



# HEALTHY EATING FOR PEOPLE WITH **TYPE 2 DIABETES**

Prepared by the Diabetes Interest Group of the Irish Nutrition & Dietetic Institute





# Introduction

This booklet has been prepared for those who have recently been diagnosed with Type 2 Diabetes. Type 2 Diabetes is a very common medical condition. While it is a condition that is on the increase, a lot is now known about Type 2 Diabetes and it can be successfully treated and managed so that the person with Diabetes can live a long and healthy life.

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# SO WHAT IS TYPE 2 DIABETES?

Type 2 Diabetes is a condition which occurs when the body is no longer able to deal with the increasing level of glucose (sugar) in the blood.

Normally when we eat food, in particular carbohydrates (starches and sugars) the level of sugar in our blood increases. In response to this the pancreas produces insulin which brings the level of sugar back to normal. Insulin is a hormone which is produced by a small organ in the body called the pancreas.

In a person with Type 2 Diabetes the body may not produce enough insulin or the insulin produced may not work as effectively as it should. This is referred to as insulin resistance. Being overweight increases insulin resistance.

Both the lack of insulin and the insulin resistance mean that the glucose levels are poorly controlled. It is important to keep the blood sugars within normal limits as poorly controlled diabetes can damage the eyes, kidneys and the nerves and can also contribute to cardio-vascular disease (CVD) which includes heart disease, stroke and poor circulation.



# Treatment of Type 2 Diabetes

Treatment of Type 2 Diabetes requires that you follow a healthy lifestyle which includes following healthy eating guidelines and taking regular activity.

As most people with Type 2 Diabetes are overweight it is important that you lose weight gradually. Losing 1-2 lbs a week is a safe amount to lose. Weighing yourself once a week means you can monitor your progress.



As well as healthy eating and physical activity you may be prescribed tablets to control your diabetes. Diabetes is a progressive condition and in some cases taking tablets is not enough to maintain or achieve good control and it may be necessary for your doctor to start you on insulin.



## Diabetes can be treated by:

- ▶ Healthy eating and regular activity
- ▶ Healthy eating, regular activity and tablets
- ▶ Healthy eating, regular activity and insulin

# Aim of Treatment

When you see your doctor he/she will decide what treatment is best for you. The aim of your treatment will be to keep your blood glucose levels within normal limits, this means keeping your blood sugars between 4-8mmol/L. To keep the blood sugars at a normal level it is necessary for you to follow healthy eating guidelines.

## Diabetes Facts: did you know?

- ▶ People with diabetes have an increased risk of cardiovascular disease which includes heart disease and stroke.
- ▶ Heart disease affects people with diabetes twice as often as people without diabetes.
- ▶ People with diabetes are 2-4 times more likely to suffer strokes and once having had a stroke are 2-4 times more likely to have a recurrence.

Remember, these risks are due to poorly controlled diabetes, if glucose levels are kept within the normal range all these risks are reduced.



# HEALTHY EATING GUIDELINES

## **The main points regarding healthy eating are as follows:**

- Eat regular meals.
- Base each meal on a starchy carbohydrate food such as bread, cereal, potato, rice or pasta (eat the appropriate portion).
- Limit your intake of sweet and sugary foods.
- Reduce your fat intake and change the type of fat you eat.
- Eat fruit and vegetables regularly, a total of 5 portions of a mix of fruit and vegetables every day.
- Eat fish twice a week: white fish once a week and oily fish once a week.
- Avoid adding salt to food and cut down on processed foods.
- If you drink alcohol, the recommendations are the same as for the general public no more than 1-2 drinks per day for women (no more than 14 standard drinks weekly) or 2-3 drinks daily for men (no more than 21 standard drinks weekly) (see page 14).

## **Regular Meals**

- Have regular meals at regular times each day. Have a breakfast, a lunch or tea time meal and a dinner.
- If you are hungry in between your meals you can have a low fat snack e.g. fruit or a diet yoghurt (low fat and reduced sugar).
- Eating regularly means you have to plan ahead. If, for example, you have to make a long journey, prepare some food to take with you so you can have something to eat at the normal time.

# Carbohydrates

This food group has the largest effect on blood glucose levels because when they are digested carbohydrates are broken down into glucose (sugar).

Carbohydrates consist of sugars and starches and are an important energy source for the body and brain. However with diabetes it is important to choose the right carbohydrates that help control blood glucose levels.

