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# Are Americans Turning Away From Lower Fat Salty Snacks?

Jane Allshouse, Betsy Frazao, and John Turpening

Americans love their salty snacks, but not especially the lower fat versions. In 1999, Americans purchased more than 1.6 billion pounds of potato chips, pretzels, and microwave popcorn from supermarkets, drug stores, and mass merchandising outlets. Sales of these salty snacks increased 6 percent from 1995 to 1999. Sales of regular versions increased 11 percent between 1995 and 1999, while sales of lower fat versions decreased 6 percent in the same period.

Food manufacturers, hoping to capitalize on consumers' concerns about fat, introduced 1,914 new reduced/low-fat products in 1995 and 2,076 in 1996. The market for these products, however, never grew as anticipated, as food processors dramatically cut their new product introductions of lower fat products after 1996, introducing only 481 new products in 1999.

These findings seem to contradict consumers' claims that they are concerned about fat, especially since the 11-percent increase in volume sales of regular versions of salty snacks is almost double the U.S. population growth since 1995. In *Trends—Consumer Attitudes in the Supermarket 2000*, a recent national survey conducted by the Food Marketing Institute, most shoppers (96 percent) said nutrition was an important factor in their food purchasing decisions. Shoppers also said they were eating healthier by buying products labeled "low fat" (79 percent) and by consuming less snack or "junk" food (18 percent). Another national survey conducted in 2000 by Booth Research Services for the Calorie Control Council also revealed that 79 percent of respondents (representing 163 million U.S. adults) reported consuming low- or reduced-fat foods and beverages.

Although nutrition is important to consumers, taste usually wins out. In 1998, Nabisco, a subsidiary of Kraft Foods, Inc., reformulated its SnackWell's line of low-fat and fat-free products to create virtually the same products with more fat, claiming that "our consumers are willing to accept up to an additional gram and a half of fat because they want great taste first."

**Popcorn's status as a favored snack goes back hundreds of years. When Columbus arrived in the West Indies, the natives tried to sell popcorn to his crew. And as a gesture of goodwill, Indians brought popcorn to snack on during peace negotiations with American settlers.**

**Credit: PhotoDisc.**

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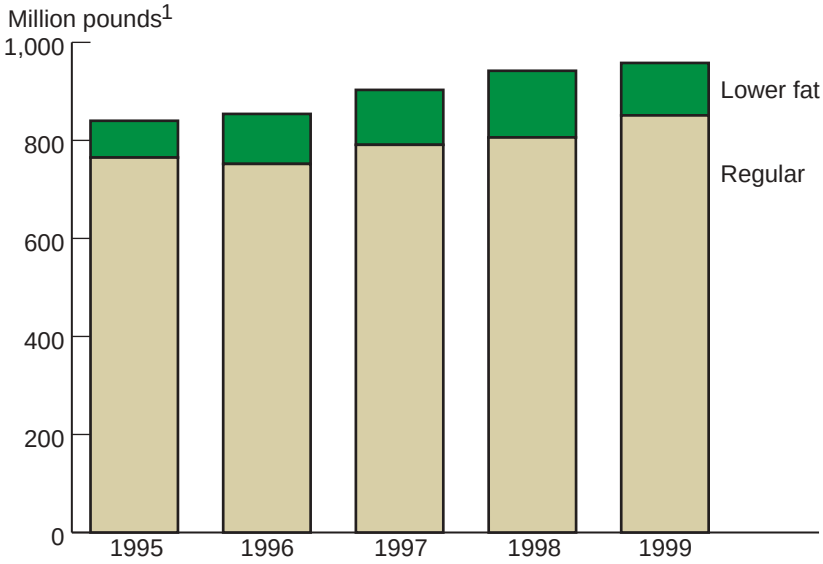
**Figure 1—Lower Fat Potato Chips Accounted for 11 Percent of Total Potato Chip Sales Quantity in 1999, Compared With 9 Percent in 1995**




[1]In supermarkets, drug stores, and mass merchandising outlets.
Source: Compiled by USDA's Economic Research Service, using Infoscan retail scanner data.

This research uses 1995-99 retail checkout scanner data to evaluate the size and growth of the market for lower fat potato chips (including crisps), pretzels, and microwave popcorn, relative to their full-fat counterparts. The data consist of weekly records of retail scanner information from samples of supermarkets, drug stores, and mass merchandising outlets across the United States. The data are scaled up to represent supermarket sales in all stores with sales of at least $2 million annually, all nonprescription drug store sales, and mass merchandiser sales in stores belonging to chains that sell at least $200 million annually.

