® "Great Grains"; Brennans® "Wholegrain Chia" or "Be Good" wholegrain (Aim less than 15g carbohydrate per slice of bread)</li> <li>Pita, chapatti, roti made from chickpea or whole-wheat flour.</li> <li>Wholemeal or seeded tortilla wrap</li> </ul>
<b>Cereals</b>	<ul style="list-style-type: none"> <li>Jumbo porridge oats, All Bran® (sticks) or Shredded Wheat®.</li> </ul>
<b>Grains</b>	<ul style="list-style-type: none"> <li>Whole-wheat pasta, white pasta.</li> <li>Egg noodles, white basmati rice, brown rice.</li> <li>Whole barley, quinoa, wholemeal couscous.</li> </ul>
<b>Potato</b>	<ul style="list-style-type: none"> <li>Boiled new or baby potatoes (with skin).</li> <li>Sweet potatoes, yams, cassava.</li> </ul>
<b>Snacks</b>	<ul style="list-style-type: none"> <li>Rye crispbread with seeds (e.g. Ryvita®), oatcakes.</li> <li>Popcorn (preferably unsalted).</li> </ul>
<b>Fruit</b>	<ul style="list-style-type: none"> <li>Apple, pear, peaches, plums, berries, fresh figs, kiwi, oranges.</li> </ul>
<b>Milk &amp; Yoghurt</b>	<ul style="list-style-type: none"> <li>Plain, Greek, natural, "diet" and no added sugar yoghurts, for example, Danone® "Activia 0%", Muller® Light, Irish yoghurts® Diet, (Aim less than 12g carbohydrate per serving)</li> <li>Whole, low-fat and skimmed milks.</li> <li>Milk alternatives (soy, nut and oat milks) with <u>no added sugar</u> (aim for 5g total carbohydrate per 100ml, or less).</li> </ul>



# Limit or avoid highly processed carbohydrate foods

**X** In general, try to limit or avoid these foods:

Carbohydrate choices to LIMIT or AVOID	
<b>Bread</b>	<ul style="list-style-type: none"> <li>White and wholemeal breads.</li> <li>"Thick cut" or "doorstep" breads (even if wholegrain)</li> <li>White bagels, bread rolls, chapatti and panini.</li> </ul>
<b>Cereals</b>	<ul style="list-style-type: none"> <li>All other breakfast cereals including: quick-cook oats, muesli, Weetabix®, Shreddies®, Ready-Brek®, Coco-Pops®, Cornflakes®, Rice Krispies®, Branflakes®, Granola, Special K®.</li> </ul>
<b>Grains</b>	<ul style="list-style-type: none"> <li>Easy-cook/ long grain rice or jasmine rice.</li> <li>Rice noodles or instant noodles (e.g. Pot Noodles).</li> </ul>
<b>Potato</b>	<ul style="list-style-type: none"> <li>Mashed potato, chips, potato croquettes, waffles.</li> </ul>
<b>Snacks</b>	<ul style="list-style-type: none"> <li>Crisps, corn snacks, white crackers, rice cakes.</li> <li>White scones, cakes, biscuits, cereal bars.</li> </ul>
<b>Fruit</b>	<ul style="list-style-type: none"> <li>Bananas, grapes, mango, pineapple and melon.</li> <li>Tinned fruit in syrup, dried fruits, fruit juices and smoothies.</li> </ul>
<b>Milk &amp; Yoghurt</b>	<ul style="list-style-type: none"> <li>Yoghurts with added sugar or fruit compote.</li> <li>Yoghurt drinks (Yop®, Yazoo®).</li> <li>Flavoured milk and milkshakes. Milk alternatives with sugar.</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>Breaded or battered meat, fish and chicken.</li> <li>Pastries, pizza, yorkshire pudding.</li> <li>Ready-made sauces with added sugar.</li> </ul>



Choose bread with less than  
15g carb per slice



Avoid white, wholemeal and thick cut  
wholegrain bread





# Suitable yogurts



Check the label:

Aim for **less than 12g total carbohydrate** per pot.

