

Improving life for  
people affected  
by inflammatory  
bowel diseases



# Food and IBD



Crohn's and Colitis UK is the working name of the National Association for Colitis and Crohn's Disease (NACC). NACC is a voluntary Association, established in 1979, which has over 30,000 members and 70 Groups throughout the United Kingdom.

Membership of the Association costs £12 a year. New members who are on lower incomes due to their health or employment circumstances may join at a lower rate. Additional donations to help the work of the Association are always welcomed.

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*We hope that you find the information helpful and relevant. We welcome any comments from readers, or suggestions for improvements. References or details of the research on which this publication is based, and details of any conflict of interest, can be obtained from Crohn's and Colitis UK at the address below. Please send your comments to Helen Terry at Crohn's and Colitis UK, 4 Beaumont House, St Albans, Herts AL1 5HH or email [h.terry@crohnsandcolitis.org.uk](mailto:h.terry@crohnsandcolitis.org.uk).*

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## Introduction

This booklet looks at the role of food in Ulcerative Colitis (UC) and Crohn's Disease, collectively known as Inflammatory Bowel Disease (IBD). It should help you to understand the basics of how food affects IBD or IBD affects food. It also provides background information on digestion, healthy eating and the nutrients in our food.

Food is essential for everybody and is usually one of life's pleasures. With IBD the processing of food can be more problematic, but the importance of nutrition and how we manage to eat whilst ill remain unchanged. When you are ill, good nutrition is important for aiding recovery. If you have a chronic (ongoing) illness, the right nutrition can give you strength to cope.

Food becomes even more important if you have an illness of the intestines that relapses and remits. There may be problems in gaining sufficient nutrients from the food, and also certain foods may affect your symptoms. These complications may mean that the process of eating becomes less pleasurable or even has painful consequences.

This booklet provides useful background information if you:

- have been newly diagnosed
- have had a lot of treatment for your IBD including surgery
- would like a refresher on Food and IBD
- have weight management concerns (losing weight without meaning to, fluctuating weight, gaining weight rapidly)
- have cut out a lot of foods and feel you cannot reintroduce foods
- have short bowel or multiple surgical resections

But do remember that we are all different and what works for you may not work for others, and vice versa.

## Does food cause IBD?

At present, the cause of IBD is not known, so it is not possible to answer the question with certainty. Every so often you may hear about researchers discovering a possible link between IBD and food. However, no research to date has proven that a food causes IBD. Therefore it can be concluded that current scientific evidence does not support the idea that food plays a role in the cause of either Crohn's or UC.

## Can food cure IBD?

If you do an internet search you will find a number of diets that claim to cure IBD. Whilst some may be well intentioned, they do not have sufficient research to support their claims.

On the other hand, there is excellent evidence that nutritional products on prescription can have a role in treating Crohn's Disease. There is also evidence that specific aspects of nutrition are important in IBD, along with an understanding that, as with any ongoing condition, keeping well nourished is also important.

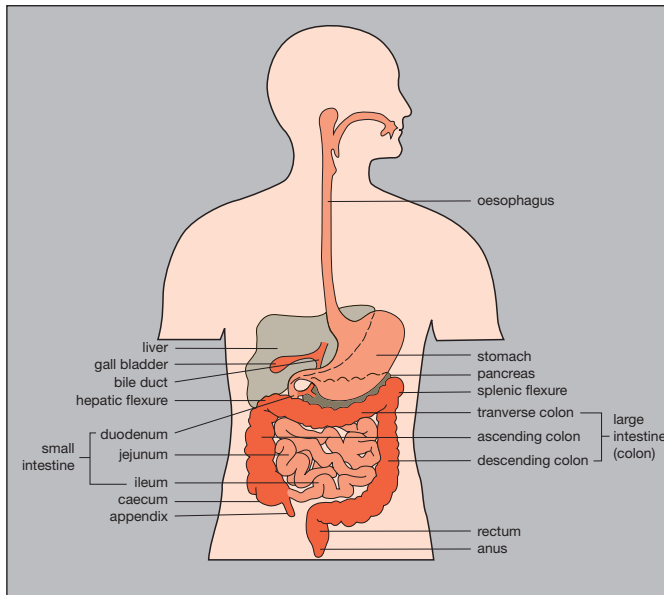
## What happens to food when it is eaten?

When food is eaten, it is broken down into tiny pieces, then smaller particles so that it can be digested. Food gives us energy and different nutrients are required in different amounts to help us to grow as children or renew our strength as adults.

The first stage of breaking down food is thorough chewing and swallowing. This is followed by mixing in the stomach for about 2-4 hours before the contents are released into the intestines. The food is then split into very small parts ( molecule-size) and nutrients are taken up into the bloodstream from the small intestine. There are three parts of the small intestine: the duodenum, jejunum and ileum. These different parts are responsible for taking up (or absorbing) different nutrients and water. Indigestible parts of food pass further down into the large intestine (colon) where they are fermented (broken down) by bacteria. More water is absorbed in the colon, resulting in faeces being produced, which are stored in the rectum prior to a bowel motion.

## Why is eating sometimes painful or uncomfortable?

Food is moved through the digestive tract (from mouth to anus) by waves of movement known as peristalsis. These waves of muscular movement are painful when passing over a section of the intestines that has become narrow. This is sometimes described as colic pain.