The database contains information on dollar sales and physical volume of food products at the brand and UPC (universal product code) or shelf item level. A potato chip, pretzel, or microwave popcorn product was classified as "lower fat" if its label made a claim that met the definition of reduced fat, low fat, or nonfat as established by the U.S. Food and Drug Administration (FDA) (see box). If the product made no such claim, it was classified as a traditional, or "regular," version.

This analysis excludes any potato chips, pretzels, and microwave popcorn purchased at the wholesale level by restaurants, theaters, sports arenas, and other away-from-home eating sites. Other types of salty snacks, such as other popcorn, corn snacks, and salted nuts, are not included because lower fat information was not available.

## Potato Chips Top List of Favorite Snack Foods

Potato chips are the top choice for between-meal munching for both American adults (79 percent) and children (73 percent), according to *What America Eats 2001*, a nationally representative survey of 2,093 men and women conducted for *Parade* magazine. Scanner data show that in 1999, Americans spent $3 billion on 958 million pounds of potato chips purchased in supermarkets, drug stores, and mass merchandising outlets. Lower fat potato chips accounted for 16 percent of total potato chip dollar sales in 1999 and 11 percent of total volume sales (fig. 1).

Both the average price and volume sales of potato chips in supermarkets, drug stores, and mass

## Nutrient Descriptors for Fat

In January 1993, the U.S. Food and Drug Administration (FDA) and USDA's Food Safety and Inspection Service published new food labeling regulations. The regulations spell out which nutrient content claims are allowed and under what circumstances they can be used. The regulations permit food labels to use 11 core terms: low, free, lean, extra lean, high, good source, reduced, less, light, fewer, and more. Five of these terms apply to the fat content of salty snacks.

**Low**—A food meets the definition for "low" if a person can eat a large amount of the food without exceeding the "Daily Value" for the nutrient. As a general rule, a food meets the definition for "low" if it contains less than 5 percent of the Daily Value for that nutrient. Daily Values are not recommended intakes, they are reference points on overall daily dietary needs. The Daily Value for fat, based on a 2,000-calorie diet, is 65 grams. A food that has 13 grams of fat per serving would be labeled as containing 20 percent of the Daily Value for fat. Low-fat products must contain 3 grams or less of fat per serving. If the serving size is 30 grams or less or 2 tablespoons or less, the food product must contain 3 grams or less of fat per 50 grams of the product.

**Free**—Because it is impossible to measure fat below a certain level, the regulations allow a fat-free claim on foods with less than 0.5 grams of fat per serving, an amount that is dietetically trivial and physiologically insignificant.

**Reduced, Less, and Light**—Products that are nutritionally altered and want to compare themselves with a regular version of the product may make a relative claim like "reduced," "less," or "light." The regular products, or reference foods, may be either an individual food or a group of foods representative of the type of food. For a product to bear a reduced-fat claim, it must have at least 25 percent less fat per serving than the reference food. A relative claim ("16 percent less fat than…") must include the percent difference and the identity of the reference food. A product bearing a light/lite claim must contain half the fat of the reference food.

Source: Stehlin, Dori. "A Little "Lite" Reading," *FDA Consumer Special Report, Focus on Food Labeling*, May 1993, pp. 29-33.

**Aided by national advertising campaigns, sales of WOW! brand snacks and other fat-free products made with Olean soared in 1998. In years since, however, both advertising and sales of the products have dropped.**

merchandising outlets increased 14 percent between 1995 and 1999. The average price of lower fat potato chips increased 27 percent, from $3.56 to $4.51 per pound (table 1). Over the same period, the average price of regular potato chips increased 11 percent, from $2.63 to $2.91 per pound. The price premium (the amount above the regular price) associated with lower fat potato chips increased from $0.93 per pound (a 35-percent differential) in 1995 to $1.60 (a 55-percent differential) in 1999.

Despite the steeper increase in the average price of lower fat potato chips compared with regular potato chips, sales volume of lower fat potato chips rose 43 percent between 1995 and 1999, compared with an 11-percent rise in sales volume of regular potato chips. As a result, lower fat potato chips increased their share of total potato chip sales from 9 to 11 percent.