## Strawberry No Added Sugar Yogurt

	Per 100g	Per serving (125g)
Energy (kcal)	49	56
Fat (g)	0	0
Of which saturates (g)	0	0
<b>Carbohydrate (g)</b>	<b>6.6</b>	<b>7.6</b>
Of which sugars (g)	6.4	7.4
Protein (g)	4.4	5.1
Salt (g)	0.19	0.22
Calcium (mg)	172	198

**Ingredients:** Fat Free Yogurt, Strawberry (12%), Oligofructose, Flavourings, Modified maize starch, Stabilisers (Pectin, Carrageenan,) Black Carrot Juice Concentrate, Acidity Regulators, Sweeteners, Vitamin D, Cultures

# Fruit and Vegetables

## Fruit

- Choose **slow release** options:



- Add **protein** when snacking – nuts, nut butter or cheese
- **Avoid:** juices, smoothies and dried fruit (raisins, dates, dried figs, prunes) and exotic fruit

## Vegetables

- **Beans, peas and lentils** (dahl) contain some carbohydrate:
  - Glucose is released very slowly.
  - If you are including more than ½ cup in a meal, you might need to eat a smaller portion of other starchy carbohydrates foods.



## Avoid foods high in sugar



## Choose sugar-free



# Step 3: Watch your carbohydrate portion sizes

- **Page 9** in your Gestational Diabetes booklet contains a list of carbohydrate “choices”.
- **1 carbohydrate “choice” contains 10-15g carbohydrate**



**Step 3: Watch your carbohydrate portions**

Eating the right amount of carbohydrate (not too much or too little) helps to manage your blood glucose levels and ensure you get enough nutrition.

As a general guide, most women will need to eat:

- ✓ 1-2 carbohydrate “choices” at breakfast
- ✓ 3-4 carbohydrate “choices” at lunch and dinner
- ✓ and 1 carbohydrate “choice” at snacks

The foods below all contain a similar amount of carbohydrate (10-15g) in one serving (or “choice”). Use these choices as building blocks to reach the recommended amounts to carbohydrate at meals and snacks

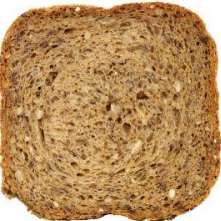
**1 carbohydrate choice equals:**

Food	Serving size (1 carb. choice)
All Bran®(sticks)	30g
Shredded Wheat®	1 biscuit (22g)
Porridge (Jumbo oats)	20g / ¼ cup/ 2 tbsp (oats)
Bread (e.g. wholegrain, stoneground or low GI)	1 medium slice (30-35g)
Pitta bread (wholemeal)	1 small (30g) or ½ large (60g)
Chapati or Roti (wholemeal or chickpea flour)	35g
Tortilla wrap (wholemeal or seeded)	½ of 8”wrap (full weight 60g)
Seeded rye crisp breads (e.g. Ryvita®)	2 crackers
Wholegrain/seeded oat crackers	2-5 crackers (check label)
New or baby potato (boiled)	100g or 3 baby potatoes
Sweet potato	75g (boiled) or 50g (baked)
Roast baby potatoes or wedges (homemade)	50g (cooked)
Yam (1 slice) or plantain (unripe)	45g (boiled)
Cassava	50g (raw)
Pasta, rice (brown / basmati) or egg noodles	50g (cooked) or 20g (uncooked)
Couscous (semolina)	70g (cooked) or 20g (uncooked)
Tapioca flour	1 heaped tbslp (15g)
Fruit	1 medium / 2 small/ 1 cup of berries
Yoghurt (plain unflavoured natural/Greek)	200g
Yoghurt (low sugar fruit flavoured)	125g pot
Cow’s milk or Oat milk (no added sugar)	200ml glass
Milk alternatives (almond, soy, coconut) with no added sugar	Do not need to be counted as a carbohydrate choice

9

# Step 3: Watch your carbohydrate portion sizes

These foods all contain 1 Carbohydrate choice (but look very different!)



