

## Conclusions

Food attributes change over time, making price comparisons at different times difficult to interpret. Thus, to definitively answer whether changing relative prices of healthy and unhealthy foods are responsible for Americans' current weight problems is an impossible task. For commonly consumed fresh fruits and vegetables for which quality has remained fairly constant, analysis of price trends reveals price declines similar to those of dessert and snack foods.

A healthy diet might include only a subset of fresh fruits and vegetables. A healthy diet could conceivably be composed of fresh fruits and vegetables that are not partially or fully prepared. Such a diet might include fruits and vegetables that have been on the market for many years, without changes in seasonal availability. In effect, a healthy diet might be exactly what was available to consumers years ago, without changes in quality. Thus, the price trend evidence suggests that the price of a healthy diet has not changed relative to an unhealthy one, although a healthy diet might not include every fresh fruit or vegetable currently available.

Fresh fruits and vegetables that have undergone substantial quality change account for a growing share of produce sold by retailers. That limits our results, but also points to the widespread benefits of quality change. Product innovations have widespread benefits if the new products remain on the market. Most product innovations fail the test of the market and disappear quietly. Bagged, washed, and cut broccoli florets have met the test of the market: many consumers are willing to pay for the services embodied in these products and do so routinely. Also, December strawberries have survived the test of the market: many consumers are willing to pay the market price for strawberries in December even though the price must cover the cost of a more complex supply chain in December than in May.

Innovative fresh fruit and vegetable products may improve Americans' health if those products increase fruit and vegetable consumption. Bagged and washed vegetables might be more expensive than traditional products, and December strawberries might be more expensive than May strawberries. As long as consumers purchase innovative products, they must be getting more benefit from their expenditures than they did in the past—that is the only rational explanation for consumers' voluntarily altering their grocery purchases. Products that reduce time devoted to kitchen labor pay for themselves, for some consumers. Many consumers value additional fresh fruit and vegetable choices in winter months. Offering consumers ever-larger benefits above what they are willing to pay should induce them to add to the quantity of fresh fruits and vegetables in their diets. Despite rising inflation-adjusted prices for broccoli and strawberries, in recent years Americans have been consuming more of both (U.S. Department of Agriculture, Economic Research Service, 2007).

Of course, some households may be unwilling to pay for additional convenience or for products to be available year round. Lower income households might select foods primarily on the basis of price. If so, the benefits to these households of quality change are less certain. We might expect lower

income households to concentrate their purchases on more traditional produce, and therefore not realize any benefits from quality change. However, even if value-added produce, measured in pounds, is generally more expensive to buy than traditional produce, value-added produce may still be less expensive to eat on a per-serving basis. In the case of broccoli, some consumers may treat stems as a waste product. Florets may be cheaper to consume on a per serving basis if the consumer discards the stem (Reed, Frazao, and Istokowitz, 2004).

Future research and debate over the costliness of healthy foods needs to focus on whether low-income households share in the benefits provided by foods that are more convenient and more readily available. These foods can appear more expensive, but may not be so.