A practical workbook to make it work for you

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CARBOHYDRATE COUNTING THE NEXT STEPS

A practical workbook to make it work for you

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Now that you are familiar with carbohydrate counting and your treatment plan, you are ready to think about different aspects of your routine and lifestyle in more detail

Basal Insulin

Remember, your basal insulin is background insulin. You always need it to keep your glucose levels steady and to give you energy. Your diabetes team will work with you to agree your initial basal dose and help you check that it continues to be correct.

If your basal insulin is correct, your blood glucose before you have anything to eat when you get up, should be similar to what it was when you went to bed. Monitor your results and look for patterns in your blood glucose increasing or decreasing overnight. You should also consider any other things that could affect your results such as:

- the amount of activity you have done
- eating dinner late
- having a large bedtime snack without taking an extra bolus
- having a bedtime snack later than normal.

Look at David's blood glucose results below and decide if the amount of basal insulin that he is taking is too little, too much or just right.

Blood glucose (mmol/l)					
Day	Before breakfast	Before lunch	Before evening meal	Before bed	During the night
Mon	14.9			8.3	
Tues	19.3			8.5	11.3
Wed	15.7			9.6	
Thurs	14.5			10.5	
Fri	12.3			8.9	

David's blood glucose results show his level is rising overnight. This may mean that he should increase his basal insulin.

Fill in the table below and think about whether you are taking too little, too much or the right amount of basal insulin.

Blood glucose (mmol/l)					
Day	Before breakfast	Before lunch	Before evening meal	Before bed	During the night
Mon					
Tues					
Wed					
Thurs					
Fri					

Your diabetes team will work with you to agree your basal dose and to make any necessary adjustments.

Bolus Insulin

Remember bolus insulin is the rapid-acting insulin that you take with carbohydrate foods. Your bolus depends on several things including how much carbohydrate is in your meals and snacks.

Let's think about some examples to help you work out your bolus doses.

Clare has had diabetes since she was six. Now she is 11 and has been using basal insulin once a day, with bolus insulin for meals for just over a year. She found it a lot of work at first, but with her family and diabetes team, she worked out her basal dose and her insulin to carbohydrate ratio (ICR). Clare and her family also spent a lot of time practicing how to work out the amount of carbohydrate in different foods and meals that she eats and enjoys. Now Clare feels confident with her treatment plan and enjoys being able to adjust her insulin with her meals and routine.

Like most of us, Clare has a usual routine of school and other activities. Thinking about some of the things that she does may help you to work out things for your own routine.

Clare uses different ICRs throughout the day. Her breakfast ICR is 1 unit of insulin per 8g of carbohydrate (1:8), and her lunch and dinner ICRs are 1 unit of insulin per 10g of carbohydrate (1:10).

Do you know your ICR?

- My breakfast ICR is
- My lunch ICR is
- My dinner ICR is

Look at how Clare has worked out how much carbohydrate is in her meals and how much bolus she should have with these meals. Try to complete the tables to work out the amount of carbohydrate in some of **your** meals and how much bolus **you** should have.

Clare's breakfast	Calculation	
Large bowl of Cheerios (40g)	75g CHO per 100g = 75g CHO ÷ 100g Cheerios = 0.75g CHO per gram Cheerios 40 × 0.75 = 30g CHO	30g
and milk (150ml)	5g CHO per 100ml milk = 0.05g CHO ÷ 100ml milk = 0.05 x 150 = 7.5g CHO	7.5g
Glass of orange juice (150ml)	12.5g CHO per 100 ml = 12.5g CHO ÷ 100ml orange juice = 0.125g CHO per ml = 0.125 x 150 = 18.75g CHO	18.75g
Total carbohydrate	= 56.25g CHO	56.25g
Units of insulin	ICR = 1:8 (1 unit per 8g CHO) = (56.25 ÷ 8) x 1 = 7.03 units (round down to the nearest whole unit)	7 units

My breakfast	Calculation	
Total carbohydrate		
Units of insulin		

Clare's lunch	Calculation	
1 pitta bread with cheese, chutney and tomato	Label says 30g CHO per pitta No CHO in cheese or tomato Label says 5g CHO in a spoon of chutney	35g
1 carton orange juice (200ml)	Label says 20g CHO per carton	20g
Packet crisps (25g)	Label says 15g CHO per packet	15g
Pear	Food tables says 10g CHO	10g
Total carbohydrate	35 + 20 + 15 + 10 = 80g CHO	80g
Units of insulin	ICR = 1:10 (1 unit per 10g CHO) = (80 ÷ 10) x 1 = 8 units	8 units

