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## Wheaten soda bread is preferred by Irish adults with diabetes

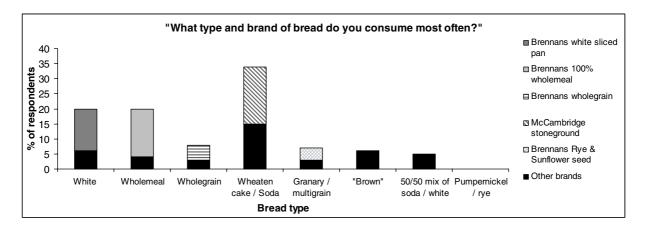
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Type 2 diabetes is estimated to affect one in twenty Irish adults<sup>(1)</sup>. Dietary modification to achieve normoglycaemia is a cornerstone of management. Carbohydrate is the major determinant of glycaemic response and bread provides the greatest contribution to carbohydrate intake in the Irish diet, representing over one-quarter of the total intake<sup>(2)</sup>. Wholegrain bread is routinely advised for individuals with type 2 diabetes<sup>(1)</sup>. A wide variety of 'non-white' breads exist in Irish supermarkets and it can be unclear, despite labelling, exactly how much of the whole grain they contain. Such breads include those known to result in a low glycaemic response (e.g. pumpernickel and rye)<sup>(3)</sup> and those that have been shown to have a similar glycaemic index to white bread (e.g. wholemeal bread)<sup>(4)</sup>. Currently, little is known about the bread consumption patterns of Irish adults with type 2 diabetes.

The aim of the present survey was twofold, being both to investigate the types of breads most frequently consumed as well as to assess general awareness of the whole-grain content of breads among adults with type 2 diabetes in Ireland. A total of 100 adults with type 2 diabetes were randomly selected from the waiting area in two hospital-based diabetes clinics in South County Dublin over a 2-week period in March 2009. A short questionnaire was given and a reference sheet with photographs of market-leader brands was available to enhance brand recognition when necessary. JMP® 7 (SAS Institute Inc., Cary, NC, USA) was used to determine statistical differences using Chi squared analyses.

The cohort surveyed was predominantly male (66%) and from an urban area (83%). Mean age was 65.5 (sp 12.4) years and mean BMI 31.4 (sp 5.4) kg/m<sup>2</sup>. The majority of those sampled (70%) had been prescribed oral hypoglycaemic agents in addition to diet. Data for the types and brands of bread consumed most often are presented in the Figure.



Most respondents (90%) reported consuming bread every day. A minority (32%) of respondents reported reading the label on bread, with sugar, fat and salt content the three most-frequently-checked constituents. A significant association was noted between the type of bread most commonly consumed and habitation setting (urban and rural; P=0.005) and with gender (P=0.005). Wheaten–soda was reported to be the most-commonly-eaten bread; 64.7% of those with a rural address and 27.7% of those with an urban address. No respondent with a rural address reported white bread to be the preference, compared with 24.1% of those with an urban address. White bread was reported less commonly by females (14.7%) than by males (22.7%) and females were more likely to report granary–multigrain (17.6%) than were males (1.5%).

These findings indicate that awareness of the whole-grain content of breads is poor among Irish adults with type 2 diabetes. Dietetic education should focus on increasing awareness of the whole-grain content of breads. Further research is required to establish both the actual whole-grain content of, and the glycaemic response to, breads most commonly consumed by this population.

- 1. Harkins V (2008) A Practical Guide to Integrated Type 2 Diabetes Care. Dublin: Department of Health and Children.
- Irish Universities Nutrition Alliance (2001) The North/South Ireland Food Consumption Survey 1999. Summary Report. http://www.iuna.net/documents/Food%20Survey%202001.pdf
- 3. Jenkins DJ, Wolever TM, Jenkins AL et al. (1986) Am J Clin Nutr 43, 516-520.
- 4. Atkinson FS, Foster-Powell K & Brand-Miller JC (2008) Diabetes Care 31, 2281-2283.