## The following foods are sources of Carbohydrates:

### Starchy Carbohydrates

- All types of bread and crackers
- Potatoes
- Cereals
- Pasta / Rice / Noodles



### Sugary Carbohydrates

All sweet foods (cakes, chocolate, biscuits, jams, marmalades, non-diet fizzy drinks etc.)

### Naturally Occurring Sugars

- Fruit and fruit juices
- Pulse vegetables (peas, beans, lentils)
- Dairy food (milk, yoghurt)



Starchy foods should form the basis of each meal. Choose similar sized portions of carbohydrate at each main meal as this can help to control your blood glucose levels.



Try to use wholegrain or wholemeal varieties of these foods to increase the fibre content of your diet e.g. wholemeal or wholegrain bread, wholegrain cereals, wholewheat pasta and brown rice. Adequate fibre in the diet ensures healthy bowel functioning.

### **1 portion of starchy foods is equal to:**

- ▶ 1 medium potato
- ▶ 1 slice of bread
- ▶ ½ pitta bread or ½ roll
- ▶ 2 ryvitas or 3 crackers
- ▶ 3 dessert spoons cooked rice/pasta/noodles/couscous
- ▶ 1 serving of breakfast cereal (1 weetabix, 1 medium bowl porridge, 5 dessert spoons of high fibre flakes)

**Take 6 portions of these foods daily.** You may require additional portions depending on your weight and activity levels. If you are referred to a Dietitian you will be advised on how many portions you should eat.

Choose carbohydrates with a low GI (Glycaemic Index). GI refers to the rate at which glucose (sugar) is released from a food. Foods that have a low GI release glucose slowly and are the best types of carbohydrate to eat for diabetes. Starchy foods with a low GI include porridge, pasta, pulses, noodles, and wholegrain/multiseed/granary breads.

# Sugar & Sweet Foods

Sugar and sweet foods can cause your blood sugar level to rise rapidly outside the normal range.

Sugary foods can also be high in calories and cause weight gain so for these two reasons these foods should be limited.

Sweet foods should be reserved as a treat and not something to be indulged in daily. It is also important to choose foods that have a low sugar content. The table opposite shows suitable low sugar alternatives.

**PLEASE NOTE: There is no need to buy special 'diabetic' foods. These foods are expensive, can be high in sugar and fat and if taken in large amounts can cause diarrhoea.**



High sugar foods to avoid	Choose instead
White or brown sugar, honey, syrup, treacle, glucose, sweeteners containing sucrose	Artificial Sweeteners e.g. Canderel, Splenda, Hermesetas, Natrena
Marmalade & Jams	Reduced sugar or high fruit content marmalade & jams, pure fruit spreads e.g. Kelkin, Poiret & Robertsons
Sweets, chocolate, fudge, toffees	Sugar free peppermints/chewing gum
Cakes, sweet biscuits	Plain biscuits e.g. Digestives, Rich Tea, Marietta, Fig Roll, Goldgrain, Crisp breads, scones (If you need to lose weight only have these occasionally)
Fruit tinned in syrup	Fruit tinned in natural juice, fresh fruit or small portions of dried fruit.
Fizzy drinks and squashes containing sugar or glucose e.g. Coke, lemonade flavoured mineral waters, mixed fruit juice drinks like Sunny Delight & Capri-Sun, Hot Chocolate and malted milk drinks like Ovaltine & Bournvita.	Sugar free or diet fizzy drinks and squashes. Pure fruit juice in small amounts.
Sugar coated cereals e.g. Frosties, Coco Pops, Crunchy Nut Cornflakes	High fibre cereals e.g. Weetabix, Branflakes, Fruit and Fibre, no added sugar Muesli or Porridge

# Fats

Having Type 2 Diabetes increases your risk of heart disease but eating less fat in your diet can help reduce that risk. As well as eating less fat it is important to eat the right type of fat.

## There are different types of fat in our diet:

**Saturated fat** is the fat in our diet that contributes to raised cholesterol.

Raised cholesterol increases the risk of a heart attack and stroke.

Saturated fat is found in butter, lard, cream, fat on meat, meat products such as sausages and black and white pudding, cakes, tarts, take-away foods, crisps, chocolate, fudge and toffees.

**Unsaturated fat** in our diet helps to lower blood cholesterol. Unsaturated fat comes in two forms monounsaturated and polyunsaturated.