My lunch	Calculation	
Total carbohydrate		
Units of insulin		



Clare's dinner	Calculation	
Roast chicken with baked potato (155g) and broccoli	Food tables say: - no CHO in chicken or broccoli - CHO table says 25g in 100g baked potato with skin = (25 ÷100) × 155 = 38.75g CHO	38.75g
Fruit corner yoghurt	Label says 29g CHO per pot	29g
Glass of sugar-free squash	Label says Og	0
Total carbohydrate	38.75 + 29 = 67.75g CHO	67.75g
Units of insulin	ICR = 1:10 (1 unit per 10 g CHO) = $(67.75 \div 10) \times 1$ = 6.775 units (round up to the nearest whole unit)	7 units

My dinner	Calculation	
Total carbohydrate		
Units of insulin		

How Do I Check my ICR is Right?

As you become older, change your routine and your lifestyle, your ICR can change. It is important to check if your ICR is still right. The best way to do this is to check your blood glucose (BG) regularly.

Bolus insulin lasts for a short time. Test your blood glucose before your bolus and hours after to check if your ICR is correct. This is sometimes called taking paired readings.

To check if your ICR is right:

- 1. Take a note of your blood glucose just before your meal.
- 2.Calculate the carbohydrate in your meal and use your ICR to work out your bolus, then take it as normal.
- 3. After hours, test your blood glucose again.

If your blood glucose is within _____ mmol/l of your pre-meal result, your ICR is correct. If your blood glucose is more than _____ mmol/l higher or lower than your pre-meal result, you may need to change your ICR.

4. Look for patterns in your blood glucose results. Do not make changes to your ICR based on one set of paired readings.

Clare has checked her basal insulin and knows it is correct. Now she wants to check her ICR.

Date	ICR = 1:10	Breakfast
07/11	BG before food	5.2
	СНО	50g
	Bolus insulin	5
	BG 2 hours after food	6.1

Clare's results show that her blood glucose is steady and within her target range before her breakfast and 2 hours after she has eaten. Therefore, her ICR is correct.

Now check your ICR.

Date	ICR =	Breakfast
	BG before food	
	СНО	
	Bolus insulin	
	BG hours after food	

If your blood glucose tends to be higher, your ICR may need to decrease. If your blood glucose is lower, your ICR may need to increase.

Before you make any changes to your ICR:

- check that you are calculating the carbohydrate of your meal correctly
- check that you are calculating your bolus correctly
- check patterns in your blood glucose over a few days, and discuss changes with your diabetes team.

Remember:

- You **always** need your basal insulin. Check your dose by monitoring your blood glucose before you go to bed and when you get up your dose is correct if your results are similar.
- Bolus insulin only lasts for a short time. Use your ICR to work out your bolus for meals and snacks that contain carbohydrate.
- Your ICR can change with age, routine and lifestyle. Check it is right by monitoring your blood glucose and checking your carbohydrate and bolus calculations.

Correcting High Blood Glucose

Sometimes your blood glucose level can become higher than your target. Your diabetes team will provide you with guidance about if, when and how you should use a correction dose of bolus insulin. You should normally only use this with your meal bolus.

Calculating your correction factor (CF) will help you to work out necessary correction boluses. Your **CF** is the amount that **1 unit of insulin will reduce your blood glucose**. A useful tool to work out your **CF** is the **100 rule**.

The 100 rule:	For example:
1. Add up your typical total daily insulin (basal and bolus).	 Charlie normally has 22 units of basal insulin and 5 bolus units with breakfast and lunch, and 8 units with dinner. 1. Charlie's daily insulin = 22 + 5 + 5 + 8 = 40 units
2. Divide 100 by this amount (100 ÷ total insulin).	2. Charlie's CF = 100 ÷ 40 = 2.5
3. This is your CF.	3. Charlie would use 1 unit of bolus to reduce his blood glucose by 2.5mmol/l.

Use the space below to work out your correction factor.

