**Gluten content of brand name food products in a food and nutrient database that includes leading U.S. food brands**

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**Objectives:** Describe the gluten content of leading U.S. brands of foods- cookies, crackers, hot cereals, ready-to-eat (RTE) cereals, specially formulated bars (e.g. Clif, Luna bars), granola bars, savory snacks, and candies.

**Methods:** To address the needs of researchers examining the role of gluten in gastrointestinal health, gluten was added to a U.S. food and nutrient database. Few foods have been chemically analyzed for their gluten content. Thus, gluten values were assigned to foods based on the assumptions that: 1) foods that do not include any gluten containing grains or their derivatives- wheat, rye or barley may be presumed to contain 0 grams of gluten; and 2) a specified fraction of vegetable protein found in wheat, rye, barley and their derivatives (0.75) may be presumed to be gluten (factor selected based on studies in which gluten content of some gluten containing grains were determined by chemical analysis). Gluten values were assigned to brand name products in the database, thus presenting a unique opportunity to describe the gluten content of brand name products in the U.S. marketplace. For each food category the percent of products containing gluten was calculated, and the mean and range in gluten content among gluten containing products were determined.

**Results:** Food categories with the highest proportion of products containing gluten were cookies (97.1%), crackers (82.7%), hot cereals (66.0%), and RTE cereals (64.8%). Categories with the lowest proportions were candies (15.7%) and savory snacks (25.0%). The mean gluten content among gluten containing products was highest for hot cereals (2.62 grams/serving), crackers (1.82 grams/serving), RTE cereals (1.76 grams/serving), and savory snacks (1.51 grams/serving). Granola bars and specially formulated bars had the lowest content (0.27 and 0.31 grams/serving respectively). The range in gluten content per serving for gluten containing products was lowest for granola bars (0.002-1.11 grams/serving) and highest for RTE cereals (0.001-7.03 grams/serving).

**Conclusion:** There is considerable variation in the gluten content of brand name products in the categories examined in this study. Studies quantifying dietary gluten intake may need to consider using a dietary assessment method that captures product brand.

Funding Sources: American Gastroenterological Association

TABLE FROM WHICH DATA PRESENTED IN ABSTRACT WAS DRAWN

Products with Mean gluten content Range in gluten content

gluten value among gluten among gluten

Brand name >0 g per serving containing products containing products

food product category % (n) g/serving g/serving

Cookies (n=478) 97.1 (464) 0.95 0.16-2.31

Crackers (n=440) 82.7 (364) 1.82 0.03-3.46

Hot cereals (n=47) 66.0 (31) 2.62 0.71-4.21

Ready-to-eat cereals (n=347) 64.8 (225) 1.76 0.001-7.03

Specially formulated bars (n=224) 49.6 (111) 0.31 0.009-1.41

Granola bars (n=227) 40.0 (91) 0.27 0.002-1.11

Savory snacks (n=936) 25.0 (230) 1.51 0.039-3.41

Candies (n=319) 15.7 (50) 0.55 0.003-1.87