1 slice Wholegrain bread



2 Ryvita crackers



1/2 Tortilla wrap or Chapatti



50g or 1/2 cup Basmati Rice or Wholewheat Pasta (Cooked)



1 glass of milk



1 pot of yoghurt



1 Shredded Wheat



20g Jumbo Oats



40g All Bran (Sticks)



100g potato (boiled)



1 Medium Fruit



2 Small Fruit

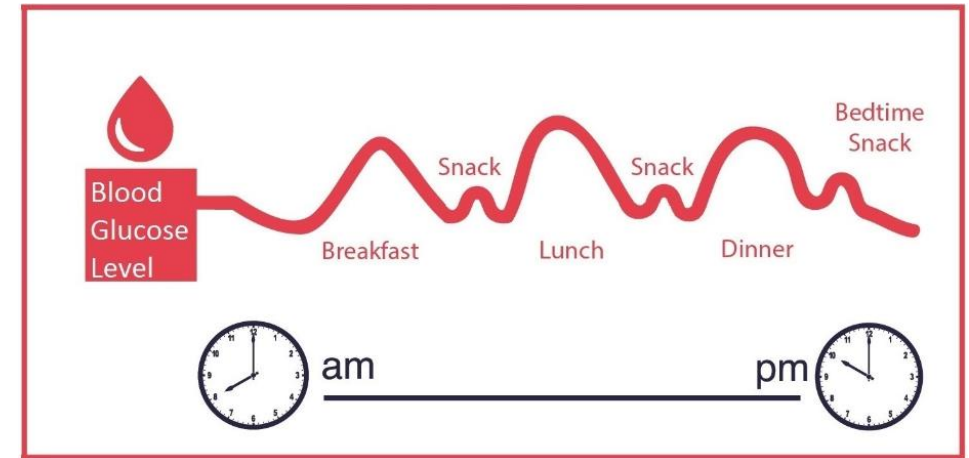


1 cup/handful of berries

## Step 3: Watch your carbohydrate portion sizes

As a guide, **most women need** to eat:

- ✓ **1-2** carbohydrate “choices” at **breakfast**
- ✓ **3-4** carbohydrate “choices” at **lunch** and **dinner**
- ✓ **1** carbohydrate “choice” at **snacks**



If you have had **bariatric or weight loss surgery** in the past, these amounts will be different. You will get an individual appointment with the dietitian to discuss.

# Cereals, grains and starch

2 Carbohydrate choices =

Pitta Bread (wholemeal)



New Potatoes (boiled)



Brown Bread



Basmati Rice



Pasta Bows



Yam (boiled)



Tortilla (wholemeal)



Noodles (egg)



Plantain (boiled)



