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## healthy villi

The lining of the small bowel contains thousands of microscopic folds known as 'villi' (under a microscope, villi can look like individual hairs or fingers). Villi are essential for the absorption of nutrients from food.


## damaged villi (cocliac disease)

For someone with coeliac disease, eating food that contains gluten causes damage and inflammation in the small bowel and 'flattening' of the villi, this means that the villi are unable to work as effectively. As a result your body is less able to absorb important nutrients from food.

Around 1 in 100 people have coeliac disease although there are many people who are not yet diagnosed with the condition. Diagnosis can occur at any age and some people may be more at risk of developing the condition, for example, close relatives of people with coeliac disease have a 1 in 10 chance of having the condition themselves. Those with other autoimmune conditions such as type 1 diabetes or thyroid disease, amongst others, also have an increased risk.

## what are the symptoms?

The symptoms associated with coeliac disease can vary from person to person and can also vary in severity. As coeliac disease is a multi-system disorder, symptoms may be gut-related but can also affect other parts of the body too. Therefore, symptoms may well present outside of the gut as well.

## CUT SYMPTOMS - Diarrhoea and/or constipation - Excessive wind - Persistent or unexplained gut symptoms such as nausea or

 vomiting- Recurrent stomach pain, cramping or bloating

NON-GUT SYMPTOMS

- Nutritional deficiencies such as iron, vitamin B12 and folic acid deficiency
- Anaemia
- Lethargy
- Sudden or unexpected weight loss
- Mouth ulcers
- Skin rash (dermatitis herpetiformis)
- Infertility
- Neurological (nerve) problems such as ataxia (loss of coordination, poor balance) and peripheral neuropathy (tingling sensation in hands and feet).
- Recurring headaches
- Bone fractures or weaker bones

There are other symptoms to look out for in babies and young children including faltering growth or a change in growth pattern and irritability.

Symptoms of coeliac disease can be mistaken for other conditions such as irritable bowel syndrome (IBS) or wheat intolerance.

A proportion of people with coeliac disease experience no symptoms at all (asymptomatic coeliac disease), however, the damage caused by gluten is still evident within their gut.

If you are experiencing any of the symptoms listed, the first step is to make an appointment with your GP and discuss your concerns. It is important not to remove gluten from your diet until you are advised to do so by a healthcare professional.


## how is coeliac disease diagnosed?

The first stage when testing for coeliac disease is a blood test that looks for certain types of gluten-related antibodies within the blood. The main test currently used detects levels of immunogolbulin A tissue transglutaminase (tTG). Another blood test that is sometimes used checks for endomysial antibodies (EMA).

If your coeliac blood test is positive, you will be referred to a gut specialist (gastroenterologist) at your local hospital who may perform a procedure known as an 'endoscopy'. This will allow doctors to look at the health of your small bowel and obtain a small sample of bowel cells (a biopsy) which can be examined under a microscope. If your biopsy shows signs of the type of gut damage caused by eating gluten, then you will be given a formal diagnosis of coeliac disease

As a result of the COVID-19 pandemic, there has been a change to current guidance, meaning that for some adults under the age of 55 , with high tTG antibody levels and where no other medical conditions are suspected, coeliac disease can be confirmed with a further EMA blood test and without the need for an endoscopy and biospy. Even if you do not need an endoscopy, you will still need to be referred to a specialist health professional for ongoing support.

## CHILDREN

For children, gut biopsies may also not be necessary in some cases. Guidelines recommend that children whose blood tests show a high level of tTG antibodies may be diagnosed if a second blood test is positive for EMA antibodies. Your child's GP should refer them to a paediatric gastroenterologist to make sure the correct tests are carried out. For more child-specific information on coeliac disease and a gluten free diet, please refer to the 'Coeliac disease and me' leaflet in this series.

IMPORTANT: It is essential that you continue to consume gluten throughout the diagnosis process. Do NOT start a gluten free diet until your diagnosis has been confirmed by a specialist, even if the results of your blood tests are positive. It is recommended that you consume gluten in at least one meal per day for six weeks prior to undergoing these tests (which includes the antibody tests and the biopsy, if you are required to have one).

## why do I need a gluten free diet?

The only available treatment for coeliac disease is a strict, lifelong gluten free diet. If it is confirmed that you have coeliac disease, you will need to start to follow a gluten free diet immediately. You should start to feel better quickly, however it can take longer for the gut damage caused by eating gluten to fully heal, and some people find it can take up to a year for their symptoms to fully resolve. Your GP or your gastroenterologist will refer you to an experienced dietitian who should be able to guide you through the changes you need to make to your diet.