## Once the nutrients are taken up what do they do?

- carbohydrate, fat or protein provide fuel which we metabolise (use for energy)
- amino acids and peptides can be built into proteins (for muscles, tissues, organs and hormones etc)
- essential fatty acids (omega 3) are an important structural part of body tissues and also help regulate inflammation
- minerals such as calcium and iron are needed for bones and red blood cells
- vitamins help the body processes such as metabolism
- sodium, potassium and other 'electrolytes' provide the right chemical environment within the body
- antioxidants help reduce inflammation

## Do all people with IBD need to follow the same diet?

Crohn's Disease usually affects the small intestine, but sometimes the large intestine (colon) is affected as well as, or instead of, the small intestine. Ulcerative Colitis is confined to the colon. Advice on what to eat differs for these two diseases, because different parts of the intestines are affected and the type of inflammation differs. This will be discussed later in the booklet, but first comes the question of good nutrition, which is relevant to both diseases.

## Healthy eating in IBD

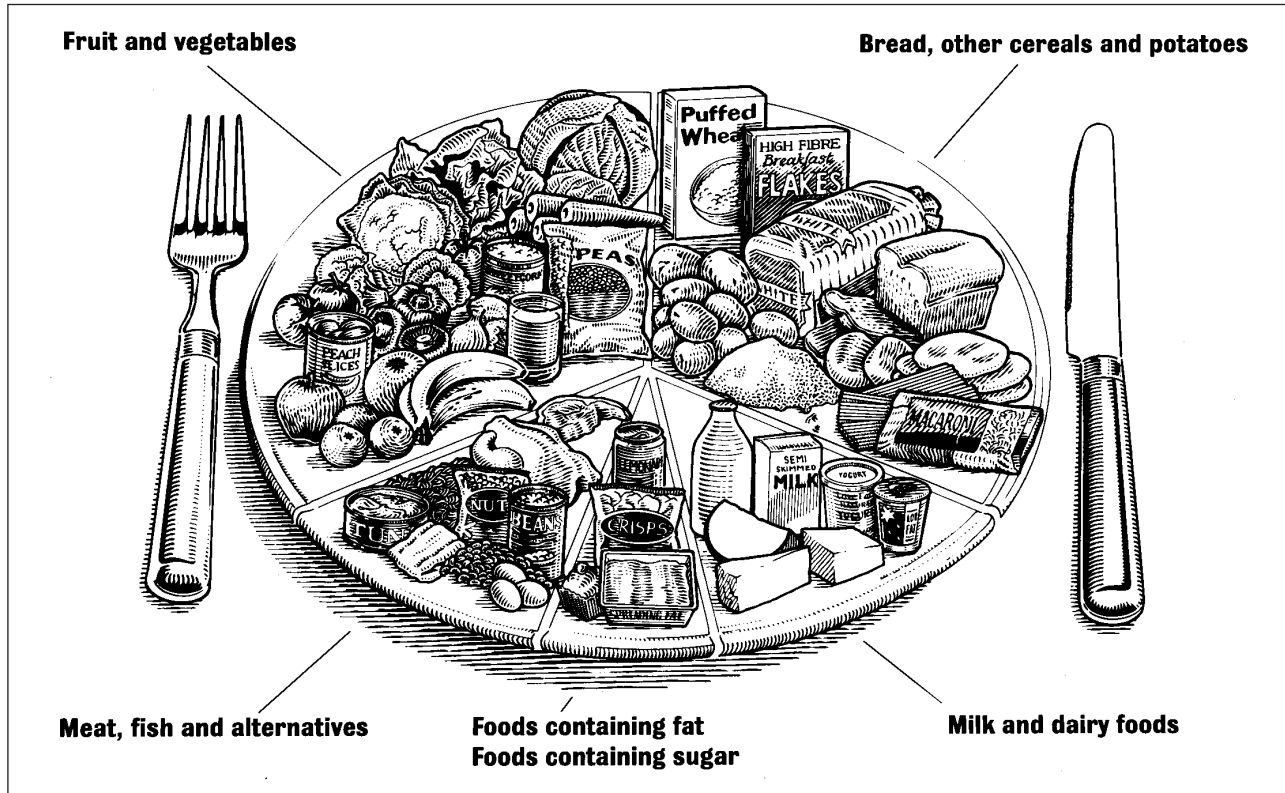
A healthy balanced diet means different things to different people. The Eatwell Plate (shown on page 7) illustrates healthy eating. The basics of the Eatwell Plate are:

- vegetables and fruit
- starchy foods (such as cereals, potatoes, rice, bread or pasta ),
- dairy products (or alternatives such as soya milk with added calcium)
- protein foods (such as meat, fish, eggs and pulses),
- high energy foods such as fats (butter, oils) and sugar-rich items

More information about good nutrition can be obtained from the Food Standards Agency (see Useful Addresses).

If you are finding it hard to manage foods from all of the five groups, then speak to your health care professional or dietitian. They will be able to make some suggestions to help balance your diet. If you are having an IBD flare-up, you may need to make temporary changes to your diet. This can mean significant changes, as described later on, or finding manageable foods from each of the groups above.

