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# Availability of Spices on the Rise in the U.S. Food Supply

## Nutrition Insight 39

The use of spices in the United States continues to increase. Historically, spices have been associated with ambiance, intrigue, suspense, and adventure. They have been linked to vast fortunes, curative powers, and early world explorations. Still today, spices energize our daily adventures in food and remind us of unforgettable meals (McCormick.com, 2007). Spices add zest to the diet, influence our food choices, and provide essential nutrients that may improve our health.

Rising domestic use of spices reflects a trend towards the use of spices to compensate for less salt and lower fat levels in foods and marketing strategies to meet the demands of foods of an increasingly ethnically diverse U.S. population (Buzzanell, Dull, & Gray, 1995). Census projections indicate that Hispanics and Asians are expected to reach 20 percent and 6.2 percent, respectively, of the population by 2030 (U.S. Census Bureau, 2004). Also, flavor enhancement with spices may counter the effects of today's rigorous processing technologies to make foods more convenient. Thus, it's no surprise that the United States, which imports 60 percent of its annual spice needs, is the world's largest spice importer and consumer, with both imports and consumption on an uptrend for the past 10 years (Buzzanell et al., 1995).

This *Nutrition Insight* presents an overview of the use of spices in today's market, with particular focus on the amount of spices available for consumption and the major nutrients they provide, as reported from the *Nutrient Content of the U.S. Food Supply* series.

### What Are Spices and How Are They Used?

Technically and for the purposes of this *Nutrition Insight*, spices are parts of tropical plants and herbs are the leafy parts of temperate-zone plants. Generally, spices are dried plant products used primarily for flavoring purposes, which include a wide range of plant and plant parts of various aromatic plants and trees: bark, buds, fruit or flower bulbs and roots, seeds, and stems. Spices also include leafy herbs, dehydrated vegetables, and spice blends or mixtures (Buzzanell et al., 1995). Generally, spices constitute up to 3 percent of food formulations (Labeling and Consumer Protection Staff, Food Safety and Inspection Service, USDA, personal communication, February 2008). However, during some U.S. holiday seasons, the quantities of spices that are available and consumed increase.

### What Are the Retail Sale Levels for Spices?

Spices and seasonings are big business. "Seasonings" is a relative term that could include spices, herbs, and/or functional food additives (e.g., tenderizers, flavor adjuvants, carriers, bulking agents, and antioxidants). Retail sale of spices and seasonings in the United States has increased 1.3 percent, to \$2.9 billion from 2004 to 2005 (Heller, 2007). Other research shows that imported spices are among the growth leaders in 2007. The forecast is for spices to cross the \$3 billion mark in 2009 and climb to \$3.8 billion in 2010, fueled by increased home cooking and a growing number of more adventurous consumers (Heller, 2007).

### How Much Spice Is Available for Consumption?

The interactive version of the *Nutrient Content of the U.S. Food Supply* series, accessible at [www.cnpp.usda.gov](http://www.cnpp.usda.gov), can be used to determine the amount of spices available for consumption and the types and amounts of nutrients that they provide. Data from this series show that the amount of spices available for consumption in the U.S. food supply has been on an upward trend: an increase of 41 percent from 1995 to 2005.