Charlie's target blood glucose is 4-7mmol/l. Look at how he works out his correction bolus to help you calculate your correction bolus if your blood glucose is above your target range.

	For example:
 Subtract your target blood glucose from your current level to work out how much it needs to fall. 	 Charlie tests his blood glucose before his meal. It is 17mmol/l, so he has to have a correction dose with his meal bolus. 1. Charlie's blood glucose needs to fall into his target range: 17 - 7 = 10mmol/l
2. Calculate your CF.	2. Charlie's CF = 100 ÷ 40 = 2.5
3. Divide your desired fall by your CF.	 3. Charlie's correction bolus dose is: 10 ÷ 2.5 = 4 units

Charlie should have a 4 unit correction bolus with his meal bolus. He should also continue to check his blood glucose regularly to make sure that the correction bolus is working.

Use the space below to work out how you would correct your blood glucose if it was 12.5mmol/l.

Try this again. This time work out how you would correct your blood glucose if it was 18.5mmol/l.

It is important to correct high blood glucose. However, if you regularly have to take correction boluses, you may need to change your ICR or your basal dose. Discuss this with your diabetes team.

Once you know your CF and how much your blood glucose needs to fall, you can use the correction bolus calculator below to find your correction bolus. Read along the bottom (orange) line to your CF, then up the side (black) to the amount that your blood glucose needs to fall. Your correction bolus is at the point where the line meet.

If your insulin pen has half units, round to the nearest half unit; if it only has whole units, round to the nearest whole unit.

10	20	10	7	5	4	3	3	2.5
9.5	19	9.5	6.5	5	4	3	2.5	2.5
9.0	18	9	6	4.5	3.5	3	2.5	2
8.5	17	8.5	5.5	4.5	3.5	3	2.5	2
8.0	16	8	5	4	3	2.5	2	2
7.5	15	7.5	5	4	3	2.5	2	2
7.0	14	7	4.5	3.5	3	2	2	2
6.5	13	6.5	4.5	3.5	2.5	2	2	1.5
6.0	12	6	4	3	2.5	2	1.5	1.5
5.5	11	5.5	3.5	3	2	2	1.5	1.5
5.0	10	5	3	2.5	2	1.5	1.5	1
4.5	9	4.5	3	2.5	2	1.5	1.5	1
4.0	8	4	2.5	2	1.5	1	1	1
3.5	7	3.5	2.5	2	1.5	1	1	1
3.0	6	3	2	1.5	1	1	1	0.5
2.5	5	2.5	1.5	1.5	1	1	0.5	0.5
2.0	4	2	1.5	1	1	0.5	0.5	0.5
1.5	3	1.5	1	1	0.5	0.5	0.5	0.5
1.0	2	1	0.5	0.5	0.5	0	0	0
0.5	1	0.5	0.5	0.5	0	0	0	0
0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0

Correction Bolus Calculator

CF

(The amount one bolus unit will reduce my blood glucose by (mmol/l))

Reduction in blood glucose required (mmol/l)

For example:

Reduction in blood glucose required (mmol/l)

- Amy's CF is **2.0**.
- Her target blood glucose is 4.0 to 7.0mmol/l.
- She is about to have her lunch and has tested her blood glucose. It is 12.5mmol/l.
- She needs to reduce her blood glucose by at least 5.5 (12.5 7 = 5.5mmol/l).
- She checks the correction calculator by reading along the bottom (orange) to 2 and up the side (black) to **5.5mmol/l**.
- Amy should have the correction bolus noted at the point where the lines meet **3 units**.

