



Living well with Pre-diabetes



What is Pre-diabetes?

This Booklet has been prepared as general advice for those who have been diagnosed with Pre-diabetes.

Pre-diabetes is where the amount of glucose in the blood (blood sugar) is higher than normal, but it is not high enough for you to have diabetes. People with Pre-diabetes have an increased risk of diabetes and heart disease. To help you control your blood glucose level it is important to:

1 Take regular exercise



2 Be a healthy weight



3 Eat a healthy diet





1 Take regular exercise

A small amount of regular exercise, whatever you most enjoy doing, will help reduce your blood glucose and has many other health benefits too. You need to do at least 30 minutes of activity on most days of the week (at least five days). Try walking, swimming, aqua-aerobics, cycling, dancing, joining a fitness class, household chores such as hoovering, gardening, cleaning or why not try the sit-to-stand exercises as shown on pages 5, 6, 7 and 8.

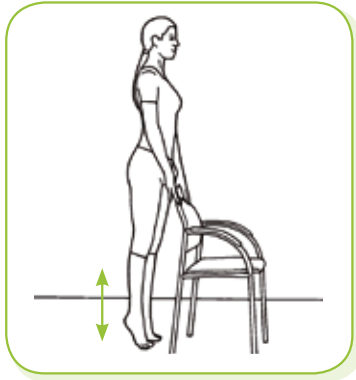
If you're trying to lose weight, you need to do at least 60 - 90 minutes a day.

Healthy muscles are very important, as most of the glucose in your blood is used by muscles. You should try to use arm or leg weights at home or in the gym or join a Pilates class.

If you have a heart condition or have not exercised in the past, you should talk to your GP before starting exercise.

Sit-to-stand exercises

The following pages show a series of sit-to-stand exercises. You should aim to spend one minute on the exercises shown in each picture. Work at a pace that is comfortable for you. Enjoy it!



