

Leader's Guide to Operational Rations

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Combat Feeding Directorate (CFD)

The global leader and technology provider for military field feeding

THE MISSION of the Department of Defense (DoD) Combat Feeding Research and Engineering Program is to provide an operationally relevant research and development base to deliver solutions for evolving field feeding challenges.

CFD is responsible for the research, development, engineering, integration and technical support for the entire family of operational rations. The program is driven by Warfighter recommendations and feedback.

This book highlights the various operational rations, which are categorized into several platforms. For each ration, a description of the purpose, major characteristics, nutritional data and preparation requirements is provided.

Leader's Guide to Operational Rations



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Individual Dations

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Meal, Ready-to-Eat (MRE)

The MRE is the primary general-purpose individual ration used by the US Armed Forces.

Leaders should consider using the MRE during missions that allow time to eat.

- Flameless Ration Heater provides heating option
- 3 MREs/day equal a day's worth of food
- Menu variety: 24 menus (4 vegetarian), entrée/starch, crackers/bread, spread, dessert/snack, powdered beverage, accessory packet, plastic spoon
- Shelf stable for 3 years at 80°F (27°C) and 6 months at 100°F (38°C)
- Nutritional data: average 1,300 calories/meal
- Weight: average 1.5 lbs (0.7 kg)/meal
- Potable water requirements: approximately 23 oz/meal

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First Strike Ration® (FSR)

The FSR is a compact, eat-on-the-move individual ration intended to be consumed during initial stages of intense conflict.

Leaders should consider using the FSR for short duration (ex. 1-3 days), highly mobile dismounted missions.

- 1 FSR/day equals a day's worth of food
- Menu variety:

 9 menus, pocket sandwiches, ready-to-eat tuna and chicken, energy bars, powdered beverages, caffeinated gum, beef jerky and Zapplesauce®
- Shelf stable for 3 years at 80°F (27°C) and 6 months at 100°F (38°C)
- Nutritional data: average 2,900 calories/ration
- Weight: average 2.5 lbs (1.13 kgs)/ration
- Potable water requirements: approximately 30 oz/ration



Meal, Cold Weather (MCW)

The MCW is designed to meet nutritional requirements for missions in extreme cold weather.

Leaders should consider using the MCW when temperatures are below 32°F (0°C) for extended periods, and water/snow is able to be heated.

- · 3 MCW/day equal a day's worth of food
- Menu variety:
 12 menus, precooked dehydrated entrees, crackers, spreads, cookies, sports bars, nuts, powdered beverages and accessory pack
- Shelf stable for 3+ years at 80°F (27°C) and 6 months at 100°F (38°C)
- Nutritional data: average 1,540 calories/meal
- Weight: average 1 lb (0.45 kg)/meal
- Potable water requirements: approximately 30 oz/meal

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Modular Operational Ration Enhancement (MORE)

MORE is mission tailored to augment (not replace) operational ration use in extreme environments.

Leaders should consider using the MORE when missions require extra calories due to heavy activity in high altitude/cold weather or hot weather environments.

High altitude/cold weather (Type I)	<40°F (4°C)
Hot weather (Type II)	>70°F (21°C)
Type I or Type II	40°-70°F (4-21°C)

- Variety:
 - 3 of each type, calorically dense, eat-on-the move items, caffeinated gum, dried fruit, powdered carbohydrate beverages, energy bars.
- Shelf stable for 3 years at 80°F (27°C) and 6 months at 100°F (38°C)
- Nutritional data: approximately 1,000 calories/pack
- Weight: average 0.7 lb (0.32 kg)/pack
- Potable water requirements:
 Type I, 12 oz/pack; Type II, 24 oz/pack

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Unitized Group Ration – Heat and Serve (UGR-H&S)

The UGR-H&S is the first group ration available to Warfighters in the field, once field feeding kitchens are available.

Leaders should consider using the UGR-H&S if a field kitchen is available (Kitchen, Company Level, Field Feeding; Assault Kitchen; Mobile Kitchen Trailer; Containerized Kitchen; Expeditionary Field Kitchen; Enhanced Tray Ration Heater System).

- Each module feeds 50 Warfighters, consists of 3 fiberboard boxes
- Menu variety:

 3 breakfast and 10 lunch/dinner menus,
 polymeric trays which contain entrees/
 starches, vegetables, desserts
- Shelf stable for 18 months at 80°F (27°C)
- Nutritional data: approximately 1,350 calories/meal

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Unitized Group Ration – A (UGR-A)

The UGR-A provides high quality, fresh-like group meals to Warfighters in the field and contains frozen food components.

Leaders should consider using the UGR-A if a field kitchen is available (Mobile Kitchen Trailer, Containerized Kitchen, Expeditionary Field Kitchen) and refrigeration capabilities (such as Multi-Temperature Refrigeration Container System) are available.

- Each module feeds 50 Warfighters, consists of 3 fiberboard boxes, 1 w/frozen food
- Menu variety:

 7 breakfast and 14 lunch/dinner menus,
 frozen and semi-perishable pre-cooked
 entrees/starches, vegetables, desserts and
 drink mixes
- Can be stored for up to 9 months in temperature controlled storage
- Nutritional data: approximately 1,500 calories/meal

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Unitized Group Ration – Express (UGR-E)

The UGR-E provides a hot group meal to Warfighters in remote locations without the need for cooks, field kitchens, or fuel.