9.5 19 9.5 6.5 5 4 3 2.5 2.5 9.0 18 9 6 4.5 3.5 3 2.5 2 8.5 17 8.5 5.5 4.5 3.5 3 2.5 2 8.0 16 8 5 4 3 2.5 2 2 7.5 15 7.5 5 4 3 2.5 2 2 7.0 14 7 4.5 3.5 3 2 2 2 6.5 13 6.5 4.5 3.5 2.5 2 1.5 6.0 12 6 4 3 2.5 2 1.5 1.5 5.0 10 5 3 2.5 2 1.5 1.5 1 4.5 9 4.5 3 2.5 2 1.5 1 1 4.5 9 4.5 3 2.5 1.5 1 1 1 1 5.0 1.5 </th <th>10</th> <th>20</th> <th>10</th> <th>7</th> <th>5</th> <th>4</th> <th>3</th> <th>3</th> <th>2.5</th>	10	20	10	7	5	4	3	3	2.5
9.018964.5 3.5 3 2.5 28.517 8.5 5.5 4.5 3.5 3 2.5 2 8.0168 5 4 3 2.5 2 2 7.515 7.5 5 4 3 2.5 2 2 7.014 7 4.5 3.5 3 2 2 2 6.513 6.5 4.5 3.5 2.5 2 2 1.5 6.012 6 4 3 2.5 2 1.5 1.5 5.511 5.5 3.2 2 1.5 1.5 1.5 5.010 5 3 25 2 1.5 1.5 4.5 9 4.5 3 25 2 1.5 1.5 1.4 9 4.5 3 25 2 1.5 1.5 1.5 7 3.5 2.5 1.5 1.5 1 1 4.0 8 4 2.5 1.5 1.5 1 1 1 3.0 6 3 2 15 1.5 1 1 1 0.5 5.5 2.5 1.5 15 1 1 1 0.5 0.5 2.0 4 2 1.5 15 1 1 0.5 0.5 2.0 4 2 1.5 15 1 1 0.5 0.5	9.5	19	9.5	6.5	5	4	3	2.5	2.5
8.5178.55.54.53.532.528.01685432.5227.5157.55432.5227.01474.53.532226.5136.54.53.52.5221.56.0126432.521.51.55.5115.55.33221.51.55.010532521.51.514.594.532.521.51.514.0842.51.51.51113.06321511113.0632151110.52.552.51.515110.50.51.531.51.5110.50.51.531.51.00.50.50.50.51.6210.50.50.50.50.51.6210.50.50.50.50.5	9.0	18	9	6	4.5	3.5	3	2.5	2
8.0168543 2.5 227.5157.5543 2.5 227.01474.5 3.5 32226.513 6.5 4.5 3.5 2.5 221.56.012643 2.5 21.51.55.511 5.5 5.5 2.5 21.51.55.01053 2.5 21.51.55.01053 2.5 21.51.55.01053 2.5 21.51.55.01053 2.5 21.51.51 3.5 7 3.5 2.5 1.51.514.084 2.5 1.51113.5 7 3.5 2.5 1.51113.0632151110.52.5 5 2.5 1.515110.50.52.0 4 2 1.5110.50.50.51.5 3 1.51.00.50.50.50.51.5 3 1.51.00.50.50.50.51.0 2 10.50.50.50.50.5	8.5	17	8.5	5.5	4.5	3.5	3	2.5	2
7.5157.55432.5227.01474.5 3.5 3 2226.513 6.5 4.5 3.5 2.5 221.56.012643 2.5 21.51.55.511 5.5 5.5 11 5.5 3.2 2 1.5 1.5 5.0105 3 25 2 1.5 1.5 1 4.59 4.5 3 25 2 1.5 1.5 1 4.0 8 4 2.5 1.5 1.5 1 1 1 3.0 6 3 2 15 1 1 1 0.5 2.5 5 2.5 1.5 15 1 1 0.5 0.5 2.6 4 2 1.5 15 1 1 0.5 0.5 1.5 3 1.5 1.5 1 1 0.5 0.5 2.6 4 2 1.5 1 1 0.5 0.5 1.5 3 1.5 1.0 0.5 0.5 0.5 0.5 1.6 2 1 0.5 0.5 0.5 0.5 0.5	8.0	16	8	5	4	3	2.5	2	2
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6.5 13 6.5 4.5 3.5 2.5 2 2 1.5 6.0 12 6 4 3 2.5 2 1.5 1.5 5.5 11 5.5 5.5 5.5 5.5 1.5 5.5 1.5 5.5 5.0 10 5 3 2.5 2 1.5 1.5 5.0 10 5 3 2.5 2 1.5 1.5 1 4.5 9 4.5 3 2.5 2 1.5 1.5 1 4.0 8 4 2.5 1.5 1.5 1 1 1 3.5 7 3.5 2.5 1.5 1 1 1 1 3.0 6 3 2 1.5 1 1 1 0.5 2.5 5 2.5 1.5 1 5 1 1 0.5 0.5 2.0 4 2 1.5 1 5 0.5 0.5 0.5 0.5	7.0	14	7	4.5	3.5	3	2	2	2
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1.0 2 1 0.5 0 5 0.5 0 0 0	1.5	3	1.5	1.0		0.5	0.5	0.5	0.5
	1.0	2	1	0.5	05	0.5	0	0	0
0.5 1 0.5 0.5 0 0 0 0 0	0.5	1	0.5	0.5	05	0	0	0	0
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0	0	0.5	1.0	1.5	(2.0)	2.5	3.0	3.5	4.0

