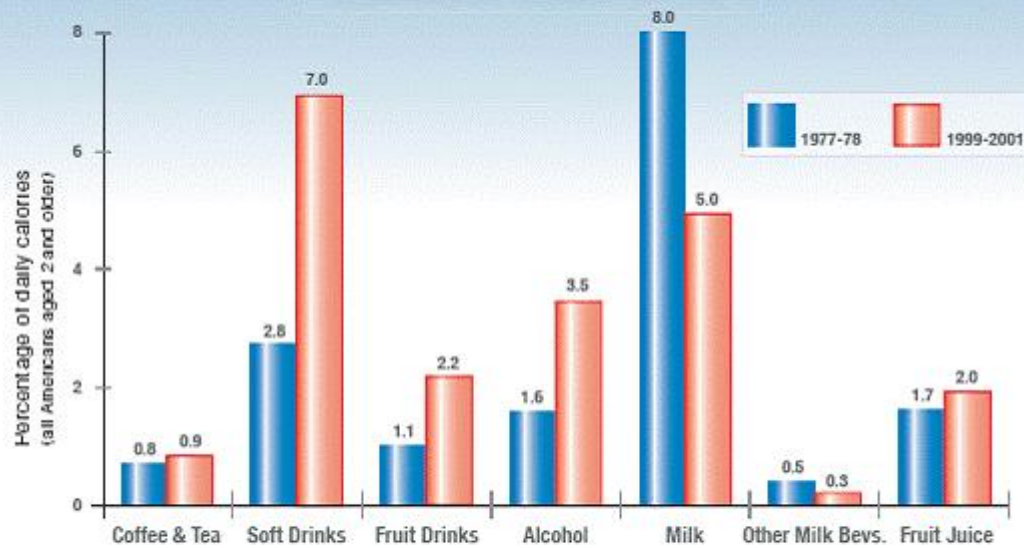




## FILL 'ER UP



**We're drinking more.** We got more of our calories from coffee and tea, soft drinks, fruit drinks, alcohol, and fruit juice in 2001 than in the late 1970s. Only calories from milk dropped during those 20 years.

Source: *Am. J. Prev. Med.* 27: 205, 2004.

# Feel Full On Fewer Calories:

**An Interview With Dr. Barbara Rolls About Volumetrics**  
**FOOD REFLECTIONS Newsletter, University of Nebraska Cooperative**  
**Extension in Lancaster County ([lancaster.unl.edu/food/foodtalk.htm](http://lancaster.unl.edu/food/foodtalk.htm))**  
Accessed on April 25, 2007 from <http://lancaster.unl.edu/food/ftjan01.htm>

**Several nutritional factors affect the energy density of foods and how well the foods will satisfy hunger. Fat, fiber and water were cited as having some of the greatest influence. Below are excerpts from an interview with Dr. Barbara Rolls, Guthrie Chair of Nutrition at Penn State and former president of the North American Association for the Study of Obesity.**

**According to literature and research conducted by Dr. Rolls:**

## **Beverages and Satiety**

"I've heard anecdotal stories about how drinking water could influence satiety. However, I haven't found any systematic data in the scientific literature that shows that drinking lots of water controls hunger or has any impact on weight loss. In our studies, drinking water didn't have an impact, but incorporating the water into the food (i.e. eating water-rich foods like soup, pasta with vegetables, etc.) did have an impact on satiety and food intake.

One challenge when talking about liquids is: When is a liquid considered a food and when is it considered a drink? Various liquids are processed by different mechanisms in the body. The hunger and thirst mechanisms are quite separate. A soft drink will trigger thirst mechanisms, not hunger mechanisms, and add calories without satisfying hunger. You may end up consuming more total calories than if you didn't take the drink.

Milk-based drinks and drinks with some protein will influence hunger mechanisms. In our lab, we found that milk-based drinks help people feel full and eat less at the next meal.

I think a lot of people take in way too many calories from sugar-sweetened beverages. I tell people that if they're trying to lose weight, in some degree they're lucky if they're getting a lot of calories from soft drinks because it's an easy habit to change. There are a lot of good substitutes for caloric soft drinks. It's a pretty easy way to reduce your calorie intake.

It's much better in terms of satiety to eat whole fruit, which has more fiber and offers more satisfaction in chewing, than fruit juice. There have been studies done that show you will feel more satiated with whole fruit than juice.

If you're thirsty, water is the best choice for quenching thirst, followed by calorie-free or low-calorie beverages.ö