## The Eatwell Plate



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Food safety to minimise the risk of food poisoning is important for the very young, the elderly, pregnant women and also for those with IBD. Food poisoning is always unpleasant, so make sure you follow good hygiene practices and think about where you eat out or buy take away food. More information is available from the Food Standards Agency

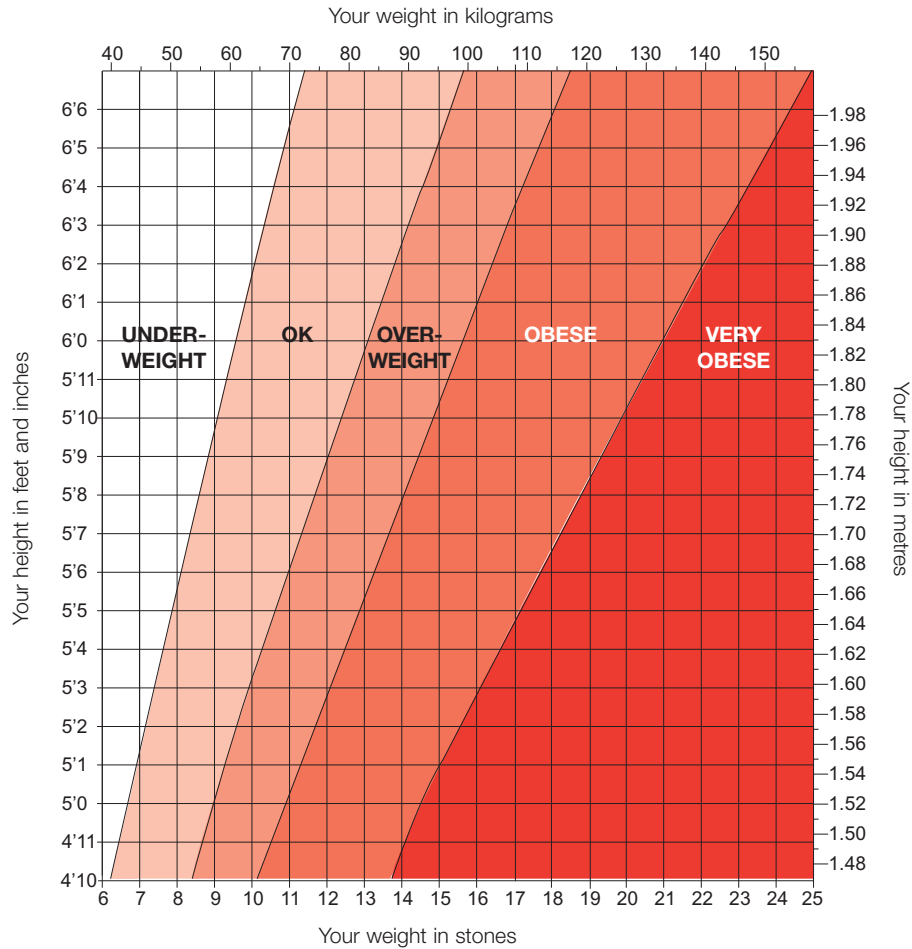
### **Assessing nutritional status**

One way of gauging whether a person is receiving good nutrition is to measure their weight. A health professional may use a calculation called a body mass index (BMI), but a simple way to check yourself is to look at the chart on page 9. The chart is for adults. For children, your doctor will have a special age-related growth chart. It is important to remember when looking at the BMI chart that size also depends on your family history and lifestyle factors. A dietitian will be able to advise you further about this. Fluctuating weight is commonly seen in people with IBD, reflecting flare-ups and periods of remission. In addition to weight there are other measures of how well nourished you are and, in particular, how strong you are. Your IBD team may use these comparative measures if they are concerned about you getting weak.

Weight loss is also a good indicator that your nutritional status is deteriorating. Your weight should be monitored as part of your IBD. Tell your doctor if you have lost weight unintentionally.

Many people find that they gain weight with steroids. This is partly a result of the steroid acting as an appetite stimulant, but it is also due to fluid retention.

## Body Mass Index Chart



'Are you the right weight for your height?' from The Health Guide © Crown Copyright 2000. Chart reprinted with the permission of the Health Development Agency. ISBN: 0-7521-0686-4

### **Testing for deficiencies**

A blood test will show if you are lacking in some nutrients, e.g. iron, potassium and other electrolytes. Supplements are often prescribed to get you back on track. You may also choose to eat and drink foods rich in iron or potassium to help build yourself back up. Deficiencies of some nutrients, such as calcium, cannot be detected by a blood test. Calcium adequacy is checked for by a bone scan.

### **How can you eat well if you have diarrhoea from IBD?**

The first principle of eating well with diarrhoea is to drink well! Staying hydrated is vital, e.g. fruit juices, lemonade, coca cola, milkshakes or smoothies, hot chocolate, milky coffee, fruit or herbal teas (adding honey or sugar will give you more energy). If you also have a poor appetite, then having more nutritious drinks is important. Filling up on liquids of little nutritional value (water, tea etc) will mean that although you are well hydrated, you soon run out of energy, feel worse and become run down. It is also helpful to follow a low fibre diet (see the section on Fibre and IBD).

## Dehydration

Watery diarrhoea can result in dehydration, so you need to replace both salts (electrolytes) and water. The shortage of salts (electrolytes) can make you feel faint when you stand up. Try making an 'oral rehydrating solution' to the following recipe:

### Oral Rehydration Solution (ORS)

3.5 g (approx one level teaspoonful) table salt

2.5g (scant level teaspoonful) sodium bicarbonate (baking soda)

20g (approx 6.5 level teaspoonfuls) glucose or sugar

Make up to 1 litre in a measuring jug with drinking water, and flavour if you wish with low sugar fruit squash. Refrigerate and drink cold.

Note: If you are not able to make up an oral rehydration solution, then an isotonic sports drink or a fizzy drink opened and left to go flat is an alternative (a diet or sugar free version is less suitable unless you are diabetic. Look for caffeine free). Commercial rehydration products are available eg: Dioralyte, Electrolade, Rehidrat.

If you have an ileostomy, or very short bowel (following extensive surgery), some rehydration solutions may not contain enough salt to restore hydration. Your doctor may suggest double strength Dioralyte or you may need the ORS recipe above, which has a higher salt content than commercial solutions.