**Monounsaturated fat** is found in olive oil, canola (rapeseed) oil, nuts such as peanuts, almonds, cashew nuts and spreads labelled high in monounsaturates. Try to include more monounsaturated fats instead of saturated fats.

**Polyunsaturated fat** is found in sunflower, corn and soya oils as well as in spreads high in polyunsaturates.

Oily fish is rich in a specific polyunsaturated fat called omega 3 that is very heart protective. It reduces inflammation and helps lower cholesterol. It is recommended to eat oily fish at least once a week. Oily fish includes salmon, sardines, mackerel, herring and trout. Fresh, frozen, vacuum packed or tinned are all suitable, avoid fish coated in batter or breadcrumbs.

Also if you have to lose weight cutting down on fat will help you to achieve and maintain a healthy weight.

Foods to avoid	Foods to choose instead
Butter, Lard, Dripping, Hard Margarine	Low Fat spreads – choose mono or polyunsaturated based spreads e.g. Low Low, Avonmore Light, Flora Light, supermarket brands of monounsaturated spreads, small amounts of olive or rapeseed (canola) oil.
Creamy sweetened yoghurts, Greek yoghurt, cream	0% fat yoghurts, diet yoghurts, low fat fromage frais
Full fat hard cheese, processed cheese and cream cheese	Low fat cheese such as Edam, Low fat cheddar, Feta, Mozzarella, Low fat cheese spread
Fried eggs, Scotch eggs	Boiled, poached or scrambled eggs
Salami, pâté, sausages, sausage rolls, black & white pudding, luncheon meat, meat pies and streaky bacon	Lean meat (cut off fat), chicken & turkey (no skin), liver, offal, soya mince, peas, beans, lentils and nuts
Fried fish or fish in batter	Fish fresh or frozen, tinned fish in tomato sauce, water or brine
Chips, roast potatoes, fried noodles, fried bread	Boiled, baked or mashed potatoes, boiled rice, pasta or noodles, bread & pitta bread
Cakes, tarts, pastries, chocolate, fudge, toffees and crisps	Scones, malt loaf, brack, plain popcorn
Mayonnaise, salad cream, fatty gravy	Small amounts of low fat mayonnaise & low fat salad cream, fat free dressings, small amounts oil and vinegar dressing, natural yoghurt, gravy granules, mustard

## How to reduce your fat intake

- Choose low fat dairy products e.g. low fat milk, low fat cheese and low fat yoghurt.
- Choose a low fat spread instead of butter
- Choose low fat mayonnaise, low fat salad cream and fat free dressings
- Cut all visible fat off meat, remove the skin from poultry
- When cooking mince drain the fat off, and skim the fat off casseroles and stews
- Avoid frying and use alternative cooking methods such as grilling, boiling, steaming, poaching, microwaving or baking.
- Avoid rich sauces and fatty gravies: skim fat off the meat juices for home-made gravy, or use tomato based sauces and gravy granules instead.
- Do not add extra fat to your food once it is cooked such as butter on potatoes or vegetables.
- Eat fruit, low fat yoghurts, plain popcorn, crispbreads, rice cakes and cereal with low fat milk instead of cakes, tarts, crisps and chocolate.

**IMPORTANT: Be careful of cakes, biscuits and desserts that are labelled low fat as these can be high in sugar and are best avoided.**



# Fruit & Vegetables

Each day eat 5 portions from a variety of fruit, vegetables and salads. Fruit and vegetables are low in calories, low in fat and high in fibre and vitamins.

## 1 portion is equal to:

- 1 medium sized apple or pear
- 1 small banana
- 2 small fruits e.g. 2 kiwis, 2 mandarins or 2 plums
- 10-12 grapes or strawberries
- 1 small glass (100-150mls) unsweetened fruit juice
- 4 stewed prunes or apricots
- 1 wedge melon or 1 slice pineapple
- 3-4 dessert spoons cooked vegetables
- 1 small bowl mixed salad
- 1 small bowl homemade vegetable soup

**REMEMBER: Eat 3 portions of fruit every day. Avoid eating more than one portion at a time. Have fruit juice with meals.**

## Ways to ensure you eat enough fruit and vegetables

- Add fresh fruit to breakfast cereals or have fruit juice at breakfast
- Always add salad vegetables such as tomato, lettuce, cucumber and onion to sandwiches or rolls
- Always have fresh, frozen or tinned vegetables with your main meal, try to have two portions
- Have fresh, frozen or tinned fruit in natural juice for dessert
- Have fresh fruit as a snack

# Salt

On average Irish people eat at least 10g salt a day in their diet.