If you do have coeliac disease, your gastroenterologist or specialist healthcare professional may run more tests to check the strength of your bones and the levels of vitamins and minerals in your blood. National guidance for the management of coeliac disease recommends that these blood tests are undertaken annually to monitor your nutritional status and health. Some people with coeliac disease are more susceptible to infections due to poor spleen function (hyposplenism).

Since we don't have a way to identify who these individuals are, Coeliac UK's Health Advisory Committee recommends people with coeliac disease should receive the pneumococcal vaccine and a booster every 5 years as well as a yearly flu jab. It also recommends that people born between 1995 and 2014 should discuss vaccination against meningitis with their GP (since 2014, vaccination against meningitis has been incorporated in the childhood immunisation programme).

## Complications of coeliac disease

Early diagnosis of coeliac disease and following a gluten free diet helps to minimise the risk of associated long-term complications, as these are predominantly linked to having untreated coeliac disease.
There is a small percentage of people with coeliac disease who do not fully respond to a gluten-free diet. It is important to have an annual check up so that this can be addressed if needed.

## ( OSTEOPOROSIS

Osteoporosis is a thinning of the bones with an increased tendency to fracture, especially in the hips, wrist and spine. As we get older there is an increased risk of low bone mineral density (known as osteopenia) and osteoporosis, and the risks are greater for women after the menopause. Osteoporosis is particularly common in undiagnosed coeliac disease due to decreased absorption of calcium as a result of the damage to the gut lining. Bone health will usually improve after starting a gluten free diet and it is important to stick to the diet to minimise the risk of low bone mineral density and osteoporosis. For children with coeliac disease following a
gluten free diet, bone health is unlikely to be affected in the long term. At diagnosis and follow-up, your healthcare professional may recommend a DEXA scan to assess the state of your bone health. You should speak with your GP, consultant or specialist health care professional regarding whether this is relevant for you

## CANCER

People with undiagnosed or untreated coeliac disease have a slightly higher risk of developing certain rare forms of gut cancer. This risk is reduced by closely sticking to a gluten-free diet after being diagnosed with coeliac disease. After 5 years on a strict gluten free diet, the risk of developing these cancers is no greater than that of someone without coeliac disease; but the gluten-free diet must be followed for life

## INFERTILITY

Undiagnosed or untreated coeliac disease may be an underlying cause of some fertility problems. It is thought that poor vitamin and mineral absorption, raised antibody levels, as well as menstrual changes may contribute to this.

## LACTOSE INTOLERANCE

Lactose intolerance can be a consequence of undiagnosed or untreated coeliac disease in some people. Lactose is the sugar found in milk and dairy products. In healthy people, lactose is broken down by an enzyme called lactase, produced by cells that line the small bowel. When the bowel is damaged (as in undiagnosed/ untreated coeliac disease), less lactase enzyme can be produced and hence lactose is not broken down as effectively, resulting in gut symptoms such as bloating, pain and diarrhoea Your dietitian can help you to manage the symptoms of lactose intolerance until your gut heals and your body is able to break down lactose again.


## what is a gluten free diet?

Following a gluten free diet means you must avoid eating all gluten containing cereals (wheat, rye and barley) and foods made from these, such as breads, crackers, pasta, biscuits, cake, pastry and thickened sauces Gluten is also found in many foods that you might not expect, including processed meats, ready meals and confectionery. Always check the ingredients list for gluten containing cereals, and if in doubt, leave it out.

Alongside naturally gluten free foods and specialist gluten free products available in larger supermarkets, you may also be able to obtain a monthly allowance of staple gluten free foods on prescription* including breads and flour mixes (refer to the 'Gluten free Foods on Prescription' section in this booklet for further information)

If you have coeliac disease, it's important to remember that gluten is only a problem if you eat it. So, there is no need to avoid gluten in things like creams, shampoos and make-up.
*Availability of gluten-free products on prescription will vary depending on local prescribing policy.


CAN I INCLUDE OATS AS PART
OF A GLUTEN-FREE DIET?

The main reason that people with coeliac disease should avoid regular oats and oat-containing products is that oats are commonly contaminated with wheat/rye/barley during production and processing. It is believed that the majority of people with coeliac disease are able to tolerate uncontaminated pure oat products. Suitable oats will be labelled as 'gluten free' as they contain no more than 20 parts per million (ppm) of gluten, a level that is considered safe for people with coeliac disease.
(1)

A small number of people may still react to uncontaminated gluten free oats so always seek advice from your dietitian if you continue to experience symptoms or if you are not sure if you should be eating gluten free oats from the outset.
reading food labels

HOW TO CHECK LABELS

All foods sold in the UK are covered by allergen labelling law. This law states that any allergen contained within a food (however small the amount) should be clearly labelled in bold, highlighted or italic font within the ingredients list for that product. As all gluten containing cereals are known allergens you can expect these to be clearly labelled if they are present; look out for wheat, rye and barley within the ingredients list and avoid any foods that contain these ingredients. Whilst oats are identified as a gluten containing cereal in the allergen labelling legislation, uncontaminated, gluten free oats are considered safe for the majority of people with coeliac disease to eat.