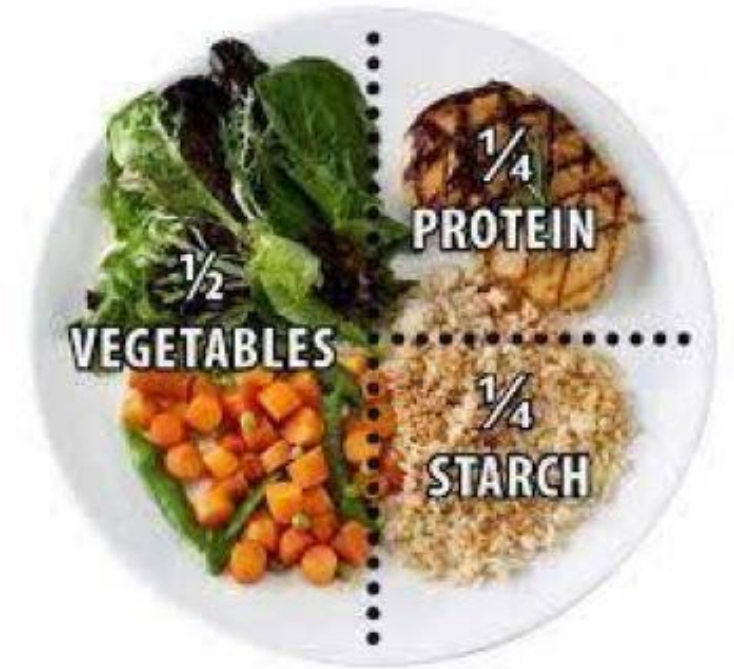
Chapati



Sweet Potatoes (baked)



# Cereals, grains and starch



**1 Cup or 1 Fist or 1/4 plate  
of cooked rice, pasta, egg noodles etc.**

**2**  
= carbohydrate  
choices



# What we've covered so far...

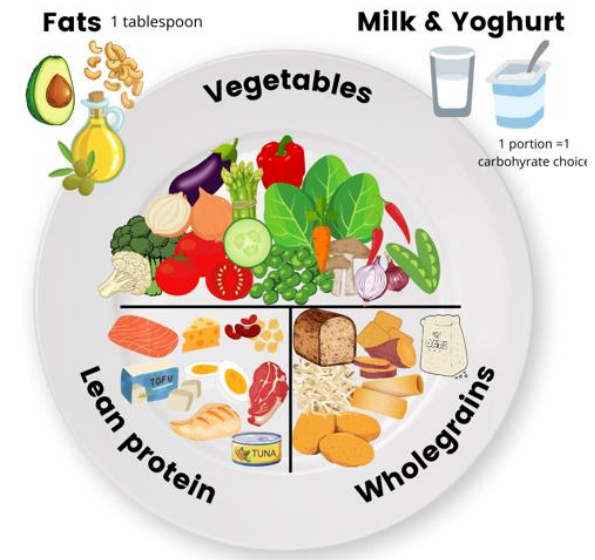
1. Importance of **activity** in managing blood glucose
2. Think about carbohydrate:
  - Which foods contain carbohydrate
  - Eating **regular meals** and **snacks**
  - Choose the **right type** of **carbohydrate** foods
  - Watch your carbohydrate **portion size**

Next..... Putting meals and snacks together



# Putting meals and snacks together

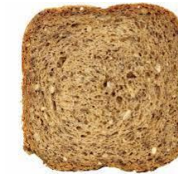
1. Choose **slow release carbs**
2. Choose the **right amount of carbs** for that meal or snack  
As a guide, **most women need** to eat:
  - ✓ 1-2 carbohydrate “choices” at **breakfast**
  - ✓ 3-4 carbohydrate “choices” at **lunch** and **dinner**
  - ✓ 1 carbohydrate “choice” at **snacks**
3. Choose **Balance your meal** for better blood glucose management:
  - Add **protein** – meat, chicken, eggs, tofu, Quorn
  - Add **healthy fats** – olive or rapeseed oil, avocado, pesto, olive spread
  - Add **fibre** – Wholegrains, nuts, seeds, vegetables and fruit
4. Add **flavour** and **enjoy** your meals!



# Breakfast

These examples contain 2 carb choices:

- ✓ 2 wholegrain toast + egg/cheese, avocado, tomato
- ✓ 1 slice wholegrain toast + 1 pot diet yoghurt or 100g low sugar beans
- ✓ Suitable breakfast cereal, such as:
  - 1 Shredded Wheat<sup>®</sup> + 150-200ml milk
  - 30-40g All-Bran<sup>®</sup> sticks + 150-200ml milk
  - 40g porridge (jumbo oats) made on water + boiled egg or 30g porridge made with 200ml milk
- ✓ 100g cooked basmati rice or 2 small wholemeal chapatti (60g weight) and meat/vegetable curry



&



or



# Lower carbohydrate bread options

- Carbohydrate can be poorly tolerated at breakfast (due to morning hormones)
- You might find choosing a **lower carb bread** option helpful.