You can take as much of the ORS as you need to reduce the feeling of faintness, but if you do not respond quickly you should seek medical advice urgently. You may have severe colitis, which may even require hospitalisation.

**Do not take the ORS without medical advice if your ankles are swollen, or if you are taking diuretic tablets (encouraging urine production) or tablets for heart failure or blood pressure.**

It may seem logical that if you stop eating, your diarrhoea will get better. In reality your symptoms may decrease temporarily but, because of the inflammation, the diarrhoea will continue and will worsen as you become more run down, which in turn will increase symptoms. This can become a vicious circle so it is important to try and keep eating and drinking.

### **Milk and dairy products**

If you have found that drinking milk or eating milk products gives you diarrhoea, it is possible that you are intolerant of lactose (milk sugar). Primary lactose intolerance is more commonly found in people of certain ethnic groups. People with primary lactose intolerance have the ability to digest lactose in infancy. This is reduced throughout childhood but is not lost completely, so small amounts can still be tolerated. Secondary lactose intolerance occurs during a flare-up of disease, surgery or if you get gastroenteritis. Milk can be avoided temporarily and then gradually reintroduced. Alternatives to cow's milk include soya, rice or oat milk depending on taste preference. It is important that they are fortified with calcium.

Remember that calcium is important for bone formation, so avoiding milk and dairy products will reduce the calcium in your diet. Other good sources of calcium include white bread, tinned fish (including the bones) and fortified soya milk, but you may be well advised to take a calcium supplement. Please see the section on Osteoporosis.

Long term exclusion of dairy products is rarely, if ever, required. Please see the section on Food intolerance.

### **MAP**

Some people with Crohn's Disease are wary of drinking milk because of publicity about research on a bacterium called MAP present in a small proportion of the milk bought in shops. At present, we do not feel that the evidence for MAP being a cause of Crohn's Disease is

sufficiently strong to justify advising people not to drink pasteurised milk. However, anyone who is particularly concerned about the possibility could opt to buy UHT milk instead of pasteurised milk. There is no research to prove that UHT milk is completely free of MAP, but it is generally assumed that the much higher temperatures used to sterilise UHT milk destroys more, if not all, of the MAP.

### **Alcohol**

Most people who have IBD can take alcohol in moderation. However, as it usually worsens diarrhoea when taken in excess, it may be best avoided during a flare-up. Alcohol should be avoided whilst taking the antibiotic metronidazole (Flagyl).

### **Caffeine**

Caffeine is found in coffee, tea, chocolate and cola drinks. Caffeine can have a laxative effect, depending on the amount taken and the individual's response. Our bodies become used to the amount of caffeine in our diets, so on a day to day basis your normal intake is unlikely to make any difference unless you are particularly sensitive. If you take more caffeine than normal on a particular day, then it may worsen diarrhoea. If you would like to try and reduce the amount of caffeine in your diet try decaffeinated drinks, herbal teas, and replacing chocolate with carob, a caffeine-free chocolate substitute.

If things are getting unmanageable you could contact your IBD Nurse or doctor, who may want to review your treatment.

## **Constipation in IBD**

Constipation is less common in IBD but food and fluid can be helpful in managing the problem. You may find that stool passing over an area of inflammation is particularly painful. The aim is to help the waste material through and to have stools that are easy to pass. Drinking plenty of fluids can help with constipation. Also look at Fibre in IBD later on for more information.

## Food intolerance and allergy in IBD

Some research studies into food intolerances suggest that during a flare-up you may be sensitive to specific foods, but that this sensitivity is usually temporary. As your gut lining heals, the food may no longer cause any discomfort.

Occasionally food sensitivity may persist and if you feel this is the case, it is worth talking it through with your IBD team. Some studies suggest that identifying and excluding those foods that you are sensitive to can maintain remission time. Cutting out one specific food, e.g. eggs, is not likely to affect your nutritional status in the longer term. However, cutting out on a number of foods, e.g. eggs, wheat, citrus fruit and sugar, is likely to mean that you are missing out on valuable nutrients, as well as disrupting social eating. Cutting out entire food groups is never advised.

What is the difference between a food intolerance and a food allergy? It is important not to confuse 'food intolerance' (a bad reaction to significant quantities of a particular food) and 'food allergy' (a bad reaction, involving general swelling and even wheezing, to minute quantities of a particular food). As discussed earlier, some people have an intolerance to the milk sugar, lactose, but can tolerate a small amount, for example milk in tea. An example of true allergy is peanut allergy when even a minute amount can be life threatening.

You can obtain more information from Allergy UK (see Useful Addresses).

## Fibre and IBD

Fibre is important in UC and Crohn's in different ways:

### **Crohn's:**

Taking a normal balanced diet can be difficult for people with Crohn's and fibre-containing foods, especially fruits and vegetables, may need to be excluded. The problems can be related to:

- 1) Strictures or narrowing of the small intestine as a result of the inflammation and thickening of the bowel wall. Fibrous food can have difficulty passing through these narrow parts of the intestine and pain is caused as the intestinal muscle contracts to push the food through.
- 2) Pain can also be caused because the contraction of inflamed intestine is more vigorous than with normal intestine.

Cutting down on fibre containing foods may be helpful to ease some of these problems (see Low residue diet). Although fruits and vegetables are high in fibre, it is important to include some in your diet even when reducing the fibre in your diet. Cutting off the skins, seeds and stalks is a good way to reduce their fibre content. Ask your healthcare team if you can be referred to a dietitian for further advice.

