

Introduction

Of all the foods that are claimed to be responsible for bloating and other symptoms of IBS, bread would appear to be the most common. No fewer than 50% of women and a substantial proportion of men suspect that bread may be causing bloating. So how is it that a food that has been the very staff of life for millennia could be making so many of us ill?

Coeliac Disease and Non Coeliac Gluten Sensitivity

We know that one in 100 of the population will have Coeliac Disease and will need to go on a gluten free diet. Half of that number may also be specifically sensitive to wheat and be diagnosed with non-coeliac gluten sensitivity (NCGS), but this is only a tiny fraction compared with the number of people who are upset by eating bread.

FODMAPs

Most of the wheat consumed in the UK comes from Canada and contains over 1% of indigestible fructans and galactans. These are complex sugars and components of FODMAPs that escape absorption in the small intestine and travel through to the colon, where they are fermented, releasing

gas. That's not a high percentage compared with onions or pulses, but in people who eat a lot of bread, it may be enough to cause symptoms. However, no study has specifically implicated wheat by re-challenging people on FODMAP exclusion diets with bread.

Chorleywood

Bread consumption has dropped by about 50% in the last 50 years and yet wheat intolerance has increased and the commonest symptom is bloating. Since the 1960s, most bread purchased in the UK has been made by the Chorleywood method, a faster process with minimal fermentation that results in loaves that are softer, last longer and toast better. Chorleywood adds extra yeast and enzymes to the dough, but while these might be implicated in bloating, they are destroyed by the baking process. It also adds preservatives, calcium and other nutrients, notably vitamins. But perhaps the ultrashort fermentation and the soft, pappy texture creates bread with more fructo-oligosaccharides. A recent study showed that faeces from IBS patients cultured with Chorleywood bread, or commercially available low yeast fermented bread, had lower concentrations of bifidobacteria and generated more gas than when cultured with traditional long fermentation sour doughs.

Retrograded starch

Many people eat substantial amounts of bread as toast. When bread is toasted, the starch is twisted and retrograded so that less can be digested and more fermented.

Giving a loaf a bad name

There has been so much bad press about bread and bloating over the last few years that many people with a sensitive gut may seize on wheat as the source of their problems. But it may not always be the biological effect of wheat on the gut, but rather the anxiety over the possible effect of wheat.

Bloating is defined as a sensation of abdominal pressure. Nevertheless, it is only associated with increased gas content or production in about 50% of patients, even though the abdomen may appear distended towards the end of the day. Physiological studies have shown that the protrusion of the abdomen may be due to the combined effect of relaxation of the abdominal wall and contraction of the diaphragm. These muscular changes may be reflex adaptations to the sensation of abdominal pressure; the descent of the diaphragm enables more air to be taken in while abdominal relaxation relieves the pressure.

Other experiments have demonstrated an increase in visceral sensitivity, which is often increased by stress. This might explain the observation that the bloated abdomen can inflate when patients put

their hands in ice cold water and deflate when they go to sleep or are anaesthetised or hypnotised.

So while bloating can be the abdominal response to increased abdominal content (gas, fluid, fat, faeces or a foetus), creating more space to breathe, it may also be the response to a heightened sensation of abdominal pressure, brought on by stress or fear.

So might the apprehension of a distended abdomen bring on the symptom sufferers most fear? Might bloating be a life style illness? In a study reported in a recent symposium on Bread and Bloating that I attended, bread produced less abdominal distension but higher rates of reported bloating. As always, our experience is often conditioned by our beliefs.

Making your own delicious spelt sourdough loaf

A tutorial by Dr Joan Ransley

Making bread is a deeply satisfying and mindful activity that relaxes and calms.

Spelt bread has a beautiful open texture, a wonderful nutty flavour and great toasting and keeping qualities. It is better tolerated by people with IBS, especially if it is made by the sourdough method. Making sour dough requires attention to detail and patience, but does not take a lot of hands on time once you get into it.

Sourdough bread contains only three ingredients: flour, salt and water. The natural yeasts and lactobacilli and the long proving time break down the fructo-oligosaccharides in the dough so that less are available to be fermented in your body. To make the bread rise you need to make a starter. It will take five days for the starter to mature but the actual hands on time is only a few minutes. The starter will keep indefinitely, provided you look after it, and it performs better the older it is!



Stage one – making the sour dough ferment

Day one: Mix one teaspoon of spelt flour and two teaspoons of water in a clean jam jar. Seal and leave overnight in a warm place.

Days two, three, four and five:

Add one teaspoon of spelt flour and two teaspoons of water to the jar and stir.

Gradually bubbles will start to appear on the surface of the mixture. This ferment is ready to use to make a sour dough starter when large bubbles appear on the surface. Leave a little longer if the ferment does not look very frothy.

Stage two – making the sour dough starter

Mix 15g/1 tbsp of the bubbling ferment from stage one with 150g/5oz spelt flour and 150g/5 fl oz lukewarm water in a large bowl and leave to ferment overnight. The next day use this starter for your recipe.