Up on your toes



Kick straight back

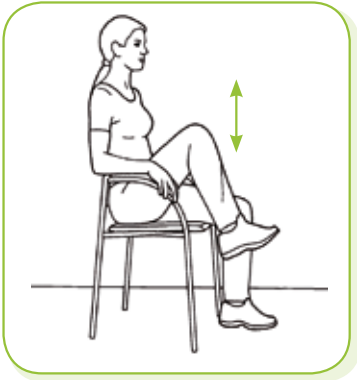


Marching on the spot



Stand up / sit down

Sit-to-stand exercises continued



Knees up



Step forward



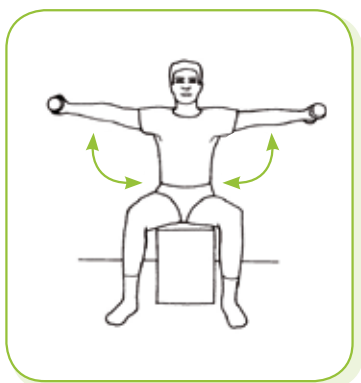
Leg out to the side



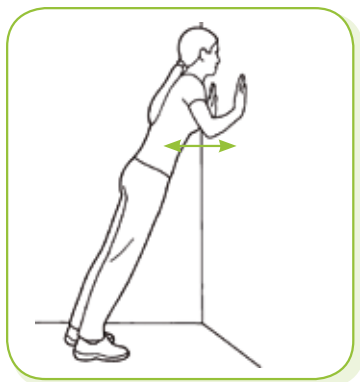
Mini-squat



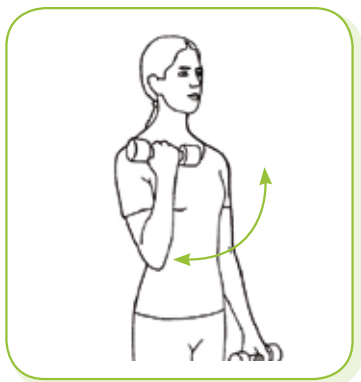
Arm straight up



Up and out

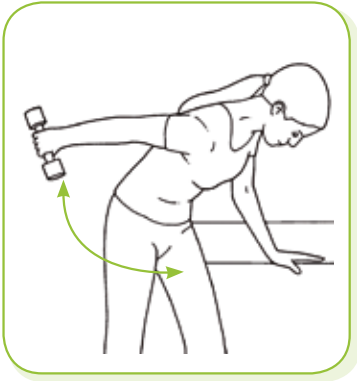


Wall press up



Bend and straighten

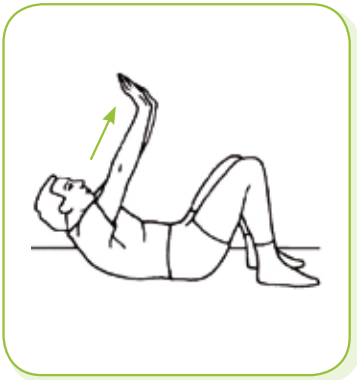
Sit-to-stand exercises continued



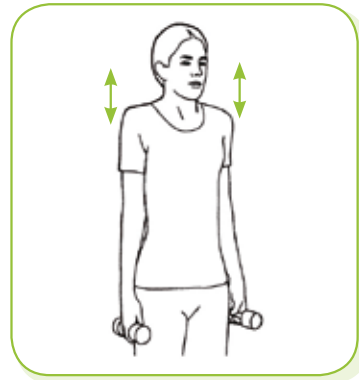
Straighten at elbow



Boxing



Reach up



Shrug shoulders



2 Be a healthy weight

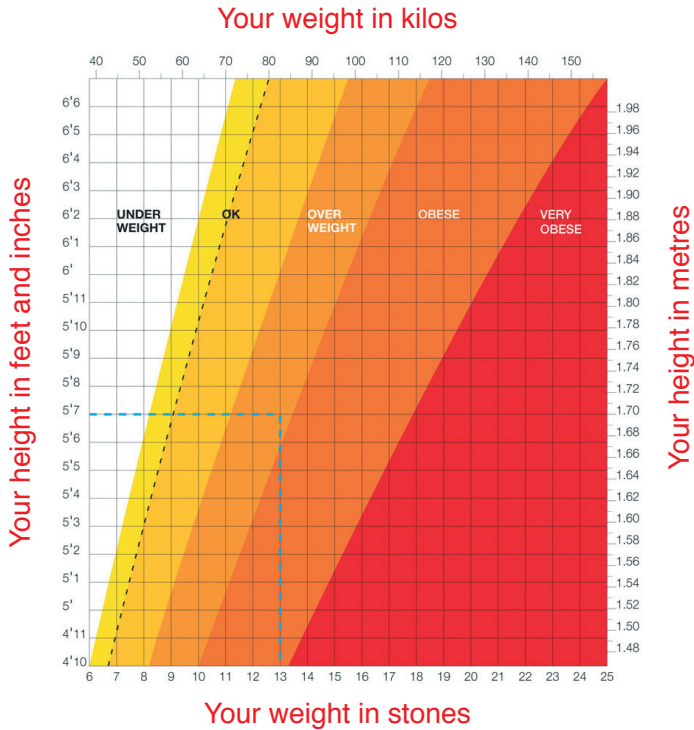
If you are overweight, losing even a small amount of weight, and keeping that weight off, will help to reduce the amount of glucose in your blood. Your aim should be to lose between 5% and 10% of your starting weight.

For example, if you are 89 kilos (14 stone), you should aim to lose between 4 – 9 kilos (10 – 20lbs). The best way to lose weight is slowly, for example 1 – 2 kilos (2 – 4lbs) a month over three to six months.

Eating a healthy, low fat, low sugar, high fibre diet and doing some exercise on most days of the week is the best way to help you reach your target weight. You may need to do 60 - 90 minutes of exercise a day to lose weight.

Are you the right weight for your height?

Use the chart below to check if you are a healthy weight or if you need to lose some weight.



