



## Research report

# What foods are US supermarkets promoting? A content analysis of supermarket sales circulars <sup>☆</sup>



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## ABSTRACT

This study compared the types of foods advertised in supermarket newspaper circulars across geographic region (US Census regions: northeast [ $n = 9$ ], midwest [ $n = 15$ ], south [ $n = 14$ ], and west [ $n = 13$ ]), obesity-rate region (i.e., states with CDC adult obesity rates of  $<25\%$  [ $n = 14$ ], 25 to  $<30\%$  [ $n = 24$ ], and  $\geq 30\%$  [ $n = 13$ ]), and with MyPlate recommendations. All food advertisements on the first page of each circular were measured ( $\pm 0.12$ -in.) to determine the proportion of space occupied and categorized according to food group. Overall,  $\geq 50\%$  of the front page of supermarket sales circulars was devoted to protein foods and grains; fruits, vegetables, and dairy, combined, were allocated only about 25% of the front page. The southern geographic region and the highest obesity-rate region both devoted significantly more advertising space to sweets, particularly sugar-sweetened beverages. The lowest obesity-rate region and western geographic region allocated the most space to fruits. Vegetables were allocated the least space in the western geographic region. Grains were the only food group represented in ads in proportions approximately equal to amounts depicted in the MyPlate icon. Protein foods exceeded and fruits, dairy, and vegetables fell below comparable MyPlate proportional areas. Findings suggest supermarket ads do not consistently emphasize foods that support healthy weight and MyPlate recommendations. More research is needed to determine how supermarket newspaper circulars can be used to promote healthy dietary patterns.

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## Introduction

“Advertising has existed for as long as humans have been trading with each other” (Walker, 2012), however the term ‘advertisement’ was not introduced in the written literature until the 15th century. The meaning then, as now, was any notice, usually paid, intended to attract the public’s attention (Harper, 2012). Coincident with the written introduction of this term was the invention of the printing press which, in turn, ushered in print advertising (Walker, 2012). Coffee, chocolate, and tea were the earliest food advertisements, appearing in British newspapers in the mid-1600s (although at that time they were advertised more as

medicinal drinks or health remedies than as foods) (Cadbury Corporation, 2012; Pendergrast, 1999; Ukers, 1922; Wilhelm, 1994).

According to *Advertising Age*, food advertising marked some of the most important events in American advertising history (Ad Age, 1999a). For instance, in 1898, Uneeda crackers was the first mass produced, individually packaged product to be advertised and sold outside of its geographic region (Ad Age, 1999a). Soon after, food advertising quickly became near ubiquitous. By the end of the 20th century, among the nearly one-quarter of the top 100 advertising campaigns (as identified by advertising experts) were for food (Ad Age, 1999d). During that century, seven of the top 10 advertising icons were related to food: Ronald McDonald, The Green Giant, Betty Crocker, The Pillsbury Doughboy, Aunt Jemima, Tony the Tiger, and Elsie the cow (Ad Age, 1999b). And, six of the top 10 jingles were for food products, including Coca-Cola’s “It’s the Real Thing”, Campbell’s “M’m, M’m Good”, and McDonald’s “You Deserve a Break Today” (Ad Age, 1999c).

Food advertising is big business. In 2010, food and candy annual advertising expenditures ranked as the sixth largest advertising category, with spending being nearly \$7 billion, up more than 7% from the previous year (Daddi, 2011). This category includes

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individual branded food products, restaurants, as well as supermarkets that promote both their store and branded products.

Food advertisers use the full array of marketing channels with newspapers and mailed circulars being among the most important (MORI Research, 2009; Newspaper Association of America, 2010). During 2010, food advertisers spent nearly \$1.6 billion on newspaper advertising (Newspaper Association of America, 2012) – this advertising channel for food is especially popular with shoppers. Half of newspaper readers review advertising circulars/flyers/inserts and use them for planning regular shopping (Magid Associates, 2011; Newspaper Association of America, 2010). Four out of five readers regularly check Sunday newspaper inserts for grocery or food store ads (MORI Research & Newspaper Association of America, 2009) and two-thirds of readers regularly use newspaper coupons for groceries or food products (Magid Associates, 2011). Readers consult newspaper ads often because they prefer the easy-to-scan format and feel the ads are believable and trustworthy (Magid Associates, 2011).

Clearly, “newspapers remain a formidable force for consumer advertising” (Magid Associates, 2011), especially in the food and grocery category. Despite the widespread use of newspapers and mailed circulars for advertising food, food advertising research has focused primarily on television advertising with limited attention to the newspaper advertising channel. Describing the foods advertised in newspaper circulars is particularly important given that nutrition professionals typically advise consumers to use supermarket sales circulars during menu planning to help stretch the family food budget (Larson et al., 2011; Nelson, Story, Larson, Neumark-Sztainer, & Lytle, 2008; Raab, 2012; Weisenberger, 2012). Thus, one purpose of this study was to conduct a content analysis of supermarket newspaper sales circulars to describe the types of foods advertised by leading supermarkets across the US and compare regional differences (geographic region and obesity-rate region). A second purpose was to compare the foods advertised to MyPlate recommendations (United States Department of Agriculture, 2011).

