

## MREs get a new kick with caffeinated jerky and Zapplesauce

By [Christian Davenport](#), Published: October 29

Natick, Mass. — And now, from the folks who developed the atomic bomb, Kevlar underwear and the Humvee, presenting the latest in war-fighting technology:

Caffeinated meat.

That's right, an Army lab here is testing a beef jerky stick that looks and tastes just like your average Slim Jim but contains an equivalent of a cup of coffee's worth of caffeine to give even the sleepest soldier that up-and-at-'em boost.

After a decade of war, military food scientists have been hard at work at a little-known research facility outside Boston transforming the field ration — known as the Meal, Ready to Eat, and perhaps the most complained about food in the world — into something not just good-tasting but full of energy-enhancing ingredients.

“There is a lot of science that goes into this,” said David Accetta, a spokesman for the Natick Soldier Research, Development & Engineering Center, where every item put into an MRE is tested and tasted. “And that's what a lot of people don't realize. It's not just a bunch of cooks in the kitchen making up recipes.”

In addition to caffeine, military technologists are lacing food with supplements such as omega 3s and curcumin, which act as anti-inflammatories. Maltodextrin, a complex carbohydrate that gives service members a little turbo charge, is injected into an amped-up applesauce called Zapplesauce.

And that energizing goo gobbled by marathoners? The Army is developing its very own.

Complaining about the MRE has been a sport within the ranks for years. They've been called every derogatory name possible: Meals Rejected by Everyone. Meals Refused by the Enemy. Materials Resembling Edibles. Meals Refusing to Exit.

But in its latest permutations, officials here say, the MRE has gone gourmet — or as gourmet as can be for food that has a shelf life of three years at 80 degrees and can withstand an airdrop from thousands of feet.

The no-name casserole, mystery meat and mealy tuna have been replaced by dishes endorsed by the Natick center's “sensory evaluators.” Recent chow additions include chicken and pesto pasta, feta cheese and

tomato. Dining al fresco in their trenches, soldiers now can choose from ratatouille, garlic mashed potatoes, salsa verde and a strawberry-banana dairy shake.

If you have the time to heat water, there's instant Irish-cream coffee. If not, caffeinated beef jerky, the military's variation on the commercially available Perky Jerky, should soon be turning up in MREs.

The technologists' efforts may be paying off. In reviewing one of the newer entrees, a food writer for the Boston Globe wrote, "The pasta is tender but not falling apart, the sauce dense and sweet, similar to many commercial sauces."

Besides whipping up new, improved MRE items, Natick also serves as the Army's equivalent of James Bond's laboratory.

Here, scientists are developing Global Positioning System-guided helicopters and weaving electrical wires into uniforms and adding keypads to the sleeves. They're working with Lockheed Martin, the Bethesda-based defense contractor, to build a robotic exoskeleton (think a less dramatic Iron Man) that would allow service members to carry as much as 200 pounds on their backs.

The combat-food department is part industrial kitchen, part chemistry lab. The other day, cooks wearing fishnet caps worked on a new soup. A researcher stashed a variety of MREs in an 80-degree storage facility, to be tasted over a period of months.

And in the tasting room, the sensory evaluators judged the latest creations, including a beef and vegetable stew, using sommelier-worthy adjectives. They pronounced the comestibles to be "brothy," "floral," "metallic," "earthy," "musty" or "grassy."

If the researchers deem a meal acceptable, they take it to military bases across the country, asking service members to fill out a 17-question survey after sampling sessions. And because they know troops will say one thing and do another, they go through the trash to see what items they rejected.

Napoleon said that an army marches on its stomach. But as many battlefield veterans can attest, the Pentagon for years largely paid no heed to the meals soldiers were offered.

Feeding thousands of service members during war has always been a challenge. To provide fresh meat during the Civil War, the Army drove cattle alongside soldiers to be slaughtered on the spot. In World War I, soldiers got "trench rations" of "hard bread," beef, salmon and sardines but scant vegetables.

World War II brought more variety and even cigarettes. But during the Vietnam years, rations were still basic meat and potatoes. The first MREs, developed in the early 1980s, weren't much better.

"We neglected one tiny little detail," said Gerald Darsch, the director of the Defense Department's Combat Feeding Directorate. "Will the war fighter actually eat it?"

During Operation Desert Storm in the early '90s, the complaints were so loud that Gen. Colin L. Powell, then chairman of the Joint Chiefs of Staff, summoned Darsch from Natick to the Pentagon.

"Don't sit down," Darsch says Powell told him. The general held up an MRE and said, "I have two words for you: Fix it."

During the wars in Iraq and Afghanistan, which at one point helped increase demand for MREs to 8 million cases a year, the taste of the food has become increasingly important.

Natick scientists doubled the number of MRE options from 12 to 24, started asking soldiers for feedback and paid closer attention to not only the way meals tasted but how they looked. Salmon should not resemble the worn spot of a catcher's mitt. Even when people are shooting at you in the desert, potatoes should beckon like scrumptious little pillows. Tabasco sauce is meant to enhance — not mask — flavor.

“If applesauce doesn't look like applesauce, a war fighter is not going to eat it,” said Jeremy Whitsitt, who works in business operations at the feeding directorate.

His other maxim: “Nothing takes out a battalion of soldiers quicker than bad food.”

The military also began experimenting with energy-enhancing supplements for ordinary rations as well as specialized ones. They created what's called the First Strike Ration, a lightweight, 2,900-calorie meal designed in particular for Special Operations forces in Iraq or Afghanistan.

MREs overall have become more diverse and attuned to market trends. Food technologists study menus at T.G.I. Friday's and Applebee's for inspiration.

“Mexican is big these days,” Whitsitt noted.

Pizza, however, continues to be problematic. Every soldier wants it. Who doesn't? But all those ingredients — the bread, the cheese, the sauce — are a nightmare. Especially the sauce, which after just a few days makes even the most robust crust soggy. And its high water content breeds bacteria; as the food scientists say: “Biology happens.”

They've tried substituting tomato paste, but paste is gluey. So they continue to work on it. And hope.

Every year, the military changes menu items based on service member feedback. In recent years, the Army axed the cheese and vegetable omelet and the white albacore tuna. In came the apple-cinnamon muffin tops and the Asian pepper steak.

For 2013, officials are thinking about adding a chicken and rice dish and beef lo mein. Sgt. Seth Bullock, a veteran of Iraq, was asked for his thoughts. He wasn't crazy about the lo mein. “I'm not partial to mushrooms,” he said.

But the chicken and rice reminded him of the meals he enjoyed growing up in Georgia. So did the potatoes au gratin, which, he said, “tastes like home.”

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