**2 slices**



**1 bagel**



**1 slimster**

Each of these contain only 1 ½ carbohydrate choices (instead of 2 carb choices)

# Lunch and Dinner

These examples all contain **3 carb choices** (but look very different!)

2 Choices



2 Choices (200g potatoes)



3 Choices (150g rice)



1 Choice



&

1 Choice



&



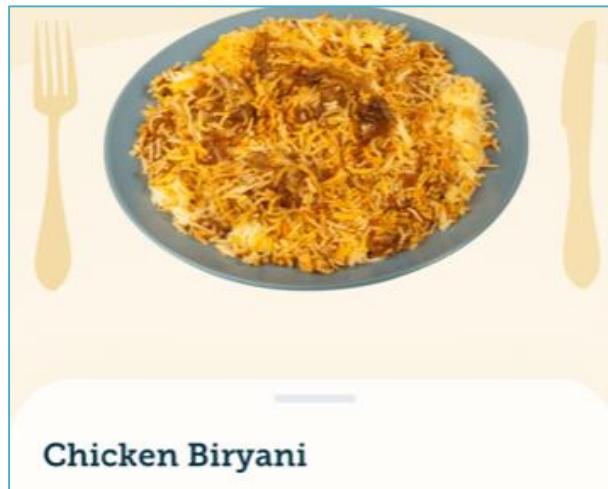
Chicken



# Lunch and Dinner: (3 carbohydrate choices)



# Very high carb meals → high blood glucose levels



# Suitable snacks (1 carb choice + protein):



Choose 1 option per snack





# 'Sometimes' foods



3-4 square dark chocolate with nuts



2 biscuits



*(Contains approx. 10 g carbs)*



*(Contains approx. 35-50g carbs)*

# More meal ideas...

## Breakfast

- Granola
- Shakshuka with feta
- Banana pancakes
- French toast
- Baked oats with raspberries

## Dinner

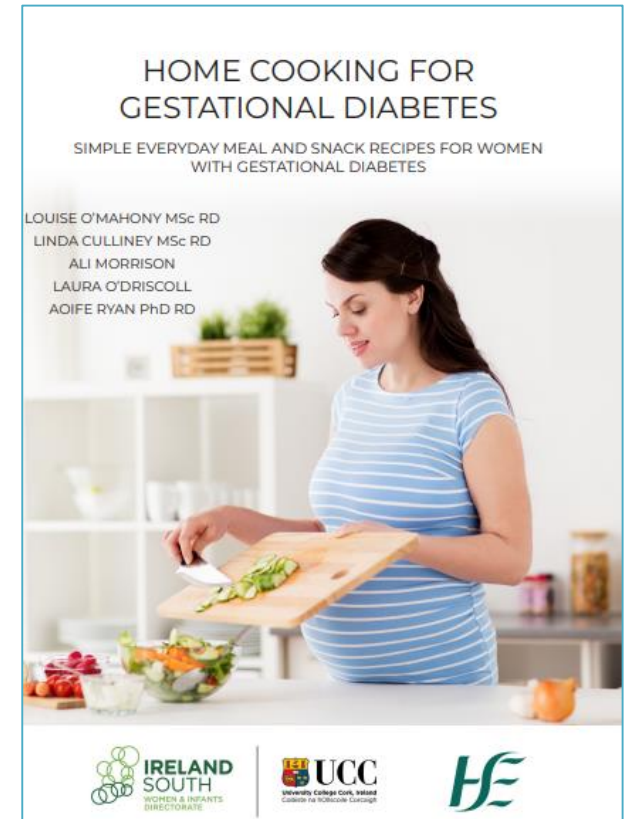
- Lasagne
- Chilli con carne
- Thai Green curry
- Pizza Wrap
- Sweet potato shepherds pie