### **UC**

There may be concern about taking fibre in the diet, because of powerful urges to go to the toilet (and associated fears of having an 'accident'). This almost uncontrollable urge to open the bowels is caused primarily by inflammation in the lower colon rather than by fibre in the food. However, fibre adds bulk to faeces and can trigger the need to open the bowels. During flare-ups it may be helpful to reduce fibre intake. However, if you have left-sided colitis you may develop constipation. In this case you need to increase your fibre intake, possibly with milk of magnesia, lactulose or movicol.

During remission it is important to increase your intake of fibre again. Fibre is important as it helps to provide a fuel for bacteria in the colon which in turn helps to keep the lining of the colon healthier.

### **Low residue diet (overlaps with low fibre)**

The aim of a low residue diet is to reduce the amount of fibre passing through the intestines and consequently the amount of residue in the colon, resulting in a smaller amount of stool being produced. If your doctor advises you to follow this diet, you will be provided with a guidance sheet with more examples – an outline is given below.

Foods to eat more of	Foods to be reduced/avoided
White bread Rice crispies, cornflakes etc White rice or pasta Well cooked vegetables Cooked or tinned fruit (no skin or seeds) Fruit or vegetable juices	Wholegrain or wholemeal cereals Wholemeal bread or pasta Brown rice Lentils, chick peas, beans and pulses Nuts and seeds Potato skins Raw vegetables and salads Vegetable stalks Skin, pith, seeds etc on fruit Dried fruit

Fibre can be divided into two types: insoluble (e.g. pips, seeds, stalks and components of the food that cannot be digested by bacteria) and soluble (e.g. oats, which forms a gel like substance during digestion). Depending on the problem you are experiencing, altering the fibre content of your diet may help. For example in constipation, avoiding pips, skins, stalks and seeds etc may still be important, but increasing soluble fibre may help.

In order to get the right balance between a nutritious diet and avoiding pain, you could:

- chew food thoroughly and eat slowly;
- avoid lumps of indigestible food (e.g. meat gristle, stinky vegetables like celery, skins and pith of fruit, dried fruit, mushrooms and nuts);
- try fruit and vegetables as soups, purees or juices;
- eat small meals regularly, including snacks;

Ask your doctor or nurse about bulking agents or stool softeners if constipation is a problem.

## **Excess wind**

Quite a number of people with IBD are concerned with the effects of wind (pain, tummy gurgling and smelly release). It is normal to have gas in the intestine and there is no evidence that people with IBD have more gas than the general population.

Air is swallowed whilst eating and talking and gas is generated by the action of intestinal bacteria. Passage of wind from the anus is normal. Some people, with or without IBD, have more gas than others.

If you are concerned about the amount of gas you produce, try cutting down on legumes (peas, beans) and brassicas (eg: cabbage, cauliflower, broccoli) and avoid 'fizzy' drinks. As for smelly wind, food with a high fat content, especially sauces, tends to produce bad-smelling gas. (See our information sheet *Managing Bloating and Wind*.)

## Weight loss and IBD

Occasionally people with UC do suffer from weight loss, mainly because of reduced eating in order to avoid experiencing pain and diarrhoea. Crohn's Disease is often associated with weight loss (or inadequate weight gain in children), particularly during periods of relapse. This means that it is wise to try hard to maintain a normal weight when you can. As a guide, see the table for normal weight for adults of particular heights (page 9). If in doubt, ask your doctor or another health professional to check your weight.

During a flare-up, you need to maintain your weight, if possible, by increasing your calorie and protein intake. Try to follow healthy eating guidelines (see Eatwell Plate on page 7), which will also help ensure you are not deficient in minerals and vitamins. Healthy eating for the majority of people involves trying to eat less fat by cutting down on butter, oil and rich or fried foods. If you are struggling to maintain your weight it is healthier for you to include more high fat foods. However, if you have disease in your ileum it may be difficult to absorb the fat, making diarrhoea worse. Discuss this with your IBD team particularly if you are losing weight.

Ways to put on weight include:

- eating little and often
- allowing treats more often
- choosing full fat varieties rather than reduced or diet products (e.g. milk, cheese and butter instead of low fat spread)
- using oil in cooking (roasting or frying)
- adding in cream, greek yogurt or cheese to mashed potatoes, casseroles, soups, curries etc
- not filling up on tea, coffee or water – every drink is an opportunity to have juice, a smoothie with yogurt, milk (soya or dairy), hot chocolate or malt drink with whole milk, soup etc.

When in remission, try to ensure that you put on more weight, if possible, so that you have some 'in reserve' should you have a flare-up. It is better to eat little and often, with small meals taken regularly rather than overloading the digestive tract with 2 or 3 large meals a day.

If you cannot maintain your weight through eating ordinary food, ask for a referral to a dietitian. A dietitian may prescribe you some nutritional supplements to help you maintain your weight and nutritional status.

### **Tiredness and IBD**

People with active IBD commonly feel tired and lethargic. This can be part of feeling unwell generally due to the IBD, but can also be related to poor dietary intake, malabsorption or anaemia. Feeling tired can discourage you from shopping for food or preparing meals, so help from family and friends may become especially important. There may be times when ready meals are your only alternative. Try to buy nutritious products that are free from additives. If you are not eating much and losing weight as a result, you will not have much energy because of a lack of nutrition.