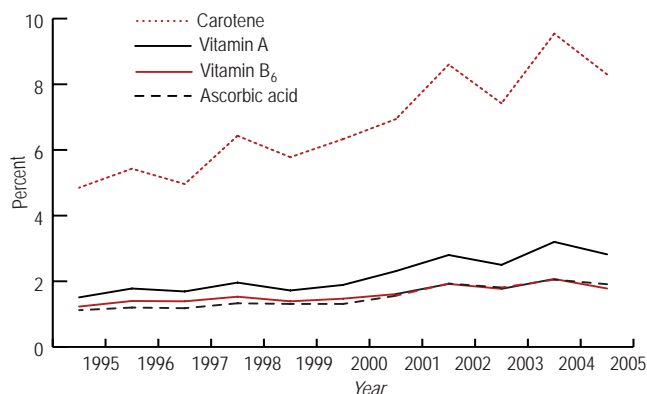
The dominant spices in the food supply during this period were categorized as "miscellaneous," "other spices," and "mustard seeds." Miscellaneous spices include anise, caraway, celery, coriander, cumin, fennel and poppy seeds, cloves, ginger root, mace, nutmeg, pimento, sage, tumeric, and vanilla bean. Other spices are comprised of basil, cardamom seeds, capers, curry and curry powder products, dill, fenugreek seeds, organum, parsley, rosemary, savory, thyme, mixed spices, and other spices and spice seeds (ground and unground) not individually reported. Spices in the food supply also include prepared Oleoresins spice extracts such as paprika, black pepper, and others (U.S. Department of Agriculture, 2007). In 2005, miscellaneous spices were the predominant source of all spices and provided 23 percent of all spices available for consumption, followed by other spices, which provided 18 percent and red peppers<sup>1</sup> that provided 17 percent of spices available for consumption (data not shown).

<sup>1</sup>Red peppers include capsicum and chili peppers.

## What Is the Nutrient Profile of the Spices Available for Consumption?

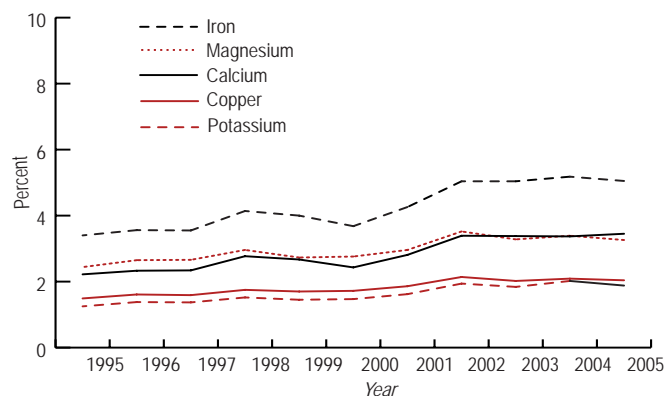
Spices provide a variety of vitamins and minerals, as well as macronutrients, to the diet. The array of color attributes of spices is linked to their nutrient content. From 1995 to 2005, pro-vitamin A carotenoids (carotene) and vitamin A were the top two vitamin contributors from spices in the U.S. food supply, followed by vitamin B<sub>6</sub> and ascorbic acid (vitamin C) (fig. 1). In 2005, carotene, vitamin A, ascorbic acid, and vitamin B<sub>6</sub> in the food supply showed a small but steady increase over the previous 10 years.

**Figure 1. Among major vitamins in the U.S. food supply, spices contribute more carotene and vitamin A, 1995-2005**



Data in the U.S. food supply indicate that the main contributors in 2005 were iron, calcium, magnesium, copper, and potassium (fig. 2). The amounts available for consumption steadily increased between 1995 and 2005, with iron showing a 2-percentage-point increase. The amount of calories that spices contributed to the U.S. food supply generally fluctuated but ranged between 0.39 and 0.51 percent between 1995 and 2005 (data not shown), with carbohydrates from spices providing the bulk of calories, followed by protein and total fat (USDA, 2007). However, it is important to note that the overall contribution of calories and nutrients by spices to Americans' diets is negligible because of the small amounts of spices that are used in preparing and formulating foods.

**Figure 2. Iron tops the list of major minerals contributed by spices to the U.S. food supply, 1995-2005**



## Conclusion

Spices enhance the flavor of foods and beverages. From 1995 to 2005, the amount of spices available for consumption in the United States grew from 2.6 to 3.3 pounds per capita per day, respectively. With the Nation's growing use of various spices, adding flavor to the diet without adding calories is a health benefit.

## References

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