## Lunch

- Chapatti wrap
- Tuna pasta salad
- Club pita
- Chicken noodle soup
- Veggie omelette with sausages and toast

## Snacks – savoury and sweet

- Roasted chickpeas
- Mezze platter
- Bruschetta
- Banana bread
- Energy balls
- Chocolate mousse





# Managing some common issues

High fasting level <u>before</u> breakfast	High levels <u>after</u> breakfast	High level after other meals	Feeling <u>hungry</u> or lost weight
<p>Hardest reading to manage</p> <ul style="list-style-type: none"><li>• Try dinner before 7.30pm<ul style="list-style-type: none"><li>✓ Watch carbs and fat</li></ul></li><li>• Exercise after dinner</li><li>• Snack before bed<ul style="list-style-type: none"><li>✓ Low GI carb + protein</li><li>✓ Or protein-only</li></ul></li><li>• 8-10 hours overnight fast</li><li>• Drink enough water</li><li>• Get enough sleep (easier said than done!)</li></ul>	<ul style="list-style-type: none"><li>• Breakfast cereals do not work for lots of women<ul style="list-style-type: none"><li>✓ Try swapping to a bread + protein option (with 2 carb choices)</li></ul></li><li>• If glucose still high:<ul style="list-style-type: none"><li>✓ Try lower carb bread (1.5 carb choices)</li><li>✓ Try “split breakfast” (1 carb choice).</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Check carb servings aren't too big (weigh them)</li><li>• Are you choosing slow-releasing carbs?</li><li>• Always include protein and vegetables.</li><li>• Consider 10-15 minutes of physical activity after your meal.</li></ul>	<ul style="list-style-type: none"><li>• Some weight loss is OK once diet is balanced and baby's growth is normal.</li><li>• If you are hungry:<ul style="list-style-type: none"><li>✓ Portions too small?</li><li>✓ Add extra protein and fibre (more filling)</li><li>✓ Snacks between meals</li><li>✓ Extra carb-free snacks</li></ul></li></ul>

If your blood glucose are still high after trying these tips, it's not your fault. Your team will support you with a plan to help manage your levels.

# What if I need extra support with my diet?

Visit the diabetes section of the **Rotunda website** ([www.Rotunda.ie/diabetes](http://www.Rotunda.ie/diabetes)) for some extra resources:



- A recording of the GDM "Lifestyle Class" webinar.
- A video demonstrating how to use your glucometer.
- Exercise videos from Rotunda physiotherapists.
- A recipe booklet
- Information translated into other languages (Russian, Chinese, Polish, Arabic and Romanian).
- Indian and African food choices.

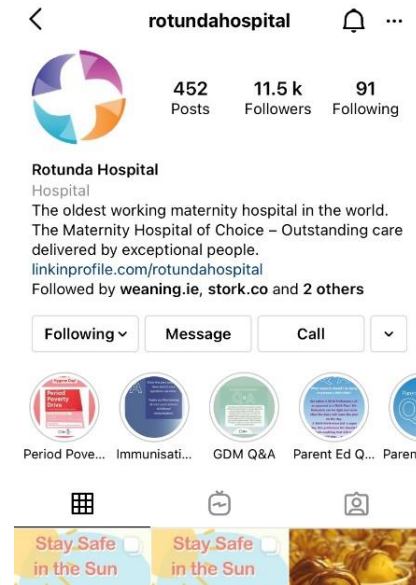


You can also call the **dietitian** (01-2119381 or 01-8172548) or **diabetes midwife** (087-3731693) if you have any concerns or questions about your diabetes management.

You should keep an eye on the **Rotunda Instagram** and **Facebook** pages for some extra tips and resources around the holidays.



If you are feeling particularly anxious, worried or overwhelmed about your diagnosis of GDM, please call our **Mental Health team** on 01-8730632 for extra support.