### **Iron deficiency and IBD**

Patients with UC or Crohn's in the colon may become iron deficient as a result of bleeding. Iron deficiency leads to anaemia (through reduction of the amount of oxygen-carrying haemoglobin in the red blood cells) and becoming pale and weak. It is sensible, therefore, to eat plenty of foods rich in iron, and these include red meats, eggs, dark green leafy vegetables, fortified breakfast cereals and pulses (peas, beans and lentils/dhal) as tolerated. However, iron deficiency may require treatment with iron tablets (or injections). Your doctor will advise you if this is the case.

## Bone strength and IBD

### Osteoporosis

Osteoporosis is bone thinning which is common as people get older (particularly in post-menopausal women). It leads to an increased risk of fractured bones. People with IBD are at higher risk of osteoporosis due to:

- use of steroid treatment
- avoidance of dairy products
- malabsorption of calcium and vitamin D which can occur in Crohn's Disease
- and possibly the inflammatory process itself

Osteoporosis is also more common in people where there is a family history of the condition. The chance of developing osteoporosis is reduced by eating plenty of calcium (e.g. dairy products), maintaining an active lifestyle with regular weight bearing exercise, not smoking and not drinking alcohol to excess. It is recommended that a high daily intake of calcium is maintained (1,000mg for adults with IBD and 1,200-1,500mg for postmenopausal women and men over 55 years old), regardless of whether you are being treated with steroids. This is not easy without calcium tablet supplementation, so if you are in a high-risk group (see above), discuss this with your doctor. Some doctors routinely recommend calcium (or calcium with vitamin D) supplements during steroid treatment. For more information, see our information sheet *The Bones and IBD*.

Vitamin D may be particularly important for bone strengthening. A good way of getting vitamin D on warmer days is from sunlight on your skin. Twenty minutes per day on your arms or legs will help. Do not sunbathe because of skin cancer risks, but try to get out for plenty of 'fresh air'.

Now we deal with Crohn's and UC separately.

## **Is there specific advice for people with Crohn's?**

Specific advice on nutrition for people with Crohn's Disease can be considered under the following:

### **Strictures**

If you have a stricture you may need to follow a low fibre diet. Nausea and vomiting can occur if there is a blockage. It is better to have small, frequent meals, taking your time to eat and chewing thoroughly. Ask your dietitian for more advice.

### **Vitamin B12 deficiency**

If you have had your ileum removed or this area is particularly inflamed you are at higher risk of Vitamin B12 deficiency. Lack of B12 results in anaemia and feeling tired. If you have had a resection your B12 level will be monitored by blood tests. If required you will be given B12 injections.

### **Fat absorption**

Some people with Crohn's Disease, particularly those who have had small bowel resections (operations), have difficulty in absorbing the fat in their diet. This can result in the stools (bowel motions) being porridge like in consistency and difficult to flush down the toilet. Some nutrients (e.g. vitamins A, D, E and K and minerals calcium and magnesium) help with absorption and supplements of these as well as essential fatty acids may be necessary. See later section on special considerations after bowel surgery. A low fat diet may be useful on its own or in combination with a low fibre diet.

## **Does food have a role in treating Crohn's Disease?**

Crohn's Disease is sometimes treated by stopping all ordinary food, and by taking only a liquid diet for a number of weeks (usually 2-8 weeks). These special liquid feeds are called elemental or polymeric diets.

### **Elemental and polymeric diets**

Elemental diets are synthetic (artificially created) feeds containing very simple molecules, which require no digestion. Polymeric feeds contain whole proteins, but still need very little digestion. Both have been found to be equally effective, but as polymeric feeds tend to taste better, the use of elemental feeds is becoming less common. Making a decision about this type of treatment needs careful thought and working closely with your doctor and dietitian.

This type of treatment is more commonly used in children because it avoids the use of steroids whilst supporting improved growth. In adults using this type of treatment is less common. For adults with Crohn's there are particular groups that will benefit more: those diagnosed young who in their lifetime are likely to have high exposure to steroids, in pregnancy and breastfeeding, those at high risk of osteoporosis, people who have problems with steroids or other IBD medications such as mesalazine, azathioprine or mercaptopurine (see our booklet *Drugs used in IBD* for more information).

### **Elimination and exclusion diets**

Some people with IBD take liquid feeds to feel better and establish weight gain before gradually adding different foods singly to the diet. This is known as an elimination diet. Another, similar approach is to eat a group of foods on which the majority of people remain well, before adding in new foods usually over three days. This is known as an exclusion diet. An example of an exclusion diet is the LOFFLEX diet – LOw Fat Fibre Limited EXclusion diet. The LOFFLEX diet is similar to a low fibre or low residue diet, but lower in fat and avoids some foods that may increase symptoms. It is easier to follow and more effective than traditional exclusion diets. If you would like to know more about elimination or exclusion diets talk to your IBD team.

## Is there any specific advice on healthy eating for people with UC?

Compared with Crohn's Disease, there is much less specific advice for Ulcerative Colitis. This is mainly because most nutrients are absorbed in the small intestine, which is not affected in Ulcerative Colitis. The relevant topics in this booklet are:

- Healthy eating in IBD
- How can you eat well if you have diarrhoea from IBD?
- Iron deficiency
- Bone strength and IBD

## Does food have a role in treating Ulcerative Colitis?

Because UC is different from Crohn's the same dietary treatments are not as effective. At present there are no proven diets or dietary treatments for inducing remission in UC. Current areas of interest include probiotics and prebiotics and reducing the sulphur content of the diet.

Recent medical research has started to examine the role of the billions of bacteria in the colon. Some of these bacteria are considered good for the large intestine and others harmful. Early research suggests that UC may be improved by changing the balance of bacteria in the colon using 'probiotics' and 'prebiotics'.