## Sales of Lower Fat Chips Jumped in 1998, But Fell in 1999

The introduction of fat-free Olean products accounts for the increase in volume sales of lower fat potato chips between 1995 and 1999. Olean is the brand name for Procter & Gamble's fat- and calorie-free cooking oil, olestra, which was approved by FDA in January 1996 for use in salty snacks. Frito-Lay opened the test market for Olean products in April 1996 with its fat-free Lay's, Ruffles, Doritos, and Tostitos brands. In September 1996, Procter & Gamble introduced Fat Free Pringles with Olean to the market. Procter & Gamble began national advertising of Olean in February 1998, during the Winter Olympics, and announced that Olean products would be available nationwide by summer 1998. Advertising for Olean prod-

**Table 1—Sales of Potato Chips and Microwave Popcorn Increased Every Year Between 1995 and 1999, While Pretzel Sales Declined**

| Item | 1995 Average price per pound | 1995 Sales | 1996 Average price per pound | 1996 Sales | 1997 Average price per pound | 1997 Sales | 1998 Average price per pound | 1998 Sales | 1999 Average price per pound | 1999 Sales | Change, 1995 to 1999 Price | Change, 1995 to 1999 Sales |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Dollars* | *Million pounds* | *Dollars* | *Million pounds* | *Dollars* | *Million pounds* | *Dollars* | *Million pounds* | *Dollars* | *Million pounds* | *Percent* | |
| Potato chips and crisps | 2.71 | 839.6 | 2.91 | 854.1 | 2.94 | 902.4 | 3.09 | 942.0 | 3.09 | 957.8 | 14.1 | 14.1 |
| Regular | 2.63 | 764.8 | 2.74 | 751.9 | 2.77 | 790.8 | 2.85 | 805.7 | 2.91 | 850.8 | 10.8 | 11.3 |
| Lower fat | 3.56 | 74.8 | 4.20 | 102.2 | 4.13 | 111.6 | 4.53 | 136.3 | 4.51 | 107.0 | 26.6 | 43.0 |
| Made with Olean[1] | na | na | 4.85 | 0.1 | 5.00 | 1.1 | 5.39 | 55.1 | 5.29 | 45.3 | na | na |
| Other | 3.56 | 74.8 | 4.20 | 102.0 | 4.12 | 110.6 | 3.94 | 81.2 | 3.93 | 61.7 | 10.5 | -17.5 |
| Lower fat share of category sales | na | 9% | na | 12% | na | 12% | na | 14% | na | 11% | na | 25.4 |
| Pretzels | 1.92 | 348.0 | 1.93 | 321.1 | 1.96 | 315.0 | 1.95 | 301.5 | 1.98 | 290.4 | 3.1 | -16.5 |
| Regular | 1.69 | 142.8 | 1.67 | 106.7 | 1.74 | 87.0 | 1.80 | 89.1 | 2.01 | 115.8 | 18.9 | -18.9 |
| Lower fat | 2.07 | 205.2 | 2.06 | 214.3 | 2.04 | 228.0 | 2.01 | 212.4 | 1.95 | 174.6 | -5.8 | -14.9 |
| Fat free | 2.07 | 136.1 | 2.04 | 151.6 | 2.00 | 155.3 | 1.96 | 150.1 | 1.89 | 120.2 | -8.7 | -11.7 |
| Other | 2.08 | 69.1 | 2.10 | 62.7 | 2.12 | 72.7 | 2.12 | 62.3 | 2.08 | 54.3 | 0.0 | -21.3 |
| Lower fat share of category sales | na | 59% | na | 67% | na | 72% | na | 70% | na | 60% | na | 1.9 |
| Microwave popcorn | 2.13 | 278.7 | 2.24 | 279.7 | 2.27 | 283.1 | 2.24 | 297.2 | 2.18 | 312.0 | 2.3 | 11.9 |
| Regular | 2.09 | 197.6 | 2.19 | 200.2 | 2.21 | 212.6 | 2.20 | 232.5 | 2.15 | 254.2 | 2.9 | 28.6 |
| Lower fat | 2.22 | 81.1 | 2.35 | 79.5 | 2.45 | 70.4 | 2.40 | 64.7 | 2.32 | 57.8 | 4.5 | -28.7 |
| Light | 2.22 | 80.1 | 2.23 | 70.9 | 2.36 | 64.1 | 2.32 | 59.8 | 2.25 | 54.4 | 1.4 | -32.1 |
| Other | 2.33 | 1.0 | 3.28 | 8.6 | 3.33 | 6.3 | 3.38 | 4.8 | 3.44 | 3.4 | 47.6 | 234.6 |
| Lower fat share of category sales | na | 29% | na | 28% | na | 25% | na | 22% | na | 19% | na | -36.3 |

Note: na = not applicable.
[1]Olean is the brand name for the fat substitute olestra, which was approved by the U.S. Food and Drug Administration in January 1996 for use in the production of salty snacks and crackers.
Source: Compiled by USDA's Economic Research Service, using Infoscan retail scanner data.

ucts accounted for almost half of all potato chip advertising that year.

