

Modest changes in military dining facilities promoted healthier eating

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The prevalence of obesity within the military is currently 13 percent. This rising epidemic, also rampant throughout the general population, could result in military career setbacks, negatively impact operational readiness, and jeopardize Department of Defense operations. To combat the epidemic, a team of researchers chose the military cafeteria as the venue to observe and evaluate eating behavior and the positive impact of modest changes to promote healthy eating and food selection. The results are captured in a new report published by the *Journal of the Academy of Nutrition and Dietetics*.

"Many studies have tested the effect of dietary, informational, and environmental interventions on the eating behaviors of customers in civilian worksite and university cafeterias," says lead investigator Major Aaron Crombie, PhD, RD, Military Nutrition Division, US Army Research Institute of [Environmental Medicine](#), Natick, MA. "However, studies to date testing such interventions in military dining facilities (DFACs) have been very limited and inconclusive. Our study aimed to address that information gap." Nearly three-quarters of military personnel eat at least one meal a day in garrison dining facilities.



This is digital photography of a study participant's tray before consuming the test meal. Digital photography was used as a tool for visual estimation of diner intakes. Credit: Pennington Biomedical Research Center



This is a photo of a study participant's tray after consuming the test meal. Photo stills were compared to both before meal photos and photos of reference portions to determine nutritional intake. Credit: Pennington Biomedical Research Center

The study team from the US Army Research Institute of Environmental Medicine and the Pennington Biomedical Research Center staged an intervention within five dining facilities on Fort Bragg, NC, that included the following actions consistent with 2005 Dietary Guidelines for Americans:

- Increased availability of fresh fruit
- Increased availability and variety of vegetables
- Increased availability of whole-grain foods
- Reduced availability of foods with high dietary fat and sugar
- Offering one main lean meat or vegetarian entrée at lunch and dinner with no added fat
- Placement of color-coded "Go for Green" nutritional information cards at the point of service

Five other dining facilities served as a control during the first half of this year-long study. Researchers collected data using a combination of survey questionnaires and digital photography of the diners' plates before and after meals were consumed.

Over time, investigators observed that minimal changes in food service practices and menus in DFACs produced significant improvement in soldiers' nutritional intake, including decreases in fat. Customer satisfaction increased on four criteria – flavor and taste, available choices, low-fat food availability, and appropriate portion sizes. More favorable results were observed the longer the intervention lasted, indicating that the positive changes are sustainable over time.

Says Major Crombie, "The results of this study give credence to the idea that DFAC food service interventions can promote a healthy lifestyle and, in turn, optimize the health profile of warfighters. Although intakes of fruit, vegetables, and whole grains continue to be problematic, reductions in energy and fat intake may prove effective over the long

term in combating the obesity problem."

While the study was performed in army dining facilities, it has implications for the entire [military](#) family, since many meals are not taken in the DFAC, but at home. Further, the study team advocates that results can be easily applied to civilian settings.

More information: *Journal of the Academy of Nutrition and Dietetics*, DOI: [10.1016/j.jand.2013.01.005](https://doi.org/10.1016/j.jand.2013.01.005)

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