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Recent trends in ready-to-eat breakfast cereals in the U.S.[†]

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Abstract

Data in the USDA National Nutrient Database for Standard Reference (SR) were examined to discern trends in ready-to-eat breakfast cereals resulting from manufacturers' reformulations, many in response to public health concerns and consumer demand. The majority of the nutrient data for breakfast cereals in SR are supplied by manufacturers. Nutrient data and ingredients for Kellogg and General Mills ready-to-eat cereals within SR were examined, as those brands represent 62% of the U.S. market. Mean values for total sugar, total dietary fiber, and sodium were calculated for those manufacturers' breakfast cereals within SR releases 18 through 24 (2005–2011). Values from SR18 (n=120 products) were compared to those from SR24 (n=151 products) using unpaired Student's *t*-tests. Sugar levels fell from 27.5 to 24.8 g/100 g and sodium from 511 to 438 mg/100 g, a reduction of 10% (not significant; $p=.057$) and 14% ($p<.05$), respectively. Fiber levels rose from 7.1 to 9.4 g/100 g, a 32% increase ($p<.05$). Nutrient comparisons were made using paired *t*-tests on a subset of 83 products, which excluded cereals that had been added or dropped between SR18 and SR24. From 2005 to 2011, sugar and sodium levels decreased by 7.6% and 11.2%, respectively, while fiber levels increased by 13.4% (all $p<.0001$). Whole grain ingredients were found in at least 2/3 of the cereals examined in SR24. Trends observed in this important breakfast category demonstrate positive changes in the nutrient composition which may have an important impact on public health.

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[†]Mention of trade names or commercial products in this publication is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the U.S. Department of Agriculture

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1. Introduction

The USDA National Nutrient Database for Standard Reference (SR) is the foundation of most nutrient databases in the U.S. SR is continuously updated and released online once a year by the USDA's Nutrient Data Laboratory (NDL), Beltsville Human Nutrition Research Center, Agricultural Research Service. Sources of nutrient data for the 7,900 food items in SR Release 24 (2011) include analytical studies, food industry, food labels, and the scientific literature [1]. SR24 includes most ready-to-eat (RTE) breakfast cereals sold by major manufacturers. These cereals account for over 80% of U.S. retail sales. Over 2 billion units of RTE cereals were sold during a 52 week period ending in August 2011 [2]. Fortification of cereals varies widely, preventing the ability to use generic items in SR. Nutrient data for these brand name products are primarily derived from breakfast cereal manufacturers. Every few years a small number of RTE cereals with a high market share are selected for statistically representative nationwide sampling and nutrient analysis via the NDL's National Food and Nutrient Analysis Program (NFNAP) [3]. With each release, new cereals are added and discontinued products are removed from SR. The nutrient data are updated to reflect changes in formulation or fortification.

Data from the manufacturers indicate changes in breakfast cereal formulations. These may be due to several reasons, including response to public health concerns and consumer demand for healthier cereals. Diet-related chronic diseases, including cardiovascular disease and diabetes, are prevalent in the U.S. [4]. Public health concern led to the publication of the Dietary Guidelines for Americans, which was developed as a guide to healthy eating based on a thorough review of current scientific evidence. Key messages in the 2010 edition include "make half your grains whole" and "cut back on foods high in added sugars and salt" [4]. These guidelines have an impact on the formulations of breakfast cereals, because they consist of grains and frequently include sugar and salt. Consumer demand for healthier cereals may be another factor influencing recent trends in breakfast cereals. In a recent survey regarding breakfast cereal consumption conducted by the market research company, Mintel [5], 93% of respondents stated they eat RTE cereal. Whole grain was ranked the third most important attribute for selecting cereal. Fiber and sugar content were also important health attributes when selecting cereal [5].

The objective of this study was to examine data in SR for trends in RTE breakfast cereals, and determine the type and extent of manufacturers' reformulations of these cereals.

2. Materials & Methods

The market share figures for RTE cereals were used to determine the top-selling companies. Kellogg and General Mills represented 33% and 29% of RTE cereals in the U.S. market, respectively, based on unit sales from August 2010 to August 2011. Other major national brand and private label (store brand) unit sales comprised a total of 31% of the market [2]. This study was limited to Kellogg and General Mills products since together they represent the majority (62%) of RTE cereals in the U.S. market. These cereal manufacturers have partnered with NDL to provide up-to-date nutrient data and ingredients lists annually for use in SR [1]. Most of the data used in this analysis (91%) were supplied by General Mills and Kellogg (about one fourth of which are Kashi brand products). A small portion of nutrient values (6%) were determined by lab analyses conducted through NFNAP. This study compared changes in three nutrients – total sugar (including natural sugar contained in raisins and other dried or dehydrated fruit), total dietary fiber, and sodium -- since these were areas of public health concern and a major emphasis of cereal manufacturers' health initiatives.

Levels of sugar, fiber, and sodium were examined in RTE cereals, on a 100 g basis, from SR release 18 (SR18, 2005) through SR release 24 (SR24, 2011). Data were limited to those years in order to examine the most recent trends. RTE cereals with "General Mills," "Kellogg," or "Kashi" in the food description were identified. The overall mean values for sugar, fiber, and sodium were calculated for all of the Kellogg and General Mills RTE cereals in each of the seven most recent releases of SR -- 18

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