In 1998, Frito-Lay introduced its WOW! brand snack products. These products included fat-free versions of Doritos, Ruffles, Lay's, and Tostitos chips made with Olean. Sales of WOW! were a major contributor to the 5-percent increase in volume sales for Frito-Lay during the brand's first year marketed nationally, but sales declined for Frito-Lay's other low-fat and no-fat products during the same period. Sales of Olean products soared in 1998, grabbing 40 percent of the lower fat market and 6 percent of the total potato chip sales volume. In 1999, advertising for Olean chips dropped to one-fifth of 1998's level, and volume sales dropped 18 percent. Although the scanner data used for this study end in 1999, Frito-Lay's 2000 annual report states that sales of WOW! brand products continued to decline in 2000.

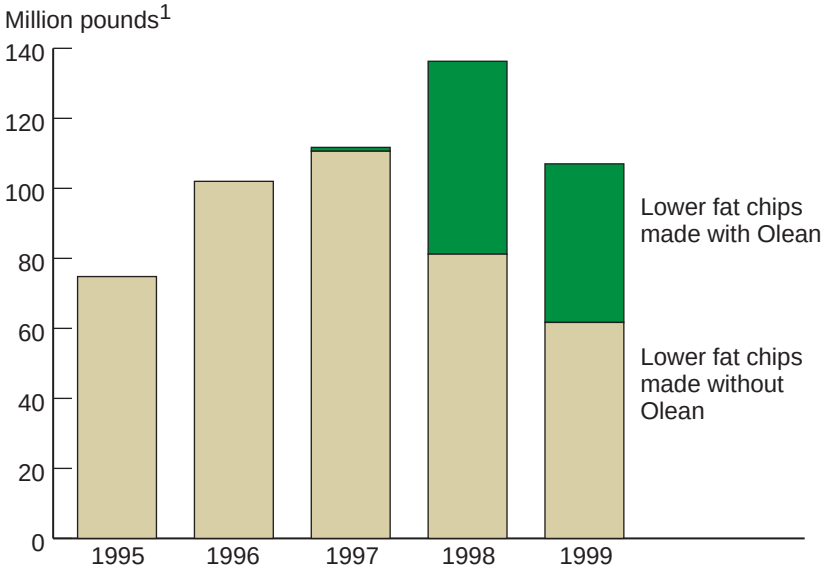
Excluding Olean products, volume sales of lower fat potato chips declined 17 percent between 1995 and 1999 (fig. 2). Volume sales increased 36 percent in 1996 and 8 percent in 1997 but fell 27 percent in 1998, the year WOW! brand potato chips were introduced nationally, and another 24 percent in 1999. In 1999, lower fat chips, excluding Olean products, accounted for 6 percent of the total potato chip market.

Fat-free chips were on the verge of becoming nonexistent before the launch of Olean chips in 1998. Low-fat chips sales volume increased in 1996 and 1997 with the introduction of baked potato chips but declined in 1998 and 1999. Reduced-fat chips accounted for 77 percent of lower fat chip sales in 1995. Volume sales increased for the next 2 years, but reduced-fat chips lost market share to low-fat baked chips and then to fat-free Olean products. In 1999, reduced-fat chips volume sales declined, but because of greater decreases in fat-free and low-fat sales, reduced-fat chips increased their market share of lower fat sales.