Correction Bolus Calculator

(The amount one bolus unit will reduce my blood glucose by (mmol/l))

- Amy calculates the carbohydrate in her lunch. It is 50g.
- Her ICR is 1:10, so she needs a meal bolus of 5 units $((50 \div 10) \times 1 = 5)$.
- She needs to take her meal bolus plus her correction bolus.

This is 8 units in total (3 + 5 = 8 units).

Remember:

- You can bring high blood glucose back into target with a correction bolus of insulin.
- Your correction factor (CF) is how much 1 unit of bolus insulin will reduce your blood glucose.
- Only take a correction bolus with your meal/snack bolus.



Using your treatment plan with carbohydrate counting can help to reduce hypos, but you still need to know what to do if your blood glucose falls below your target level.

Your diabetes team will provide you with more information to help you and your family prevent and treat hypos.

Think about the situations below and consider what you would do.

What blood glucose would mean that James is hypo?

How might he feel if his blood glucose is low?

What should he do if his blood glucose is low?

How do you feel when your blood glucose is low?

What do you do when your blood glucose is low?

When you have a hypo:

- Stop what you are doing and take 5-15g of fast-acting carbohydrate such as Glucotabs, Lucozade or sugary drinks like cola or lemonade.
- Wait 10-15 minutes. If possible, test your blood glucose level. If you are still hypo have more sugary carbohydrate.
- Once your blood glucose is over 4mmol/l have a slower-acting carbohydrate snack such as fruit, plain biscuit or cereal bar or if it is mealtime, have your meal as normal.

Your diabetes team will provide more information about hypos.

Exercise and Activity

When you are active, the insulin in your body will affect your blood glucose. For example, the hypo risk increases when exercising just after a bolus.

Being aware of your blood glucose level, carbohydrate and how your basal and bolus insulin work, will help you enjoy exercise and sport. Try to test your blood glucose before, during and after exercise. Use your results to help you plan in the future.

For example, Aisha has a snack before going to judo after school on Tuesdays. She always has a small carton of fruit juice in her bag, checks her blood glucose before the class and carries glucose tablets with her.

Before last week's class, Aisha's blood glucose was 9.6mmol/l. She had a snack with about 30g of carbohydrate and didn't take a snack bolus.

The class takes an hour. After the class, Aisha's blood glucose was 15.3mmol/l.

What should she do this week about:

...a snack?

...her insulin?

...testing her blood glucose?

Why?

... is there anything that she should look out for later in the day? What might help her to keep her blood glucose well controlled during and after judo?

Think about your week and the things that you do

So far you have learned how to keep your blood glucose in your target range by carbohydrate counting and adjusting your bolus insulin. Now you are ready to develop these skills further. This will help you to keep good blood glucose control with daily changes in your routine.

- Do you go to any after school activities?
- Do any of these mean you are more active or have your meals at different times?
- Do you need to adjust your insulin with exercise?

Everyone reacts differently to exercise. You may find you need to change your bolus insulin dose depending on the type and timing of your activities. Ask your diabetes team about this.

Note your typical routine in the table below. Think about how you juggle your activities like clubs, gym or PE with insulin, snacks and meals.

	Activities and times	Snacks and meal times	What I will do to keep my blood glucose in target range.
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

If there are any things that you unsure about then discuss these with your diabetes team.



Sick Day Rules

Unfortunately, everyone becomes unwell at some point. When you have diabetes, you get colds, sore throats, tummy bugs just like all other people. However, you need to manage your diabetes during your illness.

Your diabetes team will provide sick day guidelines with more information on how to adjust your basal and bolus doses depending on your symptoms.

