

# Non-Coeliac Gluten Sensitivity and IBS the UK experience

Dr Peter Mooney  
Clinical Research Fellow  
Royal Hallamshire Hospital  
Sheffield



# Health or Hype?



## Stars' diet is free of gluten but full of fat

Celebrities claim to lose weight with wheat-free food, but it is often full of calories – and pricy, writes Kathryn Cooper

SUPERMARKETS are cashing in on the celebrity trend for wheat-free diets with products that can be up to three times the price of standard foods and contain more than three times the fat.

High-profile stars such as Gwyneth Paltrow, Rachel Weisz and Victoria Beckham have been linked with a gluten-free diet, which cuts out the protein found in wheat, barley and rye. Many consumers are also adopting the diet, believing it to be a healthier option.

However, a Sunday Times survey of gluten-free products from four big supermarkets found that most were considerably higher in fat than the standard equivalent product. A bowl of gluten-free granola from Sainsbury's contained more fat than a Mars bar.

"People assume that by cutting out gluten they are going to lose weight. It's a myth," said Tanya Thomas, a dietician and member of the British Dietetic Association.

Gluten-free foods have nonetheless become big business. Marks & Spencer recently reported that sales of its "made without wheat" range had soared 41% over the past year, while Sainsbury's and Tesco have seen a 30% rise. The global gluten-free industry could be worth \$4.3 billion (£2.7 billion) by 2015, according to Datamonitor, the research firm.

Cutting out gluten is a medical necessity for the estimated 200,000 people in Britain with coeliac disease, an autoimmune

disease of the small intestine. Yet the growth in supermarket sales far exceeds the rise in the number of people diagnosed with the disease, according to Coeliac UK, suggesting many people are adopting the diet for lifestyle reasons.

"Undoubtedly there has been a big rise in diagnosis of coeliac disease, but it can't explain the explosion in gluten-free products. Many people are choosing to go gluten-free because they simply want to reduce their wheat intake," said Sarah Sleet, chief executive of Coeliac UK.

However, the Sunday Times study, which assessed the nutritional content of about 30 wheat-free foods and their standard equivalents, found that shoppers who believe gluten-free diets are a low-fat option may have been misled.

Sainsbury's "free from" multi-seed pitta, for example, contains 5.2g of fat per 100g compared with only 1.5g for its standard wholemeal pitta – 247% more. The supermarket's "free from" oatly granola has 27.4g of fat per 100g compared with 10.8g for its standard granola. A portion of the gluten-free cereal with milk contains 15.7g of fat compared with 9.9g in a Mars bar.

Sainsbury's said its "free from" granola was higher in fat than standard granola because it had a higher proportion of nuts and seeds, but that the majority was "good" mono- and polyunsaturated fat. The saturated fat content is lower than for its standard granola.

**ON THE MENU**

	Fat Per 100g
Sainsbury's "free from" multi-seed pitta	5.2g
Sainsbury's wholemeal pitta	1.5g
Sainsbury's "free from" oatly granola	27.4g
Sainsbury's granola	10.8g
M&S "made without wheat" brown seeded loaf	9.7g
M&S soft granary farmhouse bread	3.7g
M&S "made without wheat" crumpets	2.7g
M&S classic crumpets	0.9g
Waitrose "love life" g/f seeded sliced loaf	9.7g
Waitrose wholemeal & pumpkin farmhouse	6.9g
Waitrose "love life" g/f hot cross buns	7.7g
Waitrose essential hot cross buns	6.9g
Mars bar	17g

Although the figures relate to fat, gluten-free products are also generally higher in calories

Sainsbury's said that in order to achieve parity with gluten-based products "a certain amount of fat is required in free-from products for technical reasons".

This is at odds with the image of gluten-free as a weight-loss diet. The pop star Lady Gaga was recently reported to have cut gluten from her diet in order to lose weight, while the singer Miley Cyrus has also credited her weight

loss to gluten-free eating. The tennis star Novak Djokovic switched to a gluten-free diet two years ago and went on to win Wimbledon and the US Open, which he said was down to his dietary change.