## Methods

Sales circulars issued between mid-September to early October 2011 were collected from supermarket chains ranking in the top 75 North American Food Retailers in 2011 (Supermarket News, 2011). This time period was selected because there were no major holidays that might affect advertised food products. The sample was restricted to supermarkets and did not include department stores with grocery departments. To permit regional comparisons, a circular from each of the 50 states and Washington, D.C. was sampled. Because the number of pages in sales circulars varied among supermarkets, only the first page was included in the sample to permit similar comparisons across stores. The first page was selected because readers regularly scan the first advertising page, especially when it is a right facing page (Greene, 2012). Although sales circulars were intended for distribution as newspaper inserts, some were printed from store websites.

### Content analysis instrument

The sales circulars were content analyzed using the instrument developed for this project. The purpose of content analysis methodology is to “provide knowledge, new insights, a representation of facts, and a guide to action” (Pratt & Pratt, 1995). It permits researchers to objectively, systematically, and quantitatively describe the contents of communications (Berelson, 1971; Krippendorff, 1980).

The two-part study instrument was used to code the advertisements in each sampled circular. In Part 1 of the instrument, data regarding the store (e.g., name, location) and circular (e.g., dates sale began and ended, width and height dimensions of the front page of the circular) were recorded. Supermarket location was categorized in two separate ways: by US Census geographic region (i.e., states in the northeast [ $n = 9$ ], midwest [ $n = 12$ ], south [ $n = 17$ ], and west [ $n = 13$ ]) (U.S. Census Bureau, 2010) and CDC adult “obesity-rate” region (i.e., states with obesity rates of <25% [ $n = 14$ ], 25 to <30% [ $n = 24$ ], and  $\geq 30\%$  [ $n = 13$ ]) (Centers for Disease Control, 2012).

In Part 2, each advertisement appearing on the first page of each circular was analyzed. This included the product name and description, brand (if applicable), and size of advertisement to the nearest  $\pm 0.12$ -in. If the ad was for a food, the food group (i.e., MyPlate groups [United States Department of Agriculture, 2011] plus sweets, fats, and miscellaneous) also was recorded. In cases where more than one food was promoted in a single advertisement (e.g., cereal and milk), each food was included in the coding. The percentage of space occupied by each advertisement on the first page was computed to allow comparisons across food groups.

To ensure uniformity and accuracy in data collection, a detailed coding manual was created and data collectors were highly trained using training and practice sessions. Each circular was coded independently by three data collectors. Coding was compared across data collectors and discrepancies were reviewed and resolved by the data collectors to achieve unanimous agreement.

### Data analysis

The area occupied by each food advertisement was calculated and expressed as a percent of the total area devoted to all food advertisements on the front page of each circular. Analysis of variance (ANOVA) was conducted to examine significant differences in the proportion of space allocated to each food group for all sampled supermarkets by geographic region and obesity-rate region. Fisher’s PLSD post hoc tests were conducted when a significant main effect for a food group was found to further determine within obesity-rate region and geographic region differences.

To permit comparisons of advertised foods to current dietary guidance, the MyPlate icon (United States Department of Agriculture, 2011) was measured to determine the proportional area covered by each of its five food groups. In each sales circular, the proportion of space taken up by the foods comprising each MyPlate food group was calculated as percents. Thus, the sum of the space occupied by dairy, protein foods, grains, fruits, and vegetables groups in each circular equaled 100%. (Note that advertised foods not in MyPlate categories [e.g., sweets, fats, alcohol, and miscellaneous] were not considered in the MyPlate comparison analysis.) MyPlate was the standard against which proportions of food groups in the circulars were compared, thus the proportional area covered by each food group in the MyPlate icon was subtracted from the proportion of advertising space the food group occupied in each circular making the expected difference zero under the null hypothesis (i.e., the space devoted to a food group in the MyPlate icon did not differ from the space devoted to that food group in the advertising circular). ANOVA procedures were used to compare the MyPlate icon proportions to the overall sample’s ( $n = 51$ ) mean proportion of sales circular advertising space devoted to each MyPlate food group. If this global test found a significant difference for a food group, Fisher’s PLSD post hoc tests were conducted to determine if the mean of any geographic region or obesity-rate region differed significantly from the MyPlate standard. Significance was set at  $P < 0.05$ . All analyses were conducted on PASW Statistics 19.0 SPSS.

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