Waist size

The higher your waist measurement, the higher your risk of developing diabetes and heart disease. Measure your waist by wrapping a tape measure around your waist circumference, over bare skin, about one inch above your belly button.

	Ideal waist size	Increased risk	Greater risk
Female	Less than 32" (80cm)	32 – 35" (80 - 88cm)	More than 35" (88cm)
Male	Less than 37" (94cm)	37 – 40" (94 -102cm)	More than 40" (102cm)



3 Eat a healthy diet

Eat three meals a day

Include some starchy, high fibre foods at each meal, for example wholemeal bread, wholegrain cereals, potatoes, wholegrain rice or pasta.

Breakfast

Two thin slices of wholemeal bread **or** one third of a cup of dry porridge oats.

Lunch or Tea

Two thin slices of wholemeal bread.

Dinner

Two medium potatoes **or** one cup of cooked rice or pasta.

These starchy, carbohydrate foods are broken down to blood glucose – the more of them you eat, the higher your blood glucose levels.

Have similar amounts of carbohydrate in your diet from day-to-day and control your portion size. For further information on portion sizes, see Food Pyramid on pages 12 and 13.

The Food Pyramid

For adults, teenagers and children aged five and over

Not needed for good health.

Foods and drinks high in fat, sugar and salt



Most people consume snacks high in fat, sugar and salt and sugar sweetened drinks up to 6 times a day (Healthy Ireland Survey 2016). There are no recommended servings for Top Shelf foods and drinks because they are not needed for good health.



Needed for good health. Enjoy a variety every day.

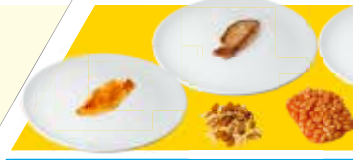
Fats, spreads and oils

Use as little as possible. Choose mono or polyunsaturated reduced-fat or light spreads. Choose rapeseed, olive, canola, sunflower or corn oils. Limit mayonnaise, coleslaw and salad dressings as they also contain oil. Always cook with as little fat or oil as possible – grilling, oven-baking, steaming, boiling or stir-frying.



Meat, poultry, fish, eggs, beans and nuts

Choose lean meat, poultry (without skin) and fish. Eat oily fish up to twice a week. Choose eggs, beans and nuts. Limit processed salty meats such as sausages, bacon and ham.



Milk, yogurt and cheese

Choose reduced-fat or low-fat varieties. Choose low-fat milk and yogurt more often than cheese. Enjoy cheese in small amounts. Women who are pregnant or breastfeeding need 3 servings a day.



Wholemeal cereals and breads, potatoes, pasta and rice

Wholemeal and wholegrain cereals are best. Enjoy at each meal. The number of servings depends on age, size, if you are a man or a woman and on activity levels. Watch your serving size and use the Daily Servings Guide below.*



Vegetables, salad and fruit

Base your meals on these and enjoy a variety of colours. More is better. Limit fruit juice to unsweetened, once a day.



*Daily Servings Guide – wholemeal cereals and breads, potatoes, pasta and rice

Active	Child (5–12)	Teenager (13–18)	Adult (19–50)	Adult (51+)	Inactive	Teenager (13–18)	Adult (19–50)	Adult (51+)
	3–4	4	4–5	3–4		3	3–4	3
	3–5	5–7	5–7	4–5		4–5	4–6	4

There is no guideline for inactive children as it is essential that all children are active.

Serving size guide



Cereals, cooked rice and pasta and vegetable salad and fruit. Use a 200ml plastic cup to get serving size.

Average daily calorie needs for all foods and drinks for adults

	Active 2000kcal	Inactive 1800kcal		Active 2500kcal	Inactive 2000kcal
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Drink at least 6 glasses of fluid a day.