### **Probiotics and prebiotics**

Probiotics is a term used for mixtures of 'friendly' bacteria, which are taken by mouth with a view to increasing the proportion of the good ones already present in the colon. Studies have shown that probiotics can be helpful in inducing or maintaining remission. However, the complex interplay of bacteria is poorly understood and although this approach has not yet become an accepted treatment, it may well be in the future.

VSL#3, a specific (patented) mixture of probiotics, has been researched and there is good evidence that it is beneficial in pouchitis.

Prebiotics is a term used for particular types of food to encourage the growth of the beneficial bacteria and so help the UC in that way. This approach is at an even earlier stage of investigation by researchers.

### **Are there circumstances, which require special consideration?**

Some people with IBD require additional attention with regard to their diets. They are:

- those who are or intend to become pregnant
- children and adolescents
- those who have had surgery including removal of the ileum, an ileostomy and internal pouch
- those with short bowel syndrome
- those who wish to try herbal remedies

### **Pregnancy**

Before conceiving, it is wise to try to achieve a desirable weight and to make sure you are not deficient in vitamins or minerals. This should be discussed with your specialist. Folic acid deficiency is a particular risk in pregnancy. All women planning for pregnancy, whether or not they have IBD, should take folic acid supplements to reduce the chance of neural tube (spine) defects in the baby. The usual recommendation is at least 400 microgrammes per day before conception and during the first 12 weeks of pregnancy.

During pregnancy there should be steady weight gain, and this will be monitored by your GP or obstetric clinic. Drinking alcohol is not recommended during pregnancy.

Food supplements or dietetic advice may be necessary to ensure that protein and energy intake is sufficient for appropriate weight gain, particularly if you suffer from Crohn's Disease. Be cautious of vitamin and mineral supplements and do not take them unless advised. During pregnancy, food with a high level of Vitamin A (e.g. liver products) should be avoided as it can harm your unborn baby.

Advice on Vitamin A, alcohol, folate and food safety applies to all pregnant women and more information is widely available, eg from the Food Standards Agency listed at the end.

Further information is contained our information sheet *Pregnancy and IBD*.

### **Children and adolescents**

Children and adolescents need enough food to support their growth and development, including the growth spurt that occurs during puberty. A delay in the onset of puberty may occur in IBD, especially Crohn's Disease. This may mean that a teenager's height is considerably lower than that of classmates, although catch-up growth should eventually occur. Control of inflammation is an important part of maintaining adequate growth at this age, and artificial liquid feeds are a particularly good way of treating Crohn's Disease in children because, unlike steroids, they tend to stimulate growth rather than suppress it.

When trying to achieve catch-up growth between flare-ups, or to maintain growth during low-level inflammation, a high calorie diet is important, including calorie-rich foods that might otherwise be seen as 'unhealthy'. However, the diet should be as balanced as possible and include adequate amounts of vitamins. Due to fussy eating and possible negative associations between food and symptoms, not all children will eat a balanced diet all of the time. Aiming to return to the Eatwell Plate (page 7) is important in the long term. Vitamin and mineral supplements may be advised in the short term. Calcium and Vitamin D supplements may also be needed to keep the child's developing bones healthy. If your child is taking special liquid feeds in adequate amounts, the special feeds will be nutritionally balanced and additional supplementation is less likely to be required.

### **Removal of the ileum**

The ileum (lower end of the small intestine) is the area most commonly affected in Crohn's Disease. If it becomes very damaged through continued inflammation, then surgical removal may be recommended. If a person no longer has an ileum then certain nutrients from food are not absorbed, particularly vitamin B12.

Absence of vitamin B12 can be harmful to the body, with a danger of developing anaemia. It is therefore normal to receive vitamin B12 supplements by injection.

The ileum also absorbs bile salts; when it is taken away these salts spill over into the colon tending to cause watery diarrhoea. A low fat diet may help. There is also medication to treat this type of diarrhoea. We have an information sheet about *Managing Diarrhoea*.

### **Ileostomy and internal pouch**

Having an ileostomy should not affect your digestive process, so try to eat as normally as possible. In the weeks after your operation this may seem unlikely but things should settle down. However, more salt and water is lost via an ileostomy than in someone with a colon. For this reason anyone who has an ileostomy should try to take extra fluid and salt, especially in hot weather. There is no need for a special diet unless advised by a doctor.

There may be some restrictions or some items that you may prefer to avoid. For example:

- Blockages may be caused by nuts, coconut, some vegetables and fruit.
- Wind may be caused by foods such as baked beans and cabbage.
- Beer, chocolate and some fruit may give you diarrhoea.
- Certain food, such as eggs and fish, may cause faeces with strong odours.

People with an internal pouch (properly known as an ileo-anal pouch) also have particular adjustments to make. It is worth bearing in mind the following:

- Anal irritation can be caused by coconut, spicy food, nuts, some fruit and food with pips. They may also cause colicky pain (abdominal cramps), which is usually of a temporary nature.
- Some foods may cause more wind, for example baked beans, cabbage and other green vegetables. You may wish to limit or avoid these items.
- Fizzy drinks may also increase the amount of wind.
- Some foods may be passed whole, for example sweet corn and beans.
- Beer, chocolate and some fruit may have a laxative effect.
- You can continue to drink alcohol, but this may cause dehydration (if taken in excess) and you may find beer and red wine increase pouch output.

The stoma nurse or dietitian can provide dietary advice if you have a pouch or an ileostomy.

### **Short bowel syndrome**

Short bowel syndrome is extremely rare but in those with Crohn's disease who have had multiple resections and/or extensive areas of inflammation, the syndrome, or features of it, are more common.

