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Abbott study links improved mental and physical condition with nutrition

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By **Manbeena Chawla** | October 20, 2020



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The double-blind study, published this week in the journal *Scientific Reports*, examined the effectiveness of optimal nutrition and exercise to enhance fitness and cognitive performance among a population of active-duty men and women in the U.S. Air Force.

Researchers divided the 148 study participants into two groups for 12 weeks. Both groups performed the same training program, which included a balanced exercise program comprised of aerobic and resistance training performed five days per week. In addition to the training program, one group was given a prototype nutritional drink, the other group received a placebo.

The study showed that exercise, along with the addition of a high-protein nutrition drink containing lutein, omega-3 fatty acids, phospholipids, vitamin D, and beta-hydroxy-beta-methylbutyrate (HMB), led to statistically significant changes to the following compared to exercise alone.

- Improved working memory by 11% (i.e., information processing and problem-solving), which predicts multitasking and is often impaired under stress
- Improved reaction time by 6% - participants became faster and more accurate
- Increased muscle mass by more than two pounds
- Lowered resting heart rate by 8% - a sign of increased cardiovascular fitness. Resting heart rate improved from 71 beats per minute to 65 beats per minute

"Abbott has been researching the impact of nutrition on brain function for more than a decade," said Matthew Kuchan, Ph.D., a research fellow and brain health scientist at Abbott and co-author of the study. "These results confirm that by combining the right nutrition and exercise, people who are facing high-pressure situations can stay sharp physically and mentally when they need it most."

Abbott Research Fellow, Tapas Das, Ph.D., led the design of the innovative liquid nutritional drink used in the study. It contained DHA, an omega-3 fatty acid, lutein, a carotenoid, as well as phospholipids and micronutrients to support mental performance. The nutrition formulation also included protein, vitamin D, and HMB to support muscle health. Abbott will leverage these results and ingredients to design future nutritional products to allow individuals to live their lives to the fullest.

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