A recommended safe level of salt in the diet is 6g per day. Too much salt can contribute to high blood pressure and heart disease. If you have high blood pressure it is important to reduce your salt intake as much as possible.

## To cut down on salt it is recommended to:

- Cut down on your intake of processed foods especially ready prepared meals and takeaways, as processed foods are the main source of salt in the diet.
- Avoid added salt in cooking or at the table.
- Instead of salt, flavour your food with pepper, garlic, vinegar, curry powder, mustard, lemon juice, parsley and other herbs and spices.

# Alcohol

As with the rest of the population people with diabetes should only drink alcohol in moderation.

Men should not drink more than 3 standard drinks per day and women not more than 2 per day. Everyone should have some alcohol free days per week.

1 pint beer = 2 standard drinks

1 small glass wine (100 mls) = 1 standard drink

1 short e.g. vodka, whiskey = 1.5 standard drinks

1 small bottle wine (187 mls) = 2 standard drinks

1 glass lager = 1 standard drink

1 bottle wine = 10 standard drinks

- Choose minerals labelled diet, light, zero or slimline as a mixer for spirits
- Avoid "Alcopops", liqueurs and cocktails
- Avoid low sugar beers as these are high in alcohol
- Do not drink on an empty stomach



# MEAL SUGGESTIONS

So now you have some idea what you should eat and drink, lets put it all together and come up with some meal suggestions.

## Breakfast Ideas

- Orange juice, Branflakes, low fat milk and a small banana
- Grapefruit segments, boiled egg and wholemeal toast with low fat spread
- Porridge with 1 dessertspoon of sultanas and a low fat no added sugar yoghurt
- Shredded wheat and strawberries (if in season), low fat milk and a natural yoghurt
- Weetabix and low fat milk, Ryvitas and reduced sugar marmalade
- Poached egg and grilled tomato, wholegrain toast and a low fat spread
- Oatibix, a kiwi and low fat milk, Crackerbread/Cracottes and a low fat spread



## Lunch Ideas

- Homemade vegetable soup, brown bread, low fat cheese and an apple
- Pitta bread sandwich made with tuna, sweet-corn and a teaspoon low fat mayonnaise, and a slice melon to finish
- Pasta with chicken and tomato sauce made with tinned chopped tomatoes, salad\* and a natural yoghurt dressing
- Baked beans on granary bread toasted and a pear
- 1 egg omelette, a small bagel and a salad
- Sardines, tomatoes, wholemeal bread and an orange
- Grilled rashers and mushrooms, potato waffle and peach/nectarine (if in season)

\*Salad suggestion

Lettuce, tomato, cucumber, onion and grated carrot

## Dinner Ideas

- Lean grilled pork chop and apple sauce, carrots and mashed potatoes.
- Roast lamb, broccoli and cauliflower, a baked potato and low fat gravy.
- Baked cod/haddock with lemon juice and black pepper, couscous with frozen peas and chopped mixed peppers.
- Stir-fried chicken with vegetables and wholegrain rice.
- Salmon marinated for 1/2 hour in orange juice, garlic and reduced salt soy sauce, then baked, noodles and frozen peas.
- Chicken and vegetable casserole, steamed or boiled potatoes.
- Chilli Con Carne with pasta and a side salad.

**NOTE: Although these foods are healthy choices it is important to reduce portion size if you need to lose weight.**

## Snack ideas

- Fresh fruit
- Diet or 0% fat yoghurt
- Crispbread / rice cakes or oat crackers with tomato/cucumber/small serving low fat cheese spread
- Small wholemeal scone with low fat spread
- Small bowl cereal with low fat milk
- Plain biscuits such as 1 Digestive/Fig Roll, 2 Rich Tea/Marietta/ Gingernut (do not have as a snack more than once daily)

As well as the above food ideas it is important to drink at least 8-10 glasses of fluid a day, this includes water, no added sugar squashes, diet drinks, tea, and coffee.



# BE A HEALTHY WEIGHT

Now that you have been diagnosed with Type 2 Diabetes it is important that you look at your weight.

If you are overweight you need to start losing weight as part of your lifestyle changes. Being overweight contributes to insulin resistance. Losing weight will help to improve your diabetes control.