## Pretzel Sales Dropped Off During the Second Half of the 1990s

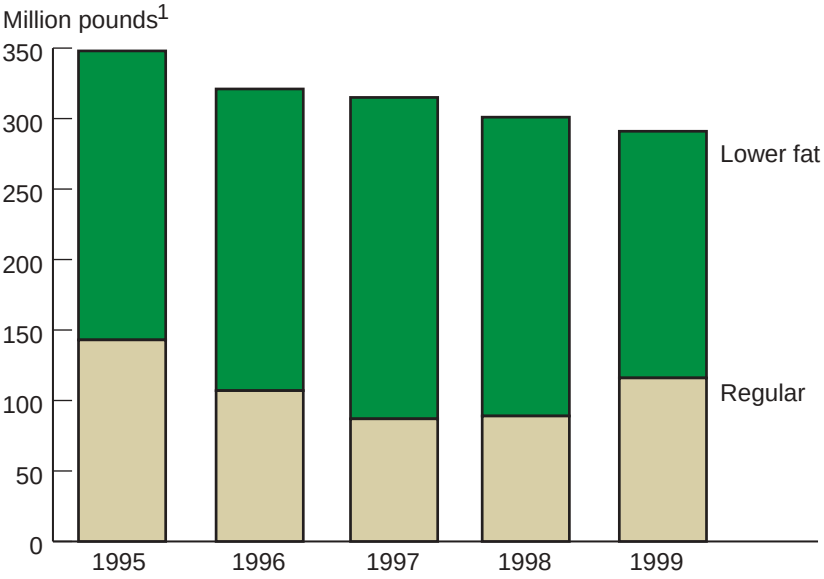
In the early 1990s pretzel manufacturers promoted their products as a low-fat alternative to potato chips. Even though, historically, pretzels have typically contained only 1 gram of fat per serving, this advertising seems to have worked because pretzels showed a 63-percent increase in sales volume between 1989 and 1993. However,

**Figure 2—Chips Made With Olean Accounted for the Increase in Sales of Lower Fat Chips in 1998 and 1999**




[1]In supermarkets, drug stores, and mass merchandising outlets.
Source: Compiled by USDA's Economic Research Service, using Infoscan retail scanner data.

**Figure 3—Sales of Lower Fat and Regular Pretzels Decreased Between 1995 and 1999**




[1]In supermarkets, drug stores, and mass merchandising outlets.
Source: Compiled by USDA's Economic Research Service, using Infoscan retail scanner data.

pretzels' popularity declined during the second half of the 1990s. Pretzel sales dropped every year between 1995 and 1999, with an overall decline of 17 percent. It is possible that when consumers became disenchanted with low-fat products they also turned away from pretzels.

Sales volume declines for regular pretzels between 1995 and 1997 were partially offset by increased sales volume for lower fat pretzels (fig. 3). The increase in lower fat pretzels likely resulted from the huge advertising campaign by Frito-Lay's Rold Gold brand fat-free pretzels, which began in 1994 and continued into 1996. After 1996, advertising for lower fat pretzels tapered off. Between 1997 and 1999, a 23-percent decline in sales volume of lower fat pretzels was accompanied by a 33-percent increase in sales volume of regular pretzels. Although the market share for lower fat pretzels fluctuated between 1995 and 1999, rising to a high of 72 percent in 1997, by 1999 it had returned to its 1995 level, accounting for 60 percent of overall pretzel sales volume.

## Pretzels Versus Potato Chips

Because pretzels are often promoted as a lower fat alternative to potato chips, we decided to compare the two categories. In 1995, pretzels accounted for nearly a third of the potato chip/pretzel market, a huge increase over 1989, when pretzels accounted for only 18 percent of that market. However, as a result of yearly increases in sales volume for potato chips and yearly declines for pretzels between 1995 and 1999, pretzels' market share dropped to 23 percent of the potato chip/pretzel market in 1999.

A comparison of sales volume of lower fat versions of potato chips and pretzels shows that consumers looking for healthier (lower fat) snacks were more likely to eat lower fat pretzels than lower fat potato chips. In 1995, lower fat pretzels accounted for 73 percent of

Credit: PhotoDisc

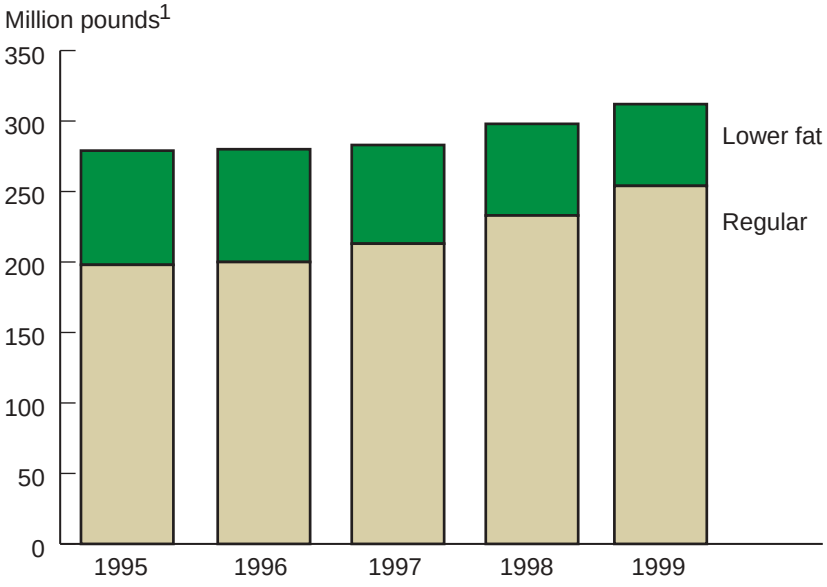
the lower fat potato chip/pretzel market. Although pretzels' share has since declined, they still accounted for 62 percent of that market in 1999. Most of this downward trend is associated with the introduction of baked and Olean potato chips. Considering that both baked and fat-free potato chips suffered declines in sales volume in the latter part of the 1990s, and that Rold Gold pretzels no longer carry a low-fat claim (even though the pretzels are still a low-fat food), it is unclear how demand for lower fat versions of potato chips and pretzels will play out over the next several years.