Remember:

- Always take your basal insulin, even if you cannot eat.
- Check your blood glucose regularly and try to keep your levels in your target range.
- If your eating has changed or your blood glucose needs to be corrected, you may need to adjust your basal and bolus insulin.
- Always check for ketones and follow your sick day guidelines.

Use the space below to note **your** sick day rules.

Adjusting your Bolus with a Flexible Diet

Now that you're learning more about your treatment plan, think about the next steps to help you take greater control. This can make taking part in activities easier and more enjoyable.

Different food types and your bolus

Different foods will affect your blood glucose differently. The rate of their digestion will affect how your blood glucose will respond to your bolus and the carbohydrate in meals and snacks.



When you are working out how much bolus insulin to take, it is important to think about:

- the amount of carbohydrate in the food you eat **and**
- how quickly the carbohydrate is digested.

This may not change the **amount** of insulin you need, but may change **when** you take it.

The main factors that affect the rate of food's digestion are:

• Fibre

Having more fibre is generally a healthy option. Some high-fibre foods are digested slowly and release glucose into the blood slowly.

High-fibre foods include:

- pulses
- wholegrain bread
- whole wheat breakfast cereals
- meals containing a lot of these foods, for example lentil soup.

• Glycaemic index (GI)

The glycaemic index (GI) is a scale from 1 to 100 that is used to measure how quickly foods that contain carbohydrate raise blood glucose levels.

- Individual foods with high GI values will raise your blood glucose level quickly.
- Individual foods with low GI values will raise your blood glucose more slowly.

However, you usually eat combinations of foods that combine to give a different GI value for your whole meal or snack. **Remember, it is the total amount of carbohydrate** eaten has the main effect on your blood glucose.

• Fat content

Fat can slow down your digestion so carbohydrate from high-fat meals may be released slowly into your blood. Meals which tend to be high-fat include:

- foods cooked in batter or using a lot of fat such as fish and chips, crispy duck, enchiladas, pastry dishes like pies, pasties and sausage rolls
- foods made with lots of cream or cheese such as korma, masala, carbonara, macaroni cheese, four cheese pizza
- fatty meats and meat products such as burgers, bacon, pâté.

When carbohydrate from meals is digested slowly, a single insulin bolus may reduce your blood glucose too quickly and cause you to hypo. However, as you slowly digest your meal and gradually release glucose, your blood glucose may become high as your insulin begins to run out.

To help you to spot trends in the impact of different foods, monitor your blood glucose and the foods that you eat. Patterns may become obvious helping you to decide if you need to change the timing or the amount of bolus you require. Speak to your diabetes team for more guidance.

To try and prevent your blood glucose falling and rising with meals that slowly release their carbohydrate, it can be useful to alter how you take your bolus. Two options are possible:

- delay your bolus insulin for a short time after your meal or
- split your bolus into two injections take one with your meal and one shortly after.

Discuss this with your diabetes team.

Practice and test your blood glucose regularly. This will help you decide which method works best for you with different meals and situations.



Think about the foods in the list below:

- baked potato with tuna and sweetcorn
- fish and chips
- flapjack
- milk chocolate
- pizza with ham and cheese.

How quickly do you think each will be digested?

What do you think affects their rate of digestion?

What adjustments would you make to the amount or the timing of the bolus for these foods?

Now think about meals and snacks that you enjoy. How quickly will they be digested? Write some down under the quick, medium or slow headings in the table below. If you're not sure, think about them with your dietitian.

Quick	Medium	Slow

Remember:

- The main factors that affect the rate of food's digestion are fibre, GI and fat.
- The total amount of carbohydrate eaten has the main effect on your blood glucose.
- Monitor your blood glucose and the foods that you eat to spot patterns in the rate that you digest different foods.

Snacks

Your treatment plan gives you flexibility with snacks. You may even choose not to have snacks. If it is a snack containing more than g carbohydrate, you may need to have an extra bolus. Your diabetes team will discuss this with you.

Let's look at what Lee does in the situation below: Lee doesn't usually take bolus insulin for snacks with 20g or less carbohydrate in it.

Lee likes to have a snack on the way home from school. On Friday, he goes out with friends after school and has a milkshake and a muffin. Lee checks the fast food labels and works out that this snack has 90g of carbohydrate.

Do you think he should take an extra bolus for this snack?