People who have less than 200cm of small intestine (less than half normal length), as a consequence of surgery, are said to have a short bowel. It is usually necessary to eat a lot more than normal to maintain weight because there is a reduced area for nutrients to be absorbed. This is achieved by eating four to five meals per day together with snacks, and your dietitian will discuss this with you.

A few patients will have a very short bowel and even extra food will not be sufficient. In these highly unusual circumstances it is possible for a patient to have long term parenteral nutrition (nutrients passed directly into the bloodstream) based in their own home, provided they are under a specialist centre. Patients can remain well on this treatment for very many years.

The effects of short bowel are very different if the small intestine remains joined to the colon than if the small intestine ends in a stoma (artificial opening). Dehydration (shortage of salt and water) can be a problem, particularly if there is a stoma. Patients with a short small intestine joined to the colon may need to follow a 'low oxalate' diet to reduce the risk of kidney stones. Details of the diet would be provided by your doctor or dietitian.

### **Herbal remedies**

Some people with IBD use herbal remedies, such as aloe vera and slippery elm bark, to help relieve their symptoms. The difficulty with herbal remedies is that very little reliable research has been undertaken and therefore it is not possible to know, with confidence, whether there is a direct physical effect or a general psychological benefit (placebo effect).

If you want to take an alternative product, do consult your doctor and do not stop any prescribed medication without discussion, even if your symptoms improve.

## **Conclusion**

It is hoped that the information contained in this booklet will help you to develop a pattern of eating which will increase your chance of you feeling better, as well as being enjoyable. However, if you are finding it difficult to obtain a satisfactory balance between the various options, do not hesitate to discuss the situation with your doctor. If necessary, ask to speak to a dietitian for additional specialist advice.

## Further information

You can ask your GP, IBD Nurse or IBD doctor to refer you to a dietitian on the NHS. Or you can find a private dietitian in your area via the Freelance Dietitians Group ([www.dietitiansunlimited.co.uk](http://www.dietitiansunlimited.co.uk)). All dietitians are registered with the Health Professions Council ([www.hpc-uk.org](http://www.hpc-uk.org)). (See Useful Addresses)

If you see a nutritionist, make sure they are appropriately qualified. Currently, anyone can call themselves a nutritionist, regardless of qualifications. The Nutrition Society is the professional organisation for nutritionists and only registers nutritionists with a university degree in nutrition or nutrition related subject and a minimum of 3 years postgraduate experience. (See Useful Addresses)

If you have any further queries please call the Crohn's and Colitis UK Information Line on 0845 130 2233. You can obtain copies of our publications mentioned in this booklet by calling the Information Line, emailing: [info@crohnsandcolitis.org.uk](mailto:info@crohnsandcolitis.org.uk) or by downloading them from the our Website: [www.crohnsandcolitis.org.uk](http://www.crohnsandcolitis.org.uk).

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## Useful addresses

### Allergy UK

Planwell House, LEFA Business Park, Edgington Way  
Sidcup, Kent DA14 5BH  
Helpline: 01322 619898 Website: [www.allergyuk.org](http://www.allergyuk.org)

### Coeliac UK

3rd Floor, Apollo Centre, Desborough Road  
High Wycombe, Bucks HP11 2QW  
Helpline: 0845 305 2060 Website: [www.coeliac.org.uk](http://www.coeliac.org.uk)

### Crohn's in Childhood Research Association (CICRA)

Parkgate House, 356 West Barnes Lane  
Motspur Park, Surrey KT3 6NB  
Tel: 020 8949 6209 Website: [www.cicra.org](http://www.cicra.org)

### Food Standards Agency

UK Headquarters, Aviation House  
125 Kingsway, London WC2B 6NH  
Tel: 020 7276 8829  
Website: [www.food.gov.uk](http://www.food.gov.uk)

### Freelance Dietitians Group

Website: [www.dietitiansunlimited.co.uk](http://www.dietitiansunlimited.co.uk)

### Health Professions Council

Park House, 184 Kennington Park Road  
London SE11 4BU  
Tel: 020 7582 0866 Website: [www.hpc-uk.org](http://www.hpc-uk.org)

### IA – (Ileostomy and Internal Pouch Support Group)

Peveill House, 1-5 Mill Road  
Ballyclare, Co Antrim BT39 9DR  
Freephone: 0800 018 4724  
Website: [www.iasupport.org.uk](http://www.iasupport.org.uk)

### National Osteoporosis Society

Camerton, Bath BA2 0PJ  
Helpline: 0845 450 0230 Website: [www.nos.org.uk](http://www.nos.org.uk)

### PINNT – Patients on Intravenous and Nasogastric Nutrition Therapy

PO Box 3126, Christchurch, Dorset BH23 2XS  
Website: [www.pinnt.com](http://www.pinnt.com)

### The Nutrition Society

10 Cambridge Court, 210 Shepherds Bush Road  
London W6 7NJ  
General enquiries: 020 7602 0228  
Website: [www.nutritionistsociety.org](http://www.nutritionistsociety.org)

**Crohn's and Colitis UK**

4 Beaumont House, Sutton Road, St. Albans, Hertfordshire AL1 5HH.

Information Service: 0845 130 2233  
Administration: 01727 830038  
Fax: 01727 862550  
Crohn's and Colitis Support: 0845 130 3344

Email: [info@crohnsandcolitis.org.uk](mailto:info@crohnsandcolitis.org.uk)

Website: [www.crohnsandcolitis.org.uk](http://www.crohnsandcolitis.org.uk)

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