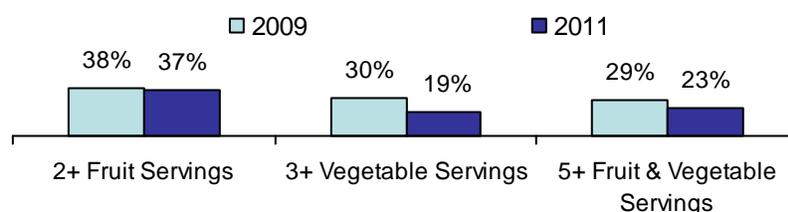


Vermont Adult Behavioral Risk Factor Survey Data Brief – Fruit and Vegetable Consumption

The Behavioral Risk Factor Surveillance System (BRFSS) includes questions about fruit and vegetable consumption. The fruit and vegetable questions were asked in 2009 and the questions were revised for the 2011 survey. The fruit questions were changed to a lesser degree, while the vegetable question revisions were significant.

VDH reports calculated measures reflecting the consumption of the recommended number of daily servings of fruit (two or more) and vegetables (three or more). There is little change in the fruit measure from 2009 to 2011. However, the vegetable measure decreased by nearly half in 2011, resulting in an overall decline in consumption of five or more fruits and vegetables per day (see Figure 1).

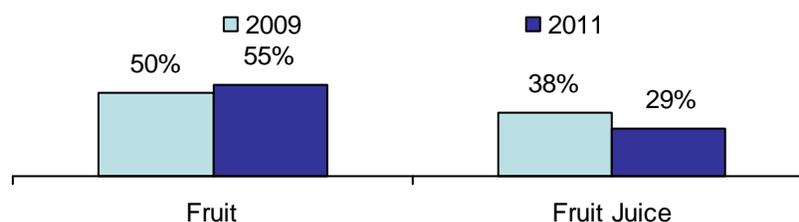
Figure 1: Servings of Fruit (2+) and Vegetables (3+) Per Day*



*Age adjusted U.S. 2000 population.

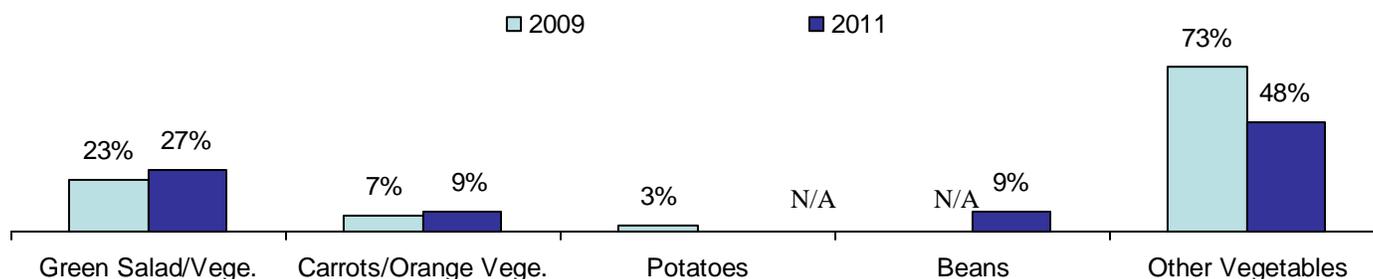
Reported fruit consumption increased in 2011, but this was balanced by a decrease in reported fruit juice consumption, making the overall difference in fruit servings negligible (See Figure 2).

Figure 2: One or More Servings of Fruits Per Day



Changes in green salad/vegetable and carrots/orange vegetables were relatively minor. The potato question was replaced with one about beans and reported consumption increased from three to nine percent. Reported servings of “other vegetables” decreased by 25 percentage points from 2009 to 2011. This change is significant and striking (See Figure 3).

Figure 3: One or More Servings of Vegetables Per Day



In 2011, all fruit and vegetable questions were changed to ask about eating behaviors in the last month, rather than a more general “how often” and many examples of specific types of foods were added to the questions. It is possible that the more specific question wording is responsible for the decline in reported “other vegetable” consumption.

In 2011, the Centers of Disease Control and Prevention also implemented changes to the BRFSS weighting methodology in order to more accurately represent the adult population. These changes limit our ability to make comparisons between 2011 BRFSS data and that collected in years prior, as the differences may be due to methodological changes, rather than changes in opinion or behavior.

Because of the changes to the BRFSS weighting methodology, it is difficult to draw any firm conclusions regarding the impact of the wording changes in the fruit and vegetables questions from the 2009 to 2011 BRFSS. However, the sharp decrease in consumption of other vegetables suggests that the addition of food examples to the bean, green and orange vegetable questions, results in respondents thinking their vegetable consumption has already been addressed, leaving fewer “other vegetables” to report.

In other words, even with the limitations, it does appear that the changes in the wording did impact answers to the fruit and vegetable questions. Specifically, the vegetable responses were most impacted.

(See Table 1, below, for the fruit and vegetable questions in 2011 vs. historical wording).

	Before 2011	2011
Fruit Consumption:	How often do you drink fruit juices such as orange, grapefruit, or tomato?	During the past month, how many times per day, week or month did you drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.
	Not counting juice, how often do you eat fruit?	During the past month, not counting juice, how many times per day, week, or month did you eat fruit? Count fresh, frozen, or canned fruit.
Vegetable Consumption:	How often do you eat green salad?	During the past month, how many times per day, week, or month did you eat dark green vegetables, for example broccoli or dark leafy greens including romaine, chard, collard greens or spinach?
	How often do you eat potatoes, not including French fries, fried potatoes, or potato chips?	Not asked
	How often do you eat carrots?	During the past month, how many times per day, week, or month did you eat orange-colored vegetables such as sweet potatoes, pumpkin, winter squash, or carrots?
	Not asked	During the past month, how many times per day, week, or month did you eat cooked or canned beans, such as refried, baked, black, garbanzo beans, beans in soup, soybeans, edamame, tofu, or lentils? Do NOT include long green beans.
	Not counting carrots, potatoes, or salad, how many servings of vegetables do you usually eat?	Not counting what you just told me about, during the past month, about how many times per day, week, or month did you eat OTHER vegetables? Examples of other vegetables include tomatoes, tomato juice or V-8 juice, corn, eggplant, peas, lettuce, cabbage, and white potatoes that are not fried such as baked or mashed potatoes.

For more information on the BRFSS or to suggest ideas for future BRFSS Data Briefs, contact Jessie Hammond, M.P.H. (802-863-7663; Jessie.Hammond@state.vt.us).