Look out for 'allergy advice' warnings on packaging, these are intended to alert customers to any potential cross-contact risks. For example, a food that contains no gluten containing ingredients but has been produced in a factory where gluten is also handled might carry a 'may contain' or 'made in a factory handling' gluten/wheat/rye/barley warning. Foods with these warnings do not tend to be suitable as even tiny amounts of gluten can cause damage to the lining of the gut. It is important to check with Coeliac UK (through their Live Well Gluten Free app, Food and Drink Guide, or via their Helpline) if you are unsure about the suitability of any food.

INGREDIENTS: White Chocolate 82\% [Sugar, Cocoa Butter, Whole Milk Powder*, Emulsifier (Soya Lecithin), Natural Vanilla Flavour], Dark Chocolate 18\% [Cocoa Mass, Sugar, Cocoa Butter, Emulsifier (Soya Lecithin), Natural Vanilla Flavour].* from Cows' Milk Dark Chocolate contains Cocoa Solids 55\% minimum.
This product does not contain any artificial colours or flavours. This product is suitable for vegetarians.


## how else can I tell if a product is gluten free?

## The use of the term 'gluten free' on products is enforced by law. Products bearing this claim must contain no more than $\mathbf{2 0}$ parts per million (ppm) of gluten; this is considered a safe level for free consumption by people with coeliac disease.

You may see this claim on specialist gluten free products such as breads, flour, crackers and biscuits, as well as processed foods made from naturally gluten free ingredients such as soups, sauces and sausages. Uncontaminated oats can also use the term gluten free on pack.

You may also see the statement 'Suitable for coeliacs' or the Crossed Grain symbol on some but not all gluten free products.

The Coeliac UK Food and Drink Guide and Live Well Gluten Free app provide a comprehensive list of gluten free products
It's worth having easy access to one or both of these resources in case you are unsure if a food is safe to consume (see the 'support and advice' section at the back of this booklet for more information on how to become a member).

## CONFUSING INGREDIENTS

There are some ingredients which are made from a cereals containing gluten where the grain is processed so that the gluten is removed. These ingredients are safe for people with coeliac disease:

- Glucose syrups derived from wheat or barley including dextrose.
- Wheat-based maltodextrins.
- Distilled ingredients made from cereals that contain gluten, for example, alcoholic spirits.


## OTHER INGREDIENTS THAT CAN BE CONFUSING ARE:

This is also known as 'gluten free wheat starch' and is used in some specialist gluten free products to improve the texture and 'mouth feel' of products. Codex wheat starch and products containing it are safe for people with coeliac disease to eat as the gluten has been removed to a trace level ( $\leq 20 \mathrm{ppm}$ )

A number of foods and drinks are made from/include barley or malted barley, for example, malted milk drinks (Horlicks), barley water, barley fruit drinks and beers. These are all unsuitable for a gluten free diet.

However, some products use barley malt in small amounts as a flavour enhancer, for example, some breakfast cereals, sauces, pickles, chocolate and ready meals. It is often referred to as barley malt extract or barley malt flavouring on the label. If the amount used is sufficiently small, it's possible that the end product may still be safe to eat ( $\leq 20 \mathrm{ppm}$ ). However, some products which contain barley malt flavouring are not suitable for people with coeliac disease as they contain $>20 \mathrm{ppm}$. If you're not sure whether a food product that contains barley malt extract or flavouring is safe to eat, first check that it is labelled 'gluten free' and if any doubt check with the manufacturer or Coeliac UK (by either calling them, using their Food $\mathcal{F}$ Drink Guide or using their Live Well Gluten Free app).

## AT-A-GLANCE GUIDE TO CHECK SUITABILITY OF COMMON INGREDIENTS

| Not cluten-Free | Need to <br> Check* | cluten Free |
| :---: | :---: | :---: |
| Barley, bulgar <br> wheat, couscous, <br> Durum wheat, <br> einkorn, emmer, <br> freekah, Khorasan <br> wheat, pearl barley, <br> rye, semolina, spelt, <br> tritcale, wheat | Barley malt <br> extract/ <br> flavouring, oats | Almond, amaranth, <br> buckwheat, cassava, <br> chestnut, corn, flax/linseed, <br> gram flour, hemp, maize, <br> millet, mustard, polenta, <br> potato, pulses, quinoa, rice, <br> sago, sesame, sorghum, <br> soya, tapioca, teff, urd |

## top tips

## CROSS CONTACT

Cross contact (sometimes called "cross contamination") is when your gluten free food comes into contact with gluten, which might not be obvious. For example, your gluten free toast may come into contact with gluten containing crumbs which have been left in the toaster.

