

Natick Labs Visit

by

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The joint Boston and NH Life Members group had an opportunity to visit the only active US Army Base in New England in April: The Natick Labs in Massachusetts. This facility does the R&D needed to support our military from the "skin out". This includes design and testing of uniform materials, developing MRE's, the field support structures for food service, medical care, and protection from the elements as well as the airborne delivery mechanisms for these. The edge of technology became apparent when you look at the approaches they are taking to these areas.

In the food domain new methods, including microwave dehydration, and sonic compaction are being used to get the right nutrition into a low weight package that satisfies and tastes good enough to eat. But there is also an effort to develop custom complements to this, Combining the additional elements a specific individual needs after a specific activity (airdrop, 6 mile run, whatever) -- created with a 3-D printer.

While water resistance and/or fire resistance may be a fairly obvious element for fatigues, the next generation will have an integrated mesh to convey power and signals without wires (and without EMI radiation). Also being evaluated are power generating leg supports so every step generates a few more amp-seconds to add to the battery pack. Vests with integrated USB cables, and even loop antenna's are also part of the mix.

Autonomous parachutes are part of the delivery system, able to steer themselves to a target landing spot, while avoiding obstacles, and other

chutes delivering to the same target at the same time. The videos on this are pretty impressive. [YouTube](#)

These might be landing food or other key supplies. The team there also lands 30 ton trucks with minimal damage from a relatively high altitude drop. Quick deployment and break-down are keys for the emerging shelters. The food kitchen we visited fit into a "container", and the parts are mostly off-the-shelf so, as our host explained, "you can go into a hardware store in Baghdad and get a replacement part."

For us life members, one key piece of information is that the MRE folks are making sure to include sufficient Omega-3 supplement which facilitates a more rapid recovery from brain injuries -- and might be relevant to Alzheimer's as well.