However, Sleet said the industry acknowledged there was a problem with higher fat in gluten-free bread and bakery products. M&S "made without wheat" brown seeded loaf has 9.7g of fat per 100g compared

with 3.7g for M&S soft granary farmhouse bread – 162% more – while M&S "made without wheat" crumpets have 2.7g of fat per 100g compared with 0.9g for classic crumpets.

"In order to produce gluten-free products which don't compromise on taste or texture, fat is needed to provide texture, and this can result in a product being slightly higher in calories," said M&S.

Shoppers are also paying up

to three times as much for gluten-free products. M&S's gluten-free white loaf costs £2.99 compared with 99p for its standard crusty white loaf, while its gluten-free crumpets cost £1.79 compared with 89p for the standard version.

The company said some gluten-free items were more expensive because of the "complexity of the ingredients".

Four out of six gluten-free products tested from Waitrose

were also found to be higher in fat. For example, its seeded sliced gluten-free loaf had 9.7g of fat per 100g compared with only 6.9g for its wholemeal and pumpkin farmhouse loaf.

"As with all our products, the nutritional content is clearly labelled with traffic lights on the front of the pack so that customers can see the nutritional content at a glance and make informed decisions," Waitrose said.

## House price rise gathers pace

Kathryn Cooper  
Economics  
Correspondent

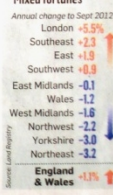
HOUSE prices have increased at their fastest annual rate for almost two years, raising further hopes that the economy has turned a corner.

According to the Land Registry, the price of an average property in England and Wales rose 1.1% to £162,861 in the year to September, the biggest year-on-year rise since November 2010.

London was the region with the strongest growth – prices rose 5.5% over the year to £365,802. The southeast also saw buoyant growth, with the average property up 2.1% to £210,301. However, six out of 10 house-price regions suffered falls over the past year. The northeast had the biggest annual drop, with the average price down 3.2% to £99,163.

In towns, Hartlepool experienced the biggest annual price rise in the year to September with an increase of 8.7%, while Blaenau Gwent in south Wales suffered the biggest fall, with a drop of 8.3%. Sales of homes in the £1.5m-£2m band rose by 31%, but those priced over £2m recorded no change. The property data follows news that Britain emerged from its double-dip recession in the third quarter of this year when the economy grew by 1%.

### Mixed fortunes



# Question ?

What is the estimated Prevalence of Non-Coeliac Gluten Sensitivity?

+A: 0%




+B: 100%

+C: 13%

+D: 6%



# NCGS Prevalence

Country	Year	Prevalence
	2012	5.9% - secondary care referrals
	2012	~4% - 1% of NZ children have CD but 5% report gluten avoidance
	2013	0.5% - National Health and Nutrition Examination Survey