Unfortunately, even the smallest amount of gluten may cause your symptoms to return in the short term, and, in the longer term, result in damage to the lining of your gut. If you continue to suffer from symptoms once you are on a gluten free diet, you should make an appointment with your doctor or dietitian to discuss this. One of the main reasons for experiencing continued symptoms is due to accidental cross contact with gluten; however, it is important to be sure that this is the reason.

## AVOIDING CROSS CONTACT AT HOME

## Avoid cross contact at home by following these tips;

## LABELLING AND SEPARATING

- Label your containers with a colour or sign if they contain gluten free food.
- If you have enough space, try using separate storage spaces for gluten free foods and gluten containing foods.
- Keep gluten free foods at the top of the fridge - this ensures that crumbs from gluten containing foods won't accidently fall into your gluten free food.
- Have separate bread boards, bread knives and toasters for non gluten free and gluten free use.
- If you don't have a second toaster, use toaster bags, which are available in many supermarkets. Alternatively, use a clean baking tray and toast under the grill.
- If possible, have separate areas for food preparation.
- Use separate butter or margarine tubs as knives can transfer crumbs from gluten containing bread.
- Use a separate flour sieve and pasta strainer.
- Use separate cooking oil at home to cook gluten free foods. Remember to check separate cooking oil is used when eating out as well.
- It may be worth getting sauces (like tomato ketchup and mayonnaise) in squeezable containers as this reduces the risk of cross contact with gluten.


## CLEAN AND COVER!

- Cover the grill pan with foil.
- Wipe surfaces thoroughly after preparing foods containing gluten.
- Wash hands thoroughly before handling gluten free foods.
- Wash any shared utensils thoroughly after each use (if you cannot use separate utensils for gluten free and non-gluten free food).


## eating out

Allergen labelling law also applies to foods served in restaurants, cafes and delis, as well as other public places that offer food including schools, nurseries and hospitals. Food businesses must be able to provide information for all of the food they serve. If a recipe includes a gluten containing cereal, you should be provided with this information within the menu (or label), or clearly signposted to where it can be found, for example a menu may simply advise you to speak to a member of staff for more information about food allergens.

- Be prepared - keep a selection of gluten free snacks to hand; in the car, at work, in your handbag/ rucksack.
- Make extra - cook additional portions of your evening meal to take to work/ eat the following day, e.g gluten free pasta/ cooked meat for jacket potatoes or salads.
- Do your homework - take time to check restaurant websites for their gluten free offerings, ring ahead to check what might be suitable. Caterers must be able to provide this information by law!
- Don't be afraid to ask - if you're not confident that your meal or where it is prepared is gluten free, ask for more information.


## healthy eating on a gluten free diet

In the early weeks and months of a gluten free diet, it's normal to put on a few pounds. This is a good sign that your gut is healing and your body is absorbing nutrients again. However. it's a good idea to talk to your dietitian if you're struggling with your weight in terms of excessive weight gain or weight loss.

Maintaining a healthy weight helps you to feel better and also:

- Reduces high blood pressure
- Improves blood sugar control for diabetics
- Improves blood cholesterol levels
- Reduces stress on your joints



## what is a healthy diet?

A healthy diet is one that includes a well-balanced variety of nutritious, wholesome foods.


## EAT STARCHY FOODS FOR ENERGY AND MORE

Starchy foods provide essential energy as well as being a good source of fibre, calcium, iron, and some B vitamins. All your meals should be based on this filling food group, which contains less than half the calories per gram than fat. Naturally gluten free starches include rice and potatoes. Other starches that usually contain gluten, such as bread and pasta, are available in gluten free versions and help to make it easier to enjoy a healthy, varied diet.

## FIVE A DAY FOR GOOD HEALTH

Eating at least five portions of fruit and vegetables each day will help you get the fibre, vitamins and other essential nutrients you need as part of a healthy diet. Whether you choose to eat them fresh, frozen, dried or canned in juice (rather than syrup), they all count. Just remember that dried fruit is very high in sugar, and potato is included as a starch, and isn't one of your five a day.

## WHAT COUNTS AS A PORTION?

## Fruit or vegetable



- Melon
- Dried apricots
- Banana, apple, orange or pear
- Plums or kiwi fruit
- Strawberries or grapes
- Vegetables
- Fruit juice


## A portion

- 1 slice
- 3
- 1 medium-sized fruit
- 2 small-sized fruit
- 1 small handful
- 3 heaped tablespoons
- 150 ml



## foods to limit

FRIED AND FATTY FOODS

We all need a certain amount of fat in our daily diet. But some fats are healthier than others. Eating too many saturated fats, like those found in butter, margarine, cheese, and fatty meats like sausages and burgers can make you gain weight and increase your risk of heart disease.