# The next steps....



✓ Testing your blood glucose levels



✓ Changes to food and activity

- Take a daily pregnancy multivitamin



✓ Check and record your weight (every 2 weeks)



✓ Regular virtual review with diabetes team



✓ Extra supports

# Why is diabetes management important?

- **Good management** of gestational diabetes **greatly reduces the risk** of health problems for mum and baby
- If diabetes is poorly managed, **high blood glucose** levels during pregnancy may lead to:

## Health problems for you:

- Pre-eclampsia
- Urinary Tract Infections (UTI)
- Pre-term birth

## Health problems for your baby:

- Macrosomia** (large baby)
- Jaundice**
- Respiratory Distress Syndrome** (Breathing difficulties)
- Low blood glucose and calcium.**

This may lead to your baby needing admission to neonatal intensive care unit.

# Monitoring your gestational diabetes

- The Diabetes team ask you to **test your blood glucose** levels **4 times per day**:



When to test your blood glucose	Aim for blood glucose level:
Before breakfast	Less than 5.3mmol/L
1 hour after you finish eating breakfast	Less than 7.8mmol/L 1 hour after you finish eating
1 hour after you finish eating lunch	
1 hour after you finish eating dinner	

- New diagnosis of GDM**: You will **check** blood glucose levels **every day**.
- Previous GDM**: If you are **less than 28 weeks pregnant** you will only need to check blood glucose levels **2 days per week**. At 28 weeks you will start testing everyday.

# Follow-up care



- You will be given an appointment time for the Gestational Diabetes **virtual clinic** every 2-4 weeks.

- The diabetes team will review your blood glucose levels on this day and contact you.



- You will be given an appointment for an extra **ultrasound scan** when you are **32 – 34 weeks** pregnant to monitor your baby's growth.





## Follow-up care

- If your diabetes is well-managed after 36 weeks, you will be discharged from the virtual clinic. You must continue to follow the diet and lifestyle advice and test your blood glucose levels until delivery.
- Contact us if you are having any difficulties.

# What happens after my baby is born?

- Remember to come for a **postnatal “Glucose Tolerance Test” at least 6 weeks** after your baby is born to check your blood glucose level has returned to normal.
- Free annual Type 2 diabetes screening for public and private patients – ask your GP
- Continue to follow a **healthy eating diet** and **physical activity** to reduce risk of Type 2 diabetes in the future. You can find a booklet on **Diabetes Prevention** on our website.
- For **future pregnancies**, you will be advised to start monitoring your blood glucose levels from your booking visit.
- **Breastfeeding** is encouraged for all women. There is a “wrap-around clinic” for anyone who experienced breastfeeding challenges before or has GDM
  - Visit [Rotunda.ie/parent-education/resources](http://Rotunda.ie/parent-education/resources) or Ph: 01 -8171766 or [cmtbf@rotunda.ie](mailto:cmtbf@rotunda.ie)

**The following information relates only to those using the OneTouch Verio  
Glucometer**

# ONETOUCH<sup>®</sup>



When you receive your glucometer pack it contains:

- OneTouch Verio glucometer and owners booklet
- 400 test strips
- 200 lancets
- Quick Start Guide
- Guide to Checking your Blood Glucose levels
- Guide to Managing Gestational diabetes booklet
- Setting up the OneTouch Reveal mobile app