# Does the UK population suffer with symptoms of Gluten Sensitivity?

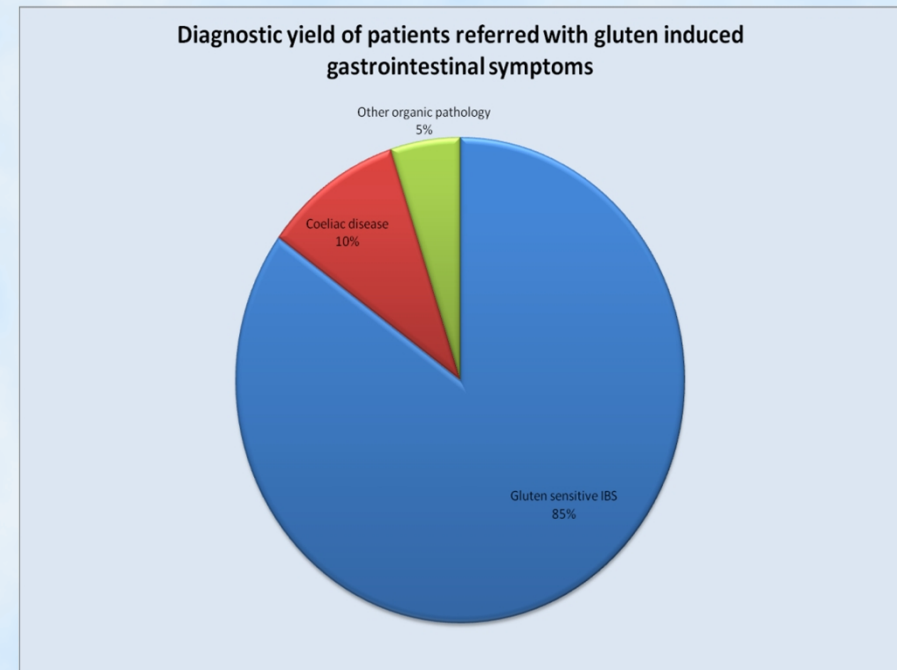


- 1002 adults completed the population based questionnaire
- 55% female, age range 16-93, mean age 39 years
- 0.8% formally diagnosed CD
- 13% gluten sensitive (129/1002, female 80% ( $P < 0.0001$ ), age range 18-75, mean age 40 years, SD 17.6)
- 3.7% of total population consuming GFD
- Patients with IBS were more likely to report GS than non-IBS patients (43% vs. 10%,  $p < 0.0001$ ).

Aziz I et al. EJGH In Press  
September 2013

## Self reporting of Gluten Sensitivity: Secondary care experience in the UK

- 200 self reported GS patients were investigated over a 5 year period. 84% female and the mean age of presentation was 39.6 yrs (range 16-77).
- Positive coeliac serology ( $p < 0.0001$ ) was significantly associated with coeliac disease
- All patients with coeliac disease were HLA DQ2 or DQ8 compared to 53% NCGS
- There was statistically no significant difference in gender, clinical symptoms or baseline bloods ( $p > 0.05$ )