Aim to lose 5-10 kg over 3-6 months, this equates to 11 lbs - 1½ stone, or aim to lose 10% of your actual body weight. In other words if you are 100 kg (15 stone 10 lbs) you should aim to lose 10 kg which is approx 1½ stone. Weight loss should be gradual, try to lose 1-2 lbs per week. If you lose weight any faster than this you will end up losing muscle as well as fat which is not to be recommended, you just need to lose fat!

Many people with diabetes tend to put on weight around their middle, so as well as looking at your weight you should check your waist measurement. Women should aim to have a waist measurement no more than 32 inches. Men should aim to have a waist measurement no more than 37 inches. Losing weight around your stomach area helps to control your diabetes. If you have a waist measurement over these values you are at increased risk of cardio-vascular disease.

## **Losing weight will help you to:**

- Keep your diabetes under control
- Reduce the risk of heart disease
- Lower your blood pressure
- Lower your unhealthy cholesterol
- Improve your mobility
- Reduce the stress on your joints

# Physical Activity

As well as healthy eating, the person with type 2 diabetes should take physical activity regularly.

This means walking for a minimum of half an hour most days. Other suitable exercise is cycling, swimming, dancing, golfing or attending the gym. If you are overweight you will need to do at least 60 minutes of activity a day to ensure you lose weight. Start slowly and gradually increase in time and pace.

## **Physical activity has many health benefits:**

- Helps keep your blood sugars within normal limits
- Helps you to feel more energetic
- Improves circulation
- Relieves stress
- Helps you to lose weight
- Increases healthy cholesterol
- Improves your blood pressure
- Improves your mood

Other activities you can do to keep active are using the stairs, washing the car, gardening and housework.

When exercising always wear good-fitting comfortable footwear so you won't damage your feet. If you have an existing heart condition or have not exercised in the past it is suggested that you consult with your GP or Diabetes team before commencing an exercise programme.



# HYPOGLYCAEMIA

Hypoglycaemia or a low blood sugar is when your blood sugar falls below 4mmol/L. It is often referred to as a "hypo".

Hypoglycaemia can occur in anyone who is on a type of medication called sulphonureas and those who take insulin.

**Check with your GP, practice nurse, pharmacist or diabetes unit what type of medication you are on and if you are at risk of hypoglycaemia.**

Symptoms of a "hypo" include sweating, shaking, tingling of lips and tongue, tiredness, hunger, trembling, dizziness, blurring of vision, headache, difficulty concentrating and irritability.

## **What causes a "hypo"?**

- Taking too much insulin or too many diabetic tablets
- Eating too little food or missing a meal
- More strenuous physical activity than usual.
- Excess alcohol intake

## **What to do if you have a "hypo":**

If you feel able check your blood sugar. If it is below 4 take 15g of quick acting carbohydrate.

If you do not feel able to check your blood sugar, take 15g quick acting carbohydrate immediately.

► **Some examples of 15g quick acting carbohydrate are**

- 85 mls Lucozade (½ glass)
- 150 mls ordinary minerals (1 glass)
- 150 mls of fruit juice
- 1-2 tubes Glucogel (hypostop)
- 5 Dextrosol/Lucozade tablets
- 3 teaspoons of sugar dissolved in a milky cup of tea or coffee

Wait 10-15 minutes, recheck your blood sugar, and if it is still below 4 take a further 15g carbohydrate.

Once your blood sugar is over 4 and you are due to eat in the next hour no further carbohydrate is needed. If you are not due to eat for some hours then it is best to follow this up with a snack or take your next meal early.

Take note of when the "hypo" occurred, so that you will know how to prevent it happening in the future. Remember to discuss these events with your GP, practice nurse or diabetes unit.





# HAVE REGULAR CHECK UPS

These are necessary to avoid any damage to the body caused by poorly controlled Diabetes.

You need to have your diabetes reviewed by your GP or diabetes team regularly even if you feel well.