Healthier choices include foods containing mono-unsaturated fats instead, such as olive oil, rapeseed oil, reduced-fat spreads, reduced-fat cheese, and lean meat like chicken (without the skin).

Easy ways to lower your saturated fat intake include grilling instead of frying, and using skimmed and semi-skimmed milk and other reduced-fat dairy foods instead of full-fat options.

Sugary foods tend to be high in empty calories that have little nutritional value and the potential to make you gain weight. To satisfy a sweet tooth, it's healthier to choose reduced-sugar foods and drinks, or look for naturally sweetened options.

Remember to check that all of your food choices are gluten free. Coeliac UK's Food and Drink Guide and Live Well cluten Free app are great resources for checking which foods are gluten free. We've included their helpline number at the back of this booklet.

## how much is a unit?

A pinch of salt can help bring out the flavour in your food, but too much in your diet can contribute to high blood pressure. Over time, this can lead to heart disease or a stroke.

The recommended salt intake for an adult is no more than 6 g a day. Processed foods such as soups, sauces and ready meals are often high in salt. Look for lower-salt options or check the salt content to make healthier choices.

When you're preparing meals at home, you can leave out the salt during cooking and let people add their own amounts at the table. Use plenty of herbs and spices for fuller flavours.

## ALCOHOL

Most drinks that could be classed as a beer contain gluten. This includes lagers, stouts and ales, although gluten free beers and lagers are becoming more widely available. Check Coeliac UK's Food and Drink Guide or Live Well Gluten Free app for suitable brands. Wine, whisky, port, sherry, cider, liqueurs, spirits and Champagne are all gluten free. Best enjoyed in moderation, of course.


## SIZING UP YOUR PORTIONS

As well as making healthy choices about what you eat, the amount of food you eat affects your health too. The UK Department of Health recommends that a woman should eat approximately 2,000 calories a day and a man should eat 2,500 calories. If you're trying to lose weight, a healthy way is to reduce your daily calories by around 500-600. This should lead to a gradual, safe weight loss of roughly $1 \mathrm{lb} / 0.5 \mathrm{~kg}$ a week.

## GUIDE TO SERVING SIZES

Here are some examples of recommended portion sizes when following a healthy gluten free diet.

| Starchy Foods | Fruit 8 Vegetables | Protein Foods |
| :---: | :---: | :---: |
| 2 egg-sized potatoes | 1 medium size piece of fresh fruit e.g. $1 / 2$ grapefruit, slice of melon | $60-90 \mathrm{~g}$ cooked lean beef, mince, chicken, turkey or oily fish (salmon, mackerel, sardines) |
| 2 heaped tbsp. boiled rice | 2-3 small fruit (plums, apricots) | 2 thin slices of lean, cold meat |
| 3 heaped tbsp. boiled gluten free pasta | 1 handful of grapes | 150g cooked white fish or canned tuna (in brine or spring water) |
| 1 slice of gluten free bread/toast | 1 handful of strawberries | 5 tbsp baked beans* |
| 3 tbsp dry porridge oats | 3 heaped tbsp. fruit (stewed/tinned in juice) | 20 g soya, Tofu, Quorn* |
| 1 small gluten free chapatti | 1 heaped tbsp dried fruit* |  |
| 1 small gluten free plain naan bread | 3 heaped tbsp cooked vegetables |  |
| 1/2 fruit or plain scone | 1 side salad |  |


| Milk 8 Dairy Products | Fats 8 Oils |
| :---: | :---: |
| 1/2 pint ( 200 ml or 1 glass) milk | 1 tsp butter or margarine |
| 1 small pot of low-fat/diet yoghurt or fromage frais* | 1 tsp oil or ghee |
| 1 small matchbox size ( $30 \mathrm{~g} / 10 z$ ) cheddar or hard cheese | 1 tsp mayonnaise* |
| 45 g half-fat cheese | 1 tsp double cream* |
| 90g cottage cheese | $\begin{aligned} & 2 \text { tsp reduced-fat/ } \\ & \text { reduced-calorie dressing* } \end{aligned}$ |
| 60g low-fat soft cheese | 2 tsp salad cream/reduced-fat mayonnaise or low-fat dressing* |
|  | 2 tsp single or soured cream or half-fat crème fraiche* |



## healthy eating tips

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## important nutrients

## (ब1) FIBRE

Fibre is an important part of a healthy, balanced diet. It is the part of plant foods that passes through the body without being absorbed. Wholegrains are the seeds of cereal plants and contain all three parts of the grain. These are higher in not only fibre but also vitamins and minerals.

