

Nutritional Fitness in the United States Marine Corps

A love-hate relationship needs to change

by Sharlene Holladay & LtCol Gary Spinelli

Marines must consider the proper nutritional intake of their fellow Marines as being critical to mission success. The United States Marine Corps embraces the task of feeding Marines to improve their performance, resiliency, and overall health. Similar to other Services, the Marine Corps embodies the idea that nutritional fitness is science-based. Nutritional fitness consists of effective nutrition strategies designed to help optimize performance and is an essential component of total force fitness. Deprived or imbalanced nutritional fueling degrades mission readiness, which may contribute to a variety of undesirable health challenges. Empowering Marines with nutrition knowledge in garrison feeding and operational (e.g., field feeding) rations helps build habits that promote lifelong health and wellness. While the nutritional adequacy and the caloric make up of master menus for our Marine Corps population is at the forefront of the feeding effort, decision makers collectively consider the required safety and food sanitation measures that must be in place as part of the nutritional fitness domain. If one of these above areas is overlooked—or neglected—then the performance and resiliency of the Marine will not be optimally supported.

Marine Corps mess halls within the continental United States (CONUS) are serviced by a contractor while those outside CONUS (OCONUS) are run by the Marine Corps. Regardless of mess hall location or operator, the objective is

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Cpl Mendoza, food service specialist, Headquarters Battalion, 1st Marine Division, preps empanadas during the Culinary Team of the Quarter Competition on Marine Corps Base Camp Pendleton, CA, June 5, 2018. The event provided Marines from across the west coast an opportunity to demonstrate their cooking abilities. (Photo by LCpl Roxanna Gonzalez.)

to safely serve fresh, nutritious, wholesome, high-quality meals that not only comply with Marine Corps nutritional requirements but also pique Marines' interest with diverse ethnic and cultural culinary options in a timely and cost efficient manner. The Marine Corps ensures that garrison and operational

feeding and menu planning focuses on human performance optimization and adheres to regulations¹ that establish nutritional standards, also known as military dietary reference intakes. The mess halls will capitalize on the choice architecture concept which outlines how placing nutrient-dense, accessible

foods at the front of service lines often enables individuals to make a healthier choice when deciding between options.

Fueling Marines via garrison meals, operational meals, and supplemental nourishments offered at some of our training installations must consider nutrient composition, total caloric intake, meal timing, the location of training, and overall physiological impact. Optimal fueling can be strategic in providing quality macronutrients necessary to optimize internal capacity of blood glucose and glycogen levels, maximize nutrient absorption without physiological overload during down time, and match the body's ability to absorb nutrients with the body's additional demand for fuel in rigorous training environments. Every opportunity must be taken to replenish depleted stores such as glycogen and muscle protein to prepare a Marine to meet this intense training demand, as applicable. Senior leadership is cognizant that the performance nutrition understanding may not have been commonplace in the civilian lives of recruits or candidates before joining the Marine Corps, but there is devotion to shaping this concept and understanding throughout a Marine's career and beyond. In addition, the events leading up to and following a dining experience, to include personal hygiene and sanitation, assists in keeping the dining environment clean, and minimizes the likelihood of transmittal illnesses using all precautions necessary, is also a significant component to the educational aspect. This allows a proactive opportunity to provide nutrient-dense meals in a safe and clean environment. These best practices ensure that all aspects of the fueling experience is addressed leading up to and following a meal engagement both in garrison and the field environment.

Practical Application: Modernizing Food Service Efforts

The Marine Corps also strengthens strategic performance fueling options by promoting healthy dining, capitalizing on Marines' food preferences, and ensuring accessibility of healthy foods at a reasonable cost. Based on industry best practices, the Marine Corps

refreshed its menu requirements to appeal to Marines' needs. Balancing nutrient demands, menu acceptability, and preferences requires close coordination to ensure Marines are properly fed to meet mission requirements and preserve personal health. The result is that mess halls provide the most cost-effective and nutrient-dense dining experience for Marines.