NOT every day

Small or fun-size servings of chocolate, biscuits, cakes, sweets, crisps and other savoury snacks, ice cream and sugary drinks – **not every day, maximum once or twice a week.**

1 serving size is:

In very small amounts

- 1 portion pack reduced-fat or light spread for 2 slices of bread
- 1 teaspoon oil per person when cooking

2 Servings a day

- 50–75g cooked lean beef, lamb, pork, mince or poultry (half size of palm of hand)
- 100g cooked fish, soya or tofu
- ¾ cup beans or lentils
- 2 eggs
- 40g unsalted nuts or seeds

3 Servings a day
5 for children age 9–12 and teenagers age 13–18

- 1 glass (200ml) milk
- 1 carton (125g) yogurt
- 1 bottle (200ml) yogurt drink
- 2 thumbs (25g) hard or semi-hard cheese such as cheddar or edam
- 2 thumbs (25g) soft cheese such as brie or camembert

3-5* Servings a day
Up to 7* for teenage boys and men age 19–50

- 2 thin slices wholemeal bread, 1½ slices wholemeal soda bread or 1 pitta pocket
- ½ cup dry porridge oats or ½ cup unsweetened muesli
- 1 cup flaked type breakfast cereal
- 1 cup cooked rice, pasta, noodles or cous cous
- 2 medium or 4 small potatoes, 1 cup yam or plantain

5-7 Servings a day

- 1 medium sized fruit – apple, orange, pear or banana
- 2 small fruits – plums, kiwis or mandarin oranges
- Small fruits – 6 strawberries, 10 grapes or 16 raspberries
- ½ cup cooked vegetables – fresh or frozen
- 1 bowl salad – lettuce, tomato, cucumber
- 1 bowl homemade vegetable soup
- 150ml unsweetened fruit juice

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guide



Cheese
Use two thumbs, width and depth to guide serving size.



Meat, poultry, fish
The palm of the hand, width and depth without fingers and thumbs, shows how much you need in a day.



Reduced-fat spread
Portion packs found in cafes can guide the amount you use. One pack should be enough for two slices of bread.



Oils
Use one teaspoon of oil per person when cooking or in salads.

at least 8 cups of
– water is best



Get Active!

To maintain a healthy weight adults need at least 30 minutes a day of moderate activity on 5 days a week (or 150 minutes a week); children need to be active at a moderate to vigorous level for at least 60 minutes every day.

Eat less sugar in foods and drinks

The table below shows reduced or sugar-free foods that you should choose.

High sugar foods to avoid	Foods to choose instead
Sugar, glucose, treacle	<ul style="list-style-type: none"> • Artificial sweeteners such as Candarel, Hermesetas, Natrena or Splenda
Large quantities of jam, marmalade, honey	<ul style="list-style-type: none"> • Reduced sugar jam and marmalade • Pure fruit spreads such as Fruitfield, Weight Watchers, St. Dalfour, Kelkin • Small amount of ordinary jam, marmalade or honey
Sugar and honey coated breakfast cereals such as Crunchy Nut Cornflakes, Frosties, Coco Pops, Sugar Puffs	<ul style="list-style-type: none"> • High fibre breakfast cereals such as porridge, Weetabix, Shredded Wheat, Bran Flakes, unsweetened muesli
Sweetened fruit juice	<ul style="list-style-type: none"> • A small amount (100mls) of pure, unsweetened fruit juice
Regular minerals and squashes	<ul style="list-style-type: none"> • Diet, light, or slimline minerals such as Sprite Zero, Pepsi Max, Fanta Light or Diet Coke • Sugar free flavoured water • Reduced sugar or sugar-free squashes such as Robinson's Special R, Mi-Wadi No Added Sugar, Ribena Toothkind, Dunnes/Tesco No Added Sugar
Drinking chocolate, Horlicks, Ovaltine	<ul style="list-style-type: none"> • Cocoa made with semi-skimmed milk and sweetener • Options, Highlights
Tinned fruit in syrup	<ul style="list-style-type: none"> • Tinned fruit in own juice (not in syrup), unsweetened stewed fruit or fresh fruit

Eat less sugar in foods and drinks (continued...)