National guidance recommends people aim for 30 g of fibre a day, however, most people in the UK do not eat enough. Those following a gluten free diet are more at risk of a low fibre intake due to the removal of cereals such as wheat, rye, barley and wholegrains.

Fibre helps to keep your bowels healthy by assisting food and waste products to move through the gut easily. Fibre can be found in foods such as fruits and vegetables (especially those with skin and seeds in), dried fruit and nuts, pulses and wholegrains like millet and quinoa which can be found in Schär breads. Fibre is also found in naturally gluten free foods like jacket potatoes.


## SIMPLE WAYS TO INCREASE FIBRE INTAKE

It is important to increase your fibre intake gradually and ensure you drink plenty of water at the same time.

We've compiled a list of easy ways to increase your daily fibre intake below:

- Aim to eat at least five portions of fruit and vegetables every day. Fresh, frozen dried and tinned all count as one of your portions
- Add pulses such as lentils, peas or beans and extra vegetables to soups, stews and curries
- Try gluten free wholegrains such as quinoa, millet and sorghum
- Choose high-fibre versions of gluten free breads, rolls, pasta and crackers
- Choose high-fibre snacks throughout the day such as a handful of dried fruit, mixed nuts, seeds or high-fibre crackers


Iron is an important mineral which has many different roles in the body. One of its main roles is to make haemoglobin, the red pigment in blood which is needed to transport oxygen around the body. Iron also plays an essential role in maintaining a healthy immune system.

Iron deficiency is common in people with undiagnosed and untreated coeliac disease as the body isn't able to absorb iron very well following damage to the gut lining. Approximately $25 \%$ of adults are anaemic when first diagnosed with coeliac disease.

THERE ARE TWO TYPES OF IRON THAT CAN BE FOUND IN THE DIET:

- Haem iron - this is more readily absorbed by the body and can be found in red meat and animal products
- Non-haem iron - this is less readily absorbed by the body and is found in plant foods such as green, leafy vegetables, beans, pulses and dried fruit.


Non-haem iron absorption can be reduced by tannins (found in tea) and polyphenols (found in coffee). Foods rich in vitamin C may improve absorption e.g. fruit juice, fresh, green vegetables, potatoes and citrus fruits.

We've compiled some simple tips to help ensure you have an adequate iron intake:

- Add green, leafy vegetables to main meals
- Add dried fruit to desserts
- Include fruit and/or nuts and seeds as snacks
- Try iron-fortified products, many gluten free breads and breakfast cereals are fortified with iron.

Calcium is an important nutrient needed to ensure you have strong bones, helping to reduce the risk of osteoporosis.

It is important for everyone to consume their recommended allowance of calcium. However, it is even more important for those with coeliac disease as there is a higher requirement for this nutrient than for the general population. This is because the damage to the lining of the gut in undiagnosed or untreated coeliac disease leads to less calcium being absorbed from the diet. It is recommended that adults with coeliac disease have at least 1000 mg per day. A 200 ml glass of milk or calcium-fortified plant-based alternative contains approximately 240 mg calcium.

Good gluten free sources of calcium include dairy products, tinned sardines, green leafy vegetables, oranges and dried figs. When choosing dairy products, opt for low-fat options as these contain as much calcium but less saturated fat than full-fat alternatives.

We've compiled some simple tips to help you achieve a good calcium intake:

- Add milk or yoghurt to your gluten free breakfast cereal
- Add green vegetables such as broccoli, cabbage, curly kale, watercress and green beans to your main meals
- Include dried fruit such as figs, seeds and nuts as gluten free snacks
- Use tinned fish with bones, such as sardines or pilchards, and include on toast
- Check non-dairy sources of calcium such as plant-based milks are fortified with calcium


## Vitamin D helps the body to absorb calcium from the diet.

Most of our vitamin $D$ is made by the action of sunlight on our skin. Foods rich in vitamin D include oily fish, eggs and fortified spreads and breakfast cereals. However, it is not possible to achieve an adequate intake of vitamin D from diet alone. Children over 1 and adults require 10 micrograms (or 4001 U ) of vitamin D per day. In the autumn and winter months, when sun exposure is reduced, a daily supplement containing 10 micrograms of vitamin D should be considered. People who have little sun exposure and those from ethnic minority groups with dark skin should consider taking a supplement all year round. Seek advice about suitable supplements from a healthcare professional.


## gluten free food on prescription

If you have been medically diagnosed with coeliac disease, you may be able to access gluten free foods on prescription each month to help you manage your condition. At present, Scotland, Wales, Northern Ireland and some parts of England still offer gluten free foods on prescription - your dietitian should be able to advise if prescriptions are available in your area and which products are available

## (?) WHAT AM I ALLOWED?

Gluten free food on prescription is measured in units. Once you've been diagnosed, you will have a number of units for your monthly allowance and you can select which products you would like to make up your allowance. If you live in England, your gluten free prescription will now just cover bread, rolls and flour mixes. If you live in Scotland, Northern Ireland and Wales you can order a variety of breads, rolls, flour mixes, pasta, biscuits and pizza bases.