# This is the OneTouch Verio glucometer and OneTouch Reveal App

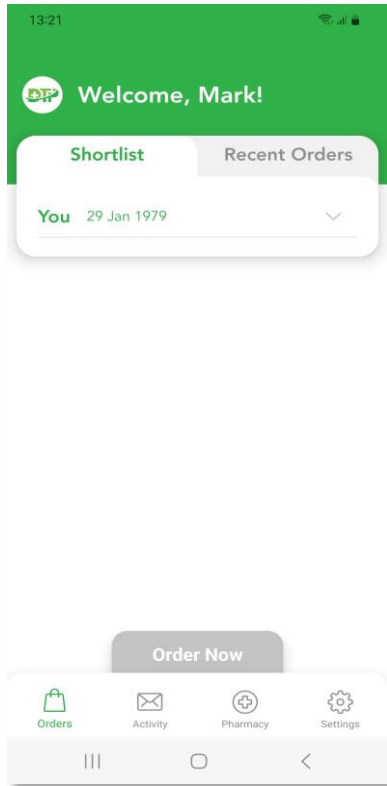


Once you have added our clinic code (JY HC EE) on your App we are able to log on and review your blood glucose levels from our office. You should tag your blood glucose levels as 'pre' or 'post' meal and if the result is higher than the target level you can enter a comment.

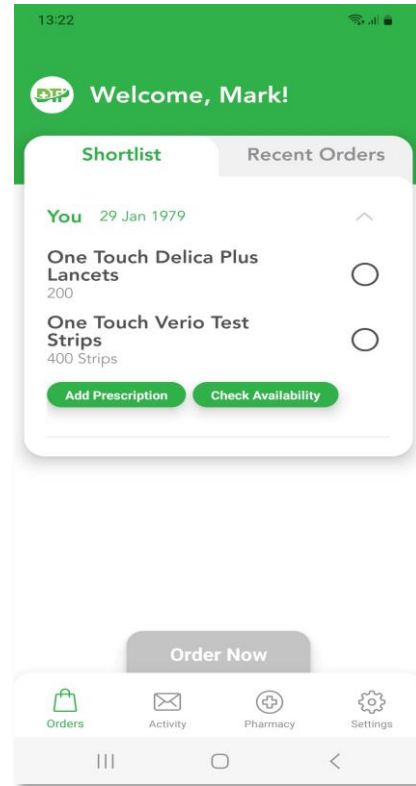


# DTP Pharmacy App

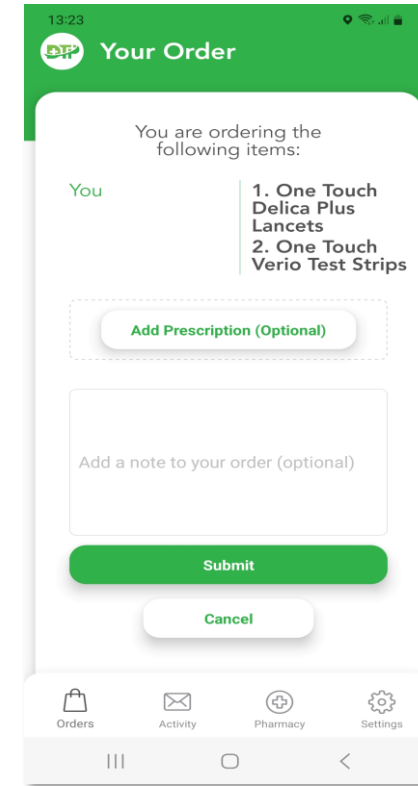
– *ordering your supplies*



1. Intro / Welcome



2. Create Order



3. Add Comments

The link to download the DTP app:  
<https://vpod.co/dtpsolutions>



# Setting up your meter and One Touch Reveal App

## Setting up your meter

- ✓ Language
- ✓ Select 'no' when asked to download One Touch Reveal app
- ✓ Time and date
- ✓ Pregnancy blood glucose targets
  - Before meal: 3.5-5.2
  - After meal: 3.5-7.7
- ✓ Test tracker 4 per day

When you do a blood glucose test tag the result as before or after meal

## Setting up your One Touch Reveal App

- ✓ Download the app
- ✓ Use meter blood glucose ranges
- ✓ Tap the symbol  (Android) or  (iPhone)
- Select Connections
- ✓ Under care team select Add a clinic
- ✓ Enter our code **JY HC EE**

Food, activity, feeling unwell, stress and vomiting can affect glucose levels – add notes to the app

Credits for images: Carb and calorie counter

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