What snacks do you have that may need an extra bolus?

Sleepovers, parties, and eating out

Your treatment plan helps to make sleepovers, parties, and eating out easier to manage. This lets you enjoy all the fun with your friends and family.

Adjust your bolus with different foods, meal times and bedtime, and **always take your basal insulin at the same time.** Depending how active or excited you are, you may have to take a little less basal than normal. Discuss this with your diabetes team.

Sleepovers

Staying overnight at a friend's house should be fun.

Top tips for a fun sleepover:

- Take your basal insulin at the same time.
- Think about any extra snacks you have. If these have more carbohydrate than your usual bedtime snack, you may need to take an extra bolus. Remember to check your blood glucose and think about how active you've been. Your diabetes team will provide more information.
- Test your blood glucose the next morning and take your bolus as usual with breakfast.

Parties

There are lots of different parties – a friend's house with games and lots of food, the cinema with ice cream and popcorn, skateboarding and cycling then out for pizza or a disco with lots of dancing.

Adjust your insulin depending on how active or excited you are and what food you have.

Top tips to enjoy the party:

- If you've been more active than usual, you may need to take less insulin with the next meal, or if the party was in the evening, you may need a bigger bedtime snack than normal.
- If the meals and snacks have more carbohydrate than your normal foods, adjust your insulin and check your blood glucose when you get home. If it is high, take a correction bolus with your next meal.



Eating out

Insulin dose adjustment helps to make going out easy and enjoyable. You can have your meal at any time, just remember to count the carbohydrate in the foods you choose and calculate your bolus insulin using your ICR.

Top tips for eating out:

- Wait until your food is served until you take your bolus.
 Seeing your food will help you work out how much carbohydrate is in your meal so you will be able to calculate the right bolus to take.
- Split your bolus take one for your main course then decide if you want dessert. Take a second bolus with your dessert so that you can give yourself the right amount of insulin for it to.
- If you're unsure how much you are going to eat, it may be better to take your bolus after the meal. Discuss this with your diabetes team.

Timing your Bolus

You probably take your bolus as part of a standard routine of school, activities and regular meal times and food choices. However, when you are away from home or on holiday this is likely to change.

Think about the situations below.

- When would you take your bolus?
- Are there any other things you would think about and do?
- 1. You're out with a friend and their family for pizza. You have ordered a cheese and mushroom pizza and are planning to have an ice cream for pudding.

2.a) You're visiting family and staying for lunch. You know this three course meal has much more carbohydrate than you usually have at lunch.

b) People get chatting and things get delayed.

3. You're up very early because you are going on holiday. It's too early to have your usual breakfast but you decide to have some toast and fruit juice. You will have a chance to eat something else later.

Remember this is only a guide. Everyone is different so keep a note of what you do each time. This will help you to keep good control of your diabetes and enjoy all the fun with your friends and family.

Menus for a Flexible Life!

An everyday menu and diary – think about your typical daily routine.

- What do you eat?
- When do you normally get up, go to bed, have your meals and snacks?
- What activities do you do?
- How will you manage your injections today?

A menu and diary for a sleepover at your best friend's house.

- What do you eat?
- When do you normally get up, go to bed, have your meals and snacks?
 What activities do you do?
- How will you manage your injections today?

A daily menu and diary for a day out with friends.

- What do you eat?
- When do you normally get up, go to bed, have your meals and snacks? What activities do you do?
- How will you manage your injections today?

A menu and diary for your holiday routine

- What do you eat?
- When do you normally get up, go to bed, have your meals and snacks?
 What activities do you do?
- How will you manage your injections today?

A menu and diary for a special occasion (Christmas/birthday)

- What do you eat?
 When do you normally get up, go to bed, have your meals and snacks?
 What activities do you do?
- How will you manage your injections today?

Are there any things that you do that you would like to change and do differently? Write these down or talk to your diabetes team about them. Together you can try to work out a different way to do things that will make you happier.

This information has been produced for SNDRí by Registered Dietitians and other relevant health professionals. At the time of publication the information contained within the leaflet was, to the best of our knowledge, correct and up-to-date. Always consult a suitably qualified dietitian and/or your GP on health problems. SNDRí cannot be held responsible for how clients/patients interpret and use the information within this resource.



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