Pretzels are the least expensive salty snack we studied. In 1995, the price of lower fat pretzels averaged $2.07 per pound, compared with $1.69 per pound for the regular versions. Unlike potato chips, where the price premium associated with lower fat versions increased between 1995 and 1999, by 1999, the price of lower fat pretzels dropped 6 percent and the price of regular versions increased 19 percent, making lower fat pretzels, at $1.95 per pound, less costly than regular pretzels at $2.01 per pound.

## Sales of Regular and Lower Fat Microwave Popcorn Offset Each Other

Microwave popcorn accounted for 65 percent of all popcorn sales volume in supermarkets, drug stores, and mass merchandising outlets in 1995, and that share increased to 72 percent by 1999. Volume sales of microwave popcorn increased 12 percent from 1995 to 1999, with 10 percent of the increase occurring between 1997 and 1999. A 29-percent decrease in sales volume of lower fat microwave popcorn in the same period was more than offset by a 29-percent increase in regular versions (fig. 4).

**Figure 4—Lower Fat Microwave Popcorn's Share of Total Sales Dropped From 29 Percent in 1995 to 19 Percent in 1999**




[1]In supermarkets, drug stores, and mass merchandising outlets.
Source: Compiled by USDA's Economic Research Service, using Infoscan retail scanner data.

The average price of microwave popcorn increased 3 percent for regular versions and 5 percent for lower fat products between 1995 and 1999. Regular microwave popcorn increased from $2.09 to $2.15 per pound, while light popcorn's average price increased only 1 percent between 1995 and 1999, going from $2.22 to $2.25 per pound. The big increase in price for microwave popcorn has been in lower fat products other than light popcorn. From 1995 to 1999, the average price for lower fat popcorn, except the light versions, increased 48 percent, from $2.33 and $3.44.

Lower fat popcorn accounted for 29 percent of all microwave popcorn volume sales in 1995 but fell to 19 percent in 1999. In 1994, a *Washington Post* staff writer predicted that the increasing availability of nutritionally improved snack foods, such as low-fat potato chips and non-fat pretzels, would raise the level of competition faced by microwave popcorn in the years ahead. Since volume sales of all these products had declined by 1999, it seems the true measure of competition was not about which product grew the most but rather which product declined the least.

The only real market for lower fat microwave popcorn is for the light versions. Even though sales volume of light microwave popcorn declined each year from 1995 to 1999, light popcorn accounted for at least 89 percent of all lower fat popcorn sales every year in the period. Fat-free and reduced-fat popcorn sales accounted for less than 1 percent of lower fat popcorn sales, and in 1999, fat-free popcorn was no longer being sold. Sales of low-fat popcorn increased between 1995 and 1996 to capture 10 percent of the lower fat market but declined every year thereafter.

## Consumers Are Still Waiting for Lower Fat Versions They Can Love To Eat

Our analysis suggests that consumers are willing to try lower fat salty snacks, but they keep returning to high-fat snacks. They tried baked potato chips, and initial increases in sales volume were shortly followed by declining sales volume. They tried Olean products, and again, initial increases in sales volume were shortly followed by declining sales volume. They tried substituting pretzels for potato chips, and increases in pretzels' share in the potato chip/pretzel market were eventually followed by declines. Although this analysis was unable to include other salty snacks, it seems that when it comes to salty snacks, consumers are still waiting for a lower fat product with enough flavor to satisfy them. *New Product News* reported that 1,057 new food products bearing reduced- or low-fat claims were introduced to the marketplace in 2000. Maybe one of these will be a salty snack that will win over consumers.

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