High sugar foods to avoid	Foods to choose instead
Ordinary or low fat yogurt	<ul style="list-style-type: none"> Natural yogurt or lower sugar varieties such as diet Yoplait, diet Irish Yogurts, Muller Light, Tesco Healthy Living, Yoplait 0%, Weight Watchers, Marks and Spencer 'Count on us', Onken Bio Pot Lite
Probiotic drinks	<ul style="list-style-type: none"> Actimel 0%, Yakult Light
Puddings	<ul style="list-style-type: none"> Angel Delight No Added Sugar Sugar-free jelly Fresh fruit salad Stewed fruit sweetened with an artificial sweetener
Cakes, biscuits and pastries	<ul style="list-style-type: none"> Plain biscuits (not more than one or two a day) such as Goldgrain, Marietta, Rich Tea, Fig Rolls Wholewheat cracker, oatcake or rice cake Small slice of fruit brack or small scone (if you need to lose weight, only have these occasionally).
Sweets and chocolates	<ul style="list-style-type: none"> Sugar-free Polo Mints, Aqua drops, Sula Sugar-free gum Fisherman's Friend sugar-free Halls or Tunes sugar-free (only eat these occasionally)

Reduce fat intake

Having Pre-diabetes increases your risk of heart disease. Eating less fat in your diet will lower your blood cholesterol level and your risk of heart disease. Also, if you need to lose weight, cutting down on fat will help you to achieve and maintain a healthy weight. Saturated fats should be limited and replaced by unsaturated fats, predominantly monounsaturated fats.

Foods to avoid	Foods to choose instead
Butter, lard, dripping, hard margarine	<ul style="list-style-type: none">• Lower fat spreads – choose mono or polyunsaturated spreads such as Low Low, Avonmore Extra Light, Flora light, Golden Olive, some supermarket brands (check label)
General vegetable oils	<ul style="list-style-type: none">• Small amounts of olive or rapeseed (canola) oil. All oils, including 'healthy' oils, are high in calories
Whole milk	<ul style="list-style-type: none">• Low fat, light or skimmed milk, low fat Supermilk
Full fat sweetened yogurts, Greek yogurt, cream, crème fraiche	<ul style="list-style-type: none">• Plain yogurt• 0% fat, unsweetened diet yogurt• Lower fat fromage frais
Full fat hard cheeses, soft cheeses, cream cheese	<ul style="list-style-type: none">• Low fat cheeses such as Edam, Gouda, Feta, Mozzarella• Reduced fat cheddar• Cottage cheese• Lower fat or light cheese spread
Fried eggs, scotch eggs	<ul style="list-style-type: none">• Boiled, poached or scrambled eggs

Reduce fat intake (continued...)

Foods to avoid	Foods to choose instead
Salami, pate, sausages, sausage rolls, black and white pudding, luncheon meat, meat pies, streaky bacon. Any fried meats	<ul style="list-style-type: none"> • Lean meats (cut off fat) • Chicken and turkey (no skin) • Liver, offal • Lean mince (drain fat off) or soya mince • Peas, beans, lentils and nuts
Fried fish or fish in batter	<ul style="list-style-type: none"> • Fish, fresh or frozen* • Tinned fish in tomato sauce, water or brine
Chips, roast potatoes, fried rice or fried noodles, fried bread	<ul style="list-style-type: none"> • Boiled, baked or mashed potatoes (without added butter or margarine) • Boiled rice, pasta or noodles • Wholegrain bread and pitta bread
Cakes, pies, pastries, biscuits, chocolate, fudge, toffees and crisps	<ul style="list-style-type: none"> • Scones, malt loaf, brack, plain popcorn
Mayonnaise, salad cream, fatty gravy, sauces	<ul style="list-style-type: none"> • Small amounts of very low fat mayonnaise and salad cream • Fat free dressings • Small amounts of oil and vinegar dressings, gravy powder or granules, mustard or low fat or tomato sauces

* Try to eat oily fish twice a week. These fish contain a type of fat called omega-3 fat which is good for your heart. They include salmon, sardines, herring, mackerel (including those in tins), trout, fresh tuna (not tinned unless omega-3 is added) and kippers.