## HOW MANY UNITS AM I ALLOWED?

Coeliac UK, the national patient charity for those with coeliac disease, has produced guidelines recommending the approximate monthly amount of gluten free food (classified in units) needed for a person with coeliac disease to help maintain a balanced diet.

The monthly allowance is based on the assumption that people with coeliac disease will also be eating some naturally gluten free foods such as rice and potato, and buying substitute gluten free products from the supermarket.


| England | Number of units |
| :---: | :---: |
| Child under 10 years | 8 |
| Child 11-18 years | 10 |
| Female 19 years \& older | 8 |
| Male 19 years \& older | 12 |
| Scotland/Wales 8 NI | Number of units |
| Child 1-3 years | 10 |
| Child 4-6 years | 11 |
| Child 7-10 years | 13 |
| Child 11-14 years | 15 |
| Child 15-18 years | 18 |
| Male 19-59 years | 18 |
| Male 60-74 years | 16 |
| Male 75 years \& older | 14 |
| Female 19-74 years | 14 |
| Female 75 years \& older | 12 |
| Breastfeeding | Add 4 |
| $3{ }^{\text {rd }}$ trimester pregnancy | Add 1 |

## HOW MANY UNITS IS EACH FOOD WORTH?

Each prescribable gluten free food is worth a certain number of units. For example, 400 g bread is 1 unit and 500 g pasta is 2 units. The table below shows the number of units each food represents.

| Food Item | Number of Units |
| :---: | :---: |
| 400 g bread | 1 |
| $100-250 \mathrm{~g}$ rolls/baguettes | $1 / 2$ |
| $251-400 \mathrm{~g}$ rolls/baguettes | 1 |
| 500 g bread mix/flour mix | 2 |
| 100 g savoury biscuits/crackers | 1 |
| 200 g savoury biscuits/crackers/crispbreads | 2 |
| 250 g pasta | 1 |
| 500 g pasta | 1 |
| $2 \times 110-180 \mathrm{~g}$ pizza bases | $1 \frac{11 / 2}{}$ |
| 500 g oats | 1 |
| 300 g breakfast cereal | $1 / 2$ |
| $100-170 \mathrm{~g}$ xanthan gum | 1 |

## HOW DO I SET UP A PRESCRIPTION?

The process for setting up a gluten free prescription varies depending on where in the United Kingdom you live, so it is important to check with your GP to see who will be responsible for this. In some areas of the country your prescription will be set up and managed by your GP, and in other areas, your pharmacist will be responsible for the management of your prescription.

## HOW MUCH WILL IT COST?

Depending on where you live in the country and what you are getting on prescription, the costs will vary. All prescriptions are free to residents of Northern Ireland, Scotland and Wales. In England, if you're over 60 years of age, under 18 years of age, on income support or pregnant, you also qualify for free prescriptions.


WHAT IS THE MOST COST-EFFECTIVE WAY TO OBTAIN A PRESCRIPTION?

The single prescription charge in England is $£ 9.35$ (2022/23). Each different category of gluten free food counts as one prescription charge, for example, if you wanted bread and a flour mix on prescription this would count as two separate prescription charges. If you are obtaining a regular gluten free prescription, it could be worth opting for a pre-payment certificate - this covers the cost of all your gluten free foods on prescription for a cost of $£ 2$ per week.

Ask your pharmacist for an FP95 form or call the NHS on 08458500030. Alternatively, visit www.nhsbsa.nhs.uk and select prepayment certificate.

## HOW DO I CHANGE MY GLUTEN FREE PRESCRIPTION?

If you would like to change the products you have on prescription you may need to make an appointment with your GP or speak to someone at your GP surgery to arrange this. In some areas, products are able to be changed by your pharmacist without the need to visit your GP. By consulting your pharmacist you can understand the easiest way of changing your prescription.

At your appointment with the dietitian, information on prescription products will be provided including manufacturer 'starter cards'. On completing these starter cards and returning them to the manufacturers, a box of gluten free products will be sent out to you for you to try. Once you have decided which ones you prefer, you can then request these products on prescription.