Leaders should consider using the UGR-E when field kitchens are not available.

- Self-contained, self-heating group meal which is pull tab activated
- Each module feeds 18 Warfighters, consists of 1 fiberboard box
- Menu variety:

 4 breakfast, 8 lunch/dinner menus, and a unique holiday meal, polymeric tray entrée/ starch, boil-in-bag eggs, vegetable, dessert, drink mixes, seasonings, dining trays/ packets, serving utensils and trash bag
- Shelf stable for up to 18 months at 80°F (27°C)
- Nutritional data: approximately 1,300 calories/meal

NOTE: UGR-E availability restricted and requires significant lead time for delivery

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Unitized Group Ration – M (UGR-M)

The UGR-M is used by the Marine Corps to allow trained culinary specialists to provide a high quality group meal.

Leaders should consider using the UGR-M if a field kitchen is available (such as the Expeditionary Field Kitchen, Enhanced Tray Ration Heater System).

- Each module feeds 50 Warfighters, consists of 3 fiberboard boxes.
- Menu variety:

 breakfast and 14 lunch/dinner menus,
 balance of dehydrated and commercial
 canned items, entrees, sides, desserts, drink
 mixes
- Shelf stable for 18 months at 80°F (27°C)
- Nutritional data: approximately 1,350 calories/meal

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	Meal, Ready-to-Eat	First Strike Ration®	
Use	General Purpose	Assault	
Description	Gen purpose ration for all Services; offers balanced nutrition & low logistics burden; can be airdropped; NATO compliant	Dismounted patrol; initial periods of intense/ highly mobile conflict; 50% lower weight & cube vs 3 MREs	
Rations/Day	3	1	
Nutrition Facts (avg/meal)	1300 cal	2900 cal	
Menu Variety	24 (4 vegetarian)	9	
NSN	8970-00-149-1094	8970-01-543-3458	
Package Image		FIRST STRIKE RATION	

APPENDIX: Individual Rations

	Meal, Cold Weather	Modular Operational Ration Enhancement
	Cold Weather	Nutritional Enhancement
	Special purpose ration for extreme cold weather; long shelf life; 4500+ calories support heavy exertion, reduce risk of dehydration	Enhancement pack to augment rations with extra calories; mission tailored: Type 1 - high altitude/cold weather, Type II - hot weather
	3	1
	1540 cal	1130 cal High Alt/ Cold Weather; 1030 cal Hot Weather
	12	3 each of Type 1 - High Altitude/ Cold Weather & Type II - Hot Weather
	8970-01-467-1753	Type l: High Alt/Cold 8970-01-581-2505
		Type II: Hot Weather 8970-01-599-4327
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	Unitized Group Ration – Heat and Serve	Unitized Group Ration - A	
Use	Large Group Feeding	Large Group Feeding	
Description	First group meal available in deployment; food service available, but no refrigeration	High quality, fresh-like meals for use in a stable environment	
#Warfighters Fed/Module	50	50	
Equipment Required	Tray Ration Heater; Kitchen, Company Level, Field Feeding; or other hot water source	Complete field kitchen including refrigeration/ freezer	
Nutrition Facts (avg/ meal)	1350 cal	1500 cal	
Menu Variety	13 (3 Breakfast, 10 Lunch/Dinner)	21 (7 Breakfast, 14 Lunch/Dinner)	
NSN	Multiple	Multiple	
Package Image			

APPENDIX: Group Rations

Unitized Group Ration - Express	Unitized Group Ration - M
Small Group Feeding	Large Group Feeding
Group meal for austere locations; no equipment, fuel, power or cooks	High quality, group meal for use by Marines
18	50
None	Kitchen, Company Level, Field Feeding Expeditionary Field Kitchen
1300 cal	1350 cal
13 (4 Breakfast, 8 Lunch/Dinner, 1 Holiday)	19 (5 Breakfast, 14 lunch/Dinner)
Multiple	Multiple

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Leader Tips

- When time is limited for breaks encourage snacking on carbohydrate and energy-rich choices when possible.
- When operations require eating-onthe-move, use the First Strike Ration®.
- Maintain glycogen stores and electrolytes during long periods (90 minutes or more) of intense activity by drinking carbohydrate-electrolyte beverage from the ration.
- Consuming calorie-dense and nutrient-rich foods is even more critical when exposed to cold and high altitudes due to higher energy needs and a decreased appetite.
- Enforce hydration discipline especially in extreme environments such as hot, cold, and high altitudes.

You set the standard by modeling and promoting healthy behaviors.

Optimize nutrition *before, during, and after* deployment/field operations.

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Links

Combat Feeding Directorate (CFD)

CFD research & engineering overview http://hotchow.natick.army.mil/

Defense Logistics Agency – Troop Support

Ration pricing and availability information http://www.dla.mil/TroopSupport/Subsistence.aspx

Joint Culinary Center of Excellence

Ration ordering and policy guidance http://www.quartermaster.army.mil/jccoe/ jccoe_main.html

COMRAD Database

Ration nutritional information http://hprc-online.org/comrad/

Operational Rations Handbook

Ration information and menus http://nsrdec.natick.army.mil/media/print/ OP_Rations.pdf

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