## **Checklist for a diabetes review**

- Blood glucose levels and HbA1c  
(Test of your average blood sugar reading)
- Blood pressure
- Cholesterol and lipid profile
- Medication
- Discuss any recent hypos  
(low blood glucose readings)
- Smoking
- Exercise
- Healthy eating
- Weight and BMI
- Alcohol intake
- Feet
- Eyes
- Kidney review (blood or urine)

# Useful Contacts

## **Diabetes Federation of Ireland**

76 Lower Gardiner Street

Dublin 1

01-8363022

Lo-call 1850 909 909

[www.diabetes.ie](http://www.diabetes.ie)

## **Diabetes UK Careline**

10 Queen Anne Street,

London W1M 0BD

0044-2076366112

[www.diabetes.org.uk](http://www.diabetes.org.uk)

## **Irish Nutrition and Dietetic Institute**

Ashgrove House

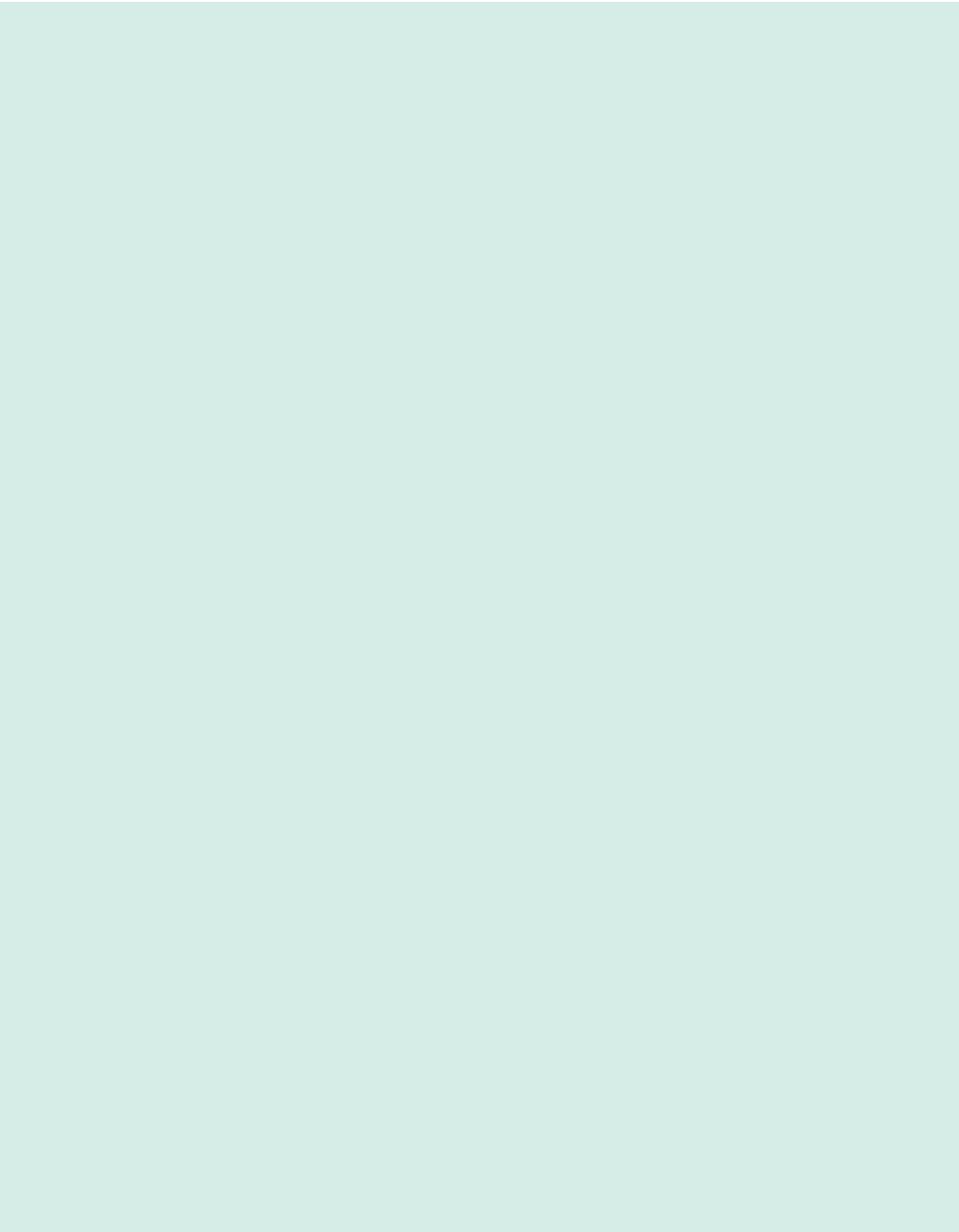
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# Notes



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