The USMC Fueled to Fight® nutrition education program is designed to take into consideration both nutrient density and overall nutrition quality. In assigning a "Green" (Engage at Will), "Yellow" (Well Aimed Shots), or "Red" (Check Fire) identifier assists the Marine patron in making an informed decision at the point of service. Before a color designation is assigned, each food as a whole—including additives, degree of processing, and nutrient value—is considered. As such, the Marine Corps has cited requirements to offer healthy choices on the main line for an entrée, side, and vegetable. Alongside the healthy choice requirements, these items are to be front-loaded in accordance with choice architecture principles in which newer choices are made easily accessible and presented right in front of Marines to increase visibility and engagement. Entrées, side dishes, and other menu items will incorporate the use of contrasting and complementary foods and spices to reflect popular food trends. Incorporation of whole grain options will be provided throughout the menu to minimize empty calories and improve nutrition. Strong sources of Vitamin A or Vitamin C will be considered for at every meal (e.g., items like dark and leafy greens and colorful vegetables). A variety of menu concepts and specialty bars offering both attractive and nutritious entrees will provide an alternative to the main line and provide Marines with increased choice and convenience. Marines will continuously have the opportunity to provide feedback on current options and shape future menu items. The Marine Corps Fueled to Fight® program parallels the other Services' nutrition education and guidelines effort for appropriated facilities identified as Go for Green®. Both programs highlight the idea of

wholesome, nutrient dense foods, high in fiber, least-processed, and containing healthy fats for military efficacy while allowing the freedom of choice in the dining establishments. The value added of this alignment is to provide consistency in messaging for all service members dining within the DOD.

Recent changes in mess halls aim to provide a better distribution of healthy and psychologically comforting items within the main service line, the convenience line, and the cold bar. The updates encompass USDA Healthy People recommendations, conditions outlined in Marine Corps Orders and DOD policies for healthy eating, and Marines' requests for expanded food options that better support performance. A balanced diet is integral to a healthy meal plan, and Marines can make menu choices based on personal preferences, their tasks and missions, and corresponding nutritional standards. The variety of main line entrees range from performance enhancing options, placed first on the serving lines for ease of selection in accordance with choice architecture concepts, to comfort food. Cold bars, formerly known as "salad bars," are offered at all meals and offer traditional vegetable options, chopped eggs, yogurt, cheese, salsa, legumes, and trail mixes. To enhance Marines' dining experiences, the mess halls at installations both inside and OCONUS feature a rotating selection of specialty bars. These self-service areas are recognized as high volume, customer interaction areas and may provide additional contact between patrons and common areas. As such, representatives from Army Public Health Command, Navy and Marine Corps Public Health Command, and the Bureau of Medicine have reviewed the current practices and regulations of safety and sanitation which address a potential impact in the dining environment and steps are being taken to go above and beyond the standard when circumstances exist.

The Way Forward

Strategic and intentional food choices should be considered throughout all garrison feeding environments. The well-informed Marine knows that all



Food service specialists prepare chicken for the Phelps Mess Hall grand re-opening aboard the Marine Corps Air Ground Combat Center, Twentynine Palms, CA, June 4, 2018. Phelps Hall has been closed since November 11, 2017, due to renovations to improve the efficiency of the facility. (Photo by LCpl Margaret Gale.)

foods can be integrated into their diet at the right time and the right place, and Marines should be empowered to make choices based on a variety of options provided in the government feeding realm. A well-informed Marine also knows that personal hygiene and hand-washing before receiving optimal nourishment is an integral part to high performance. Both practices are imperative in both the garrison and field feeding environments. Marines make daily choices that consider a balanced, nutrient-dense diet in conjunction with

daily hygiene practices that support a clean and safe setting. All components combined will help fuel a Marine's performance and accomplish the mission in partnership with education, physical training, and skills proficiency.

To support decision making on food selections, the Marine Corps labels foods on the dining facilities' main service line with clear, easy-to-read signage within the Marine Corps' Fueled to Fight® nutrition program parameters. A prototype of these best practices has been in effect in various locations

for over a year. Feedback has been positive on the additions of "cleaner fuel," vegetarian options, and performance enhancing foods. To support continuous improvement and promote acceptability of mess hall offerings, surveys have been collected and will continue to be evaluated to capture lessons learned. Other information gleaned from survey feedback will influence food choices on the line and modernizing flavors and cuisines.

The physical and cognitive demands can vary from day-to-day for our Marines. Customization of caloric load is essential for maximum performance and recovery. The desired end state for the Marine Corps is to support an athletic warrior who understands how to properly fuel himself by making informed choices within the nutritional environment in order to execute his mission.

Note

1. Headquarters Departments of the Army, the Navy, and the Air Force, *MCO 10110.49, Nutrition and Menu Standards for Human Performance Optimization*, (Washington, DC: January 2017); Headquarters Marine Corps, *MCO 10110.14N, Marine Corps Food Service and Subsistence Program*, (Washington, DC: March 2018); and Department of Defense, *DOD 1338.10, DOD Food Service Program*, (Washington, DC: December 2014).