Keeping your sourdough

Add one teaspoon of flour to the jar containing remaining sourdough culture. Stir well, seal and refrigerate for another time. Putting the starter in the fridge does not kill the wild yeasts but causes them to become dormant (sleepy). When you are ready to use the sourdough again pour away any grey liquid that may have formed and continue to make up the starter as described in stage two. A fresh influx of water and flour will invigorate the wild yeasts and they will be ready to use again in your next batch of bread.

Spelt sourdough bread

It takes a day to make a good spelt sourdough loaf, but the hands on time is no longer than ten minutes and it will keep for a week and freezes well. The only part when you need to use judgement is adding the correct amount of water to the dough. This depends on the type and age of the flour, so you might have to add a little more or less to get the consistency of the dough just right. It should be stretchy, smooth and a little bit sticky.

You will need a small proving basket (500g/1lb) for this loaf but if you don't have one line a colander with a linen tea towel and this will do the job just as well. It is important to slash the top of the loaf with a really sharp knife (or use scissors) before it goes in the oven to allow steam generated from within the loaf to push the crust upwards and give the loaf a good height when cooked.

One really useful tip I was given by a master baker was to place the bread dough in the fridge for about half an hour after it has risen and before it is baked. This helps the loaf to keep its shape after turning out of the proving basket and makes it easier to slash the top just before it goes in the oven.

Ingredients

- 250g/9oz white spelt flour
- 4g salt/½ tsp salt
- 75g/3oz sour dough starter
- 100 – 125g/100 – 125ml warm water

Method

Place the flour and salt in one bowl and mix together. In another bowl place 100 ml/3 fluid oz water and 75g/3oz sourdough starter and mix together well. Add the liquid to the flour and mix well. If it is too dry add up to 25ml/1oz of extra water until the dough has come together into a soft ball. Use your hands to help at this stage. You may have to adjust slightly the amount of liquid used. Use a shower cap or a clean used plastic supermarket bag to cover the dough and leave for 10 minutes.

Kneading the sourdough

Keep the dough in the bowl and pull a portion of the dough up from the side towards you and then press it back to the middle of the dough. Spelt dough is quite stretchy so this should be easy for you to do. Turn the bowl slightly and repeat this process with another portion of dough. Repeat these movements about eight times or until you have worked around all the dough. This should take about 10 seconds.

Cover the bowl again and let it rest for 10 minutes. Repeat this kneading and resting process twice. Give the dough a final knead (you have kneaded it four times in all), cover and then leave to rise for an hour. The dough should have doubled its volume. Uncover the dough and while it is still in the bowl punch it with your fist to deflate the dough ball.

Lightly dust a work surface with flour. Remove the dough from the bowl and place on the work surface. Shape the dough into a smooth round disc. Line a proving dough rising basket with a clean linen tea towel. Dust generously with flour and lay the dough inside. Sprinkle the top of the dough with flour. Allow the dough to rise until it has almost doubled in size. This will take between three and six hours depending on the temperature of the air.

Lightly dust a work surface with spelt flour. Remove the dough from the proving basket and place it on the floured work surface. Gently pull into an oval shape and fold both ends over into the middle. You will now have a rectangular shape. Pull and fold the top of the rectangle one third of the way towards the middle, move round 180° and keep folding until you have a shape the size of a 450g/1lb loaf tin. Sprinkle any seeds on the bread at this point.

Place the dough inside a 450g/1lb lightly-greased with vegetable oil loaf tin. Cover with Clingfilm, or a plastic bag, and leave the dough in a warm place to rise to almost twice its original size (about 45 minutes). The rate at which the dough rises depends on the warmth of the room. It is impossible to say exactly how long this process will take. It requires the judgement of the cook which is obtained through experience of making bread.

About 15 minutes before the bread has finished rising, preheat the oven to 240°C (475°F), gas 9. Place a roasting tin at the bottom of the oven filled with a cup full of water. Then when the oven is up to temperature, remove the cover, snip a circle around the top of the loaf with scissors or simply slash the top with a very sharp knife to create a crown and place the loaf in the preheated oven and immediately lower the temperature to 220°C (425°F), Gas 7.

Bake the loaf for about 35 minutes or until the surface is nicely browned. Turn the loaf out of the tin, tap on the base to check it sounds hollow and is cooked and place on a wire rack to cool.

Here are some tips to help bread making fit in with a busy life:

- Make up bread dough in the evening, leave to rise overnight and cook in the morning.
- Cook several loaves of bread at once and freeze for later. Home made bread freezes well.
- Make up a batch of bread dough to keep in the fridge. Break off pieces, roll into discs and cook in a hot oven or even a frying pan to make a quick pizza base or pitta bread. Bread dough keeps well, stored in a plastic bag, for a week in the fridge.

Further Reading

Read NW. Bloating, *abnormal abdominal physiology or just a lot of gas*. The Sensitive Gut (www.thesensitivegut.com)
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