Eat at least 5 - 7 portions of fruit, vegetables and salad each day

Vegetables, salads and fruit have fibre and the vitamins A, C and E, which help to protect your heart. You should eat a good variety every day, but you can have only one small glass (150mls) of unsweetened fruit juice or a smoothie each day.

One portion is one of these:

- One medium fruit such as apple, pear, orange, banana
- Two small fruits such as kiwi, plums, mandarins
- One handful (around ten) of grapes
- Half a cup of cooked vegetables - fresh or frozen
- One bowl of salad - lettuce, tomato, cucumber
- One bowl of homemade vegetable soup
- One small glass (150mls) of unsweetened fruit juice



Limit how much alcohol you drink

The weekly limits for alcohol are up to 11 standard drinks a week for women and up to 17 standard drinks a week for men. Do not have more than five standard drinks at one time and have three alcohol-free days each week.

One standard drink is:

- One small glass (100mls) wine
- A half pint beer or lager
- A pub measure of spirits

Avoid sweet alcoholic drinks such as cider, liqueurs, port, alcopops, Bailey's, sherry and sweet wines. Choose diet or slimline mixers for spirits and avoid low sugar beers as these are high in alcohol.

Sample meal plan

Breakfast

- Bowl of breakfast cereal such as porridge, Weetabix, Bran Flakes, Shredded Wheat with low fat milk and/or wholegrain bread or toast with small amount of low fat spread and reduced sugar jam or marmalade **or** a small amount of ordinary jam or marmalade.
- Egg – boiled, poached or scrambled, **or** Bacon (remove fat), tomato and mushrooms – grilled.
- Fresh fruit

Lunch or Tea

- Homemade vegetable soup

- Wholegrain bread, roll, bap or pitta bread with low fat spread
- Cheese (preferably low fat), ham, turkey, tinned salmon **or** sardines, **or** beans, **or** egg – boiled, poached or scrambled, **or** bacon (remove fat), tomato and mushrooms – grilled.
- Always include salad such as lettuce, tomato, onion, cucumber, peppers, sweetcorn or other vegetables.
- Use a small amount of fat free salad dressing or extra-light mayonnaise

Main meal

- Potatoes – boiled, baked or mashed with low fat milk only **or** pasta **or** rice. Do not have roast potatoes or oven chips more than once a week.
- Large portion of vegetables or salad
- Fish or chicken (remove skin) or meat (remove fat) – not fried.
- Fresh, tinned (in own juice) or stewed fruit, diet yogurt **or** sugar-free jelly

Snacks (not always necessary)

- Fruit (fresh or tinned)
- Diet yogurt
- Plain biscuits – no more than one or two a day
- One slice of wholegrain bread or toast with a scrape of low fat spread or low fat cheese spread, tomato, banana or reduced sugar jam **or** a small amount of ordinary jam.
- One or two crispbread or Ryvita with a tomato, banana or low fat cheese spread
- Small bowl of suitable breakfast cereal with low fat milk
- Drinks such as tea, coffee, water, diet minerals

Results of your annual check-up

You should have a check-up every year with your doctor. The table below will help you to understand your blood glucose results.

	Fasting blood glucose (mmol/l)	2-hour glucose (mmol/l)	HbA1c (mmol/mol)
Prediabetes	6.1 - 6.9	7.8 - 11.0	39 - 46
Type 2 Diabetes	Greater than or equal to 7	Greater than or equal to 11.1	Greater than or equal to 48

Record your results in this table.

Date	Fasting Blood Glucose (mmol/l)	2-hour Glucose (mmol/l)	HbA1c (mmol/mol)	Weight (kilos)	Other Results



Notes





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DIABETES



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