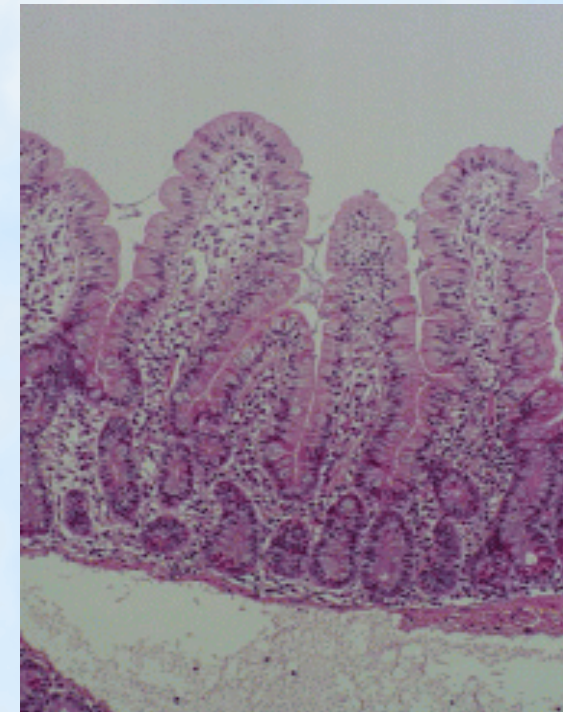




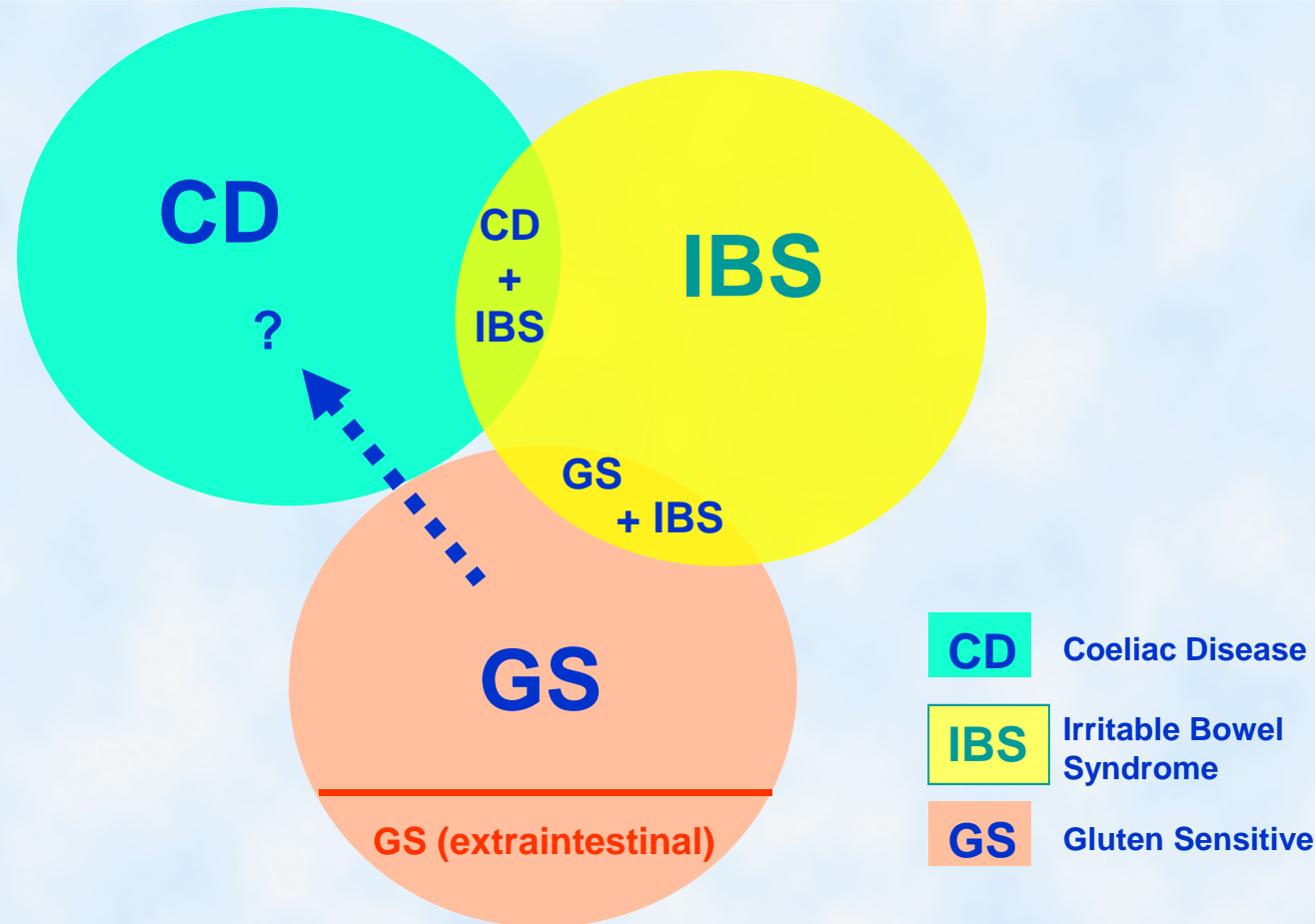
# Is lymphocytic duodenitis (LD) a marker for IBS?

- 200 patients with LD extensively investigated
- Identifiable cause found in 70%
- 35/60 patients with no identifiable cause fulfilled Rome III criteria for IBS (17% of all LD patients)
- 9/35 patients self reported GS
- 55% IBS patients HLA DQ2/DQ8

Associations with lymphocytic duodenitis (n 200)	Percentage
No cause found	30%
Coeliac disease	20%
Anti-inflammatory drugs	17%
Helicobacter pylori	16%
Gastrointestinal infections	7%
Autoimmune disorders	5.5%
Inflammatory bowel disease	2%
TB or HIV	1.5%
IgA deficiency	1%



Aziz et al UEGW 2013



A Model for the relationship between coeliac disease, IBS and gluten sensitivity?

Ball A and Sanders DS *Am J Gastroenterol* 2010;105:222-3



# Conclusions

- UK self reported gluten sensitivity 13%
- Clear association with IBS symptoms
- HLA DQ2/DQ8 preponderance
- Clinical practice: consider GFD in patients with IBS

# Thank you

