

# ESKENAZI HEALTH FOOD & NUTRITION SERVICES | Indianapolis, Indiana

## Sodium Reduction in Vending Machines

### Problem

Approximately 90% of Americans ages 2 years and older consume too much sodium, which is a major risk factor for heart disease and stroke. About 75% of sodium consumed by Americans comes from packaged and restaurant foods, with 14% coming from snack foods alone. The percentage of individuals who report consuming snacks and the amount of snack consumption have increased in recent decades.

### Project

Eskenazi Health Food & Nutrition Services developed the Choose Health program to reduce sodium and identify healthy foods available in vending machines. A “traffic signal” labeling system was implemented to classify vending machine items in terms of their nutritional content.

**Choose Health**

### Outcomes

The modifications in vending machine offerings led to a 31% average reduction in sodium content among vending items, from an average of 210 milligrams to 145 milligrams. The number of snack items was also reduced significantly, from 92 to 47, which simplified stocking and allowed for appropriate substitutions when inventory was low.

### Resources

- Centers for Disease Control and Prevention: Salt [www.cdc.gov/salt](http://www.cdc.gov/salt)
- Eskenazi Health [www.eskenazihealth.edu](http://www.eskenazihealth.edu)

**Statement of Problem:** A diet high in sodium may raise blood pressure, which is a major risk factor for heart disease and stroke. About 90% of Americans ages 2 years and older consume too much sodium. In addition, about 75% of the sodium Americans eat comes from packaged and restaurant foods, and about 14% comes from snack foods. Given that the percentage of people who report snacking and the amount of snacking they report have continued to increase over the past few decades, reducing sodium in snack foods can help people reduce sodium in their diets overall.

At Eskenazi Health (EH), offering more healthful foods, including lower sodium items in vending machines, has the potential to affect the health of more than 5,000 employees and visitors.

**Project Description:** CDC awarded the Health & Hospital Corporation of Marion County (HHC) and the Marion County Public Health Department (MCPHD) funding to participate in the Sodium Reduction in Communities Program. This 3-year initiative supports the partnership between MCPHD and EH, which is part of HHC, to reduce sodium among four hospital food retail operations and vending machines. EH is one of the United States’ five largest safety net health systems, providing care to nearly 1 million outpatients each year, with a special emphasis on the vulnerable populations of Marion County, Indiana.

EH Food & Nutrition Services (FNS) owns a total of 66 vending machines (22 snack and 44 beverage), with two full-time employees dedicated to purchasing and stocking the machines, which are located on the EH campus (i.e., hospital and professional office buildings) and at multiple community locations. The Choose Health program was developed to provide a “traffic signal” labeling system to help identify more healthful foods in the vending machines.

To reduce sodium in vending machine offerings, FNS began by using the Nutrition Environment Measures Survey–Vending (NEMS-V) to assess the food and beverage items offered for sale in EH machines. FNS then analyzed the items’ nutrient content and developed nutrition criteria loosely modeled on the Health and Sustainability Guidelines for Federal Concessions and Vending Operations developed by the U.S. Department of Health and Human Services and the U.S. General Services Administration. Foods were then categorized as green, yellow, or red, according to the following standards:

- “Green” foods are rich in nutrients and have no more than 230 milligrams of sodium.





“The ability to offer healthy vending snack and beverage choices to staff and visitors supports Eskenazi Health’s overall health mission. Self-operated vending allows FNS management flexibility for direct and immediate control of the entire vending operation to meet these goals.”

—Thomas Thaman, CDM, CFPP,  
Eskenazi Health Food & Nutrition  
Services Director

### For more information please contact

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- “Yellow” foods contain healthier fats and have no more than 400 milligrams of sodium.
- “Red” food items are not rich in nutrients, contain higher levels of fats, and have more than 400 milligrams of sodium; they should be consumed sparingly.

FNS reviewed the snack selections after the criteria were in place and chose to stock machines with more items that met the green standard; most of the red items were discontinued. Planograms for snack machines were developed for consistent stocking of the approved items. The Choose Health strategy has also helped remove presweetened soft drinks and flavored water from vending machines. The creation of and adherence to an FNS policy that included these nutrition criteria was critical to increasing the availability of healthier food items. Throughout the process, FNS was committed to providing healthier food choices to all EH patients, visitors, and employees.

**Outcomes:** A baseline assessment of 14 snack vending machines conducted in April 2014 found vending items were 20% red, 35% yellow, and 45% green. In March 2016, an assessment of all 22 snack vending machines found items were 0% red, 4% yellow and 96% green. To increase compliance, FNS significantly reduced the number of snack items, from 92 to 47, simplifying stocking and allowing for appropriate substitutions when inventory was low. Vending staff could easily maintain the planogram by substituting one green item for another green item. This change in snack stock represented a 31% reduction in the average sodium content per item, from 210 milligrams to 145 milligrams with 100% of the items meeting the standard ( $\leq 230$  mg). Comparing the trends of invoices from January–March 2014, January–March 2015, and January–March 2016 showed that the cost of items was reduced from \$0.83 to \$0.82.

**Conclusions:** It is possible to significantly reduce the sodium content of vending machine offerings without significantly increasing price per item. A few critical investments are essential for this effort to be sustained: (1) nutrition standards should be established as part of the procurement policy for foods offered for sale purchases; (2) an open dialog should be maintained with food distributors and manufacturers for food and beverage items that meet the criteria; and (3) a planogram for stocking snack machines that optimizes food selection of healthier foods should be designed and used.

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