## frequently asked questions

## AM I AT RISK OF NUTRITIONAL DEFICIENCIES WHEN I SWITCH TO A GLUTEN FREE DIET?

No, not necessarily - if you follow a balanced diet, you shouldn't miss out on essential nutrients. Advice from a dietitian can help to ensure your diet is balanced with specific advice on important nutrients. This leaflet contains lots of useful tips and advice for healthy eating on a gluten free diet

## WHAT IF I EAT GLUTEN BY MISTAKE?

Following a gluten free diet is a learning curve and it can be quite common for mistakes to occur, especially when starting out on a gluten free diet. If this happens it is likely that the symptoms you experienced before diagnosis may reappear. The effect of eating gluten will vary from person to person and depends on the amount of gluten eaten, how sensitive you are and how long you have followed a gluten free diet. Whilst the occasional mistake is unlikely to cause any lasting damage to the lining of the gut it is important to try to minimise the risk of making mistakes in the future as repeated gluten exposure is likely to cause long-term health consequences.

## HOW LONG DO I HAVE TO WAIT AFTER MY DIAGNOSIS BEFORE FEELING BETTER?

Starting a gluten free diet following a diagnosis of coeliac disease means you will begin to feel better and your gut will start to heal. Some people will see an improvement in their symptoms within a few days of starting a gluten free diet, whereas in others it may take longer. It can take anywhere between 6 months and 5 years for the gut to fully heal and it is thought that this is dependent on age at diagnosis and also the severity of the gut damage. If you are concerned that your symptoms are not improving despite following a gluten free diet, make an appointment with your GP to discuss your concerns

## IF I HAVE COELIAC DISEASE, WILL MY CHILDREN HAVE IT?

Coeliac disease does run in families but is not necessarily inherited. If you have coeliac disease, there is roughly a 1 in 10 chance of your children or other close family members (e.g parents, siblings) also developing the condition. It is important to be aware of the symptoms and seek advice from your GP if your child develops any of these

## CAN I EAT OATS?

Oats can offer a nutritious addition to a gluten free diet as well as adding variety. They are rich in soluble fibre which can help maintain a healthy gut and may help to keep blood sugars stable. Oats also contribute B vitamins, zinc, iron, magnesium, protein and polyunsaturated fatty acids to the diet. Most people with coeliac disease can safely eat gluten free, uncontaminated oats. The issue with standard oats is that they are produced in the same place as gluten containing cereals such as wheat, rye and barley, which makes them unsafe as they may become contaminated during milling and processing. A very small number of people with coeliac disease may still be sensitive to gluten free, uncontaminated oats. If you are including gluten free oats in your diet and still experiencing symptoms, consult with your healthcare professional for individual advice.

## ARE GLUTEN FREE FOODS HIGH IN FAT AND SUGAR?

Gluten free foods are often criticised for being higher in fat and sugar than their mainstream counterparts, however, there is huge variation between the different brands and types of gluten free foods available on the market. Schär is committed to producing products that contain only the highest quality raw ingredients. We continually benchmark our products' nutritional values against mainstream equivalents to ensure comparability. Moreover, many of our products are high in fibre and low in saturated fat.


## support \& advice

## COELIAC UK

Coeliac UK is a national charity for people who need to live without gluten, due to coeliac disease or another medical condition, and their families. The charity provides a range of services to help individuals manage their health and diet including local support groups, information, tips and advice via their website and careline, and access to their annually updated Food and Drink Guide and Live Well Gluten Free app. Listing all gluten free products sold in the UK and restaurants that have an accreditation showing they are compliant with allergen laws.

## SCHÄR

is a gluten free food manufacturer, who is committed to supporting those with special dietary needs. With decades of experience and a team of expert food technologists and health professionals, the Schär range offers a wide selection of tasty and high-quality ambient and frozen products and is available in leading retailers. Schär also provides a range of services and resources including practical tips, information and gluten free recipes to support those on a gluten free diet. Further information on Schär products, resources and a gluten free diet can be found on the website. There is also a Schär app which helps you find gluten free options on the go including stores, restaurants and hotels as well as restaurant cards in different languages for travelling abroad.

Careline: 08001615838
sharecschar.co.uk www.schaer.com/en-uk


## Glutafin

## notes:

## GLUTEN FREE



## glutafin

Glutafin is one of the UK's leading manufacturers of gluten free foods on prescription. Glutafin offers support to newly-diagnosed patients with coeliac disease by providing free product samples and expert advice and information on their website and via their careline.

Careline: 08009882470 glutenfree@glutafin.co.uk www.glutafin.co.uk

## notes:



Leaflet produced with the editorial support of Cristian Costas Batlle (RD). Updated January 2023


[^0]:    - Choose healthy food that you enjoy
    - Keep your diet interesting with lots of variety
    - Eating slowly makes it easier to feel when you're full
    - Eat foods rich in starch and fibre
    - Include plenty of fruit and veg with meals and as snacks
    - Keep fatty foods to a minimum
    - Sugary foods and drinks are ok as an occasional treat
    - Use salt sparingly and enjoy salty foods such as cheese, bacon and crisps in moderation

