This study compared a light meal combat ration (LMCR) to specific commercial sport drinks (CSD) and the effect of their ingestion on time to exhaustion during simulated combat maneuvers (SCM). The SCM consisted of three activities: a 2-hour march at 50% of maximal aerobic capacity (VO2max); a subsequent 1-hour run at 70% VO2max; and a run to exhaustion at 80% VO2max. During SCM, the subjects consumed one of four different meals: three CSD (Ergo, Go Sports, and Gatorlode), and the LMCR. In addition, one SCM was conducted with half rations. Oxygen consumption, heart rate, and rating of perceived exertion were evaluated during each phase of the SCM.

Time in minutes (mean ± SD) to exhaustion at 80% VO2max for Ergo (42.3 ± 8.9), Go Sports (39.4 ± 13.3), and Gatorlode (37.7 ± 8.6) was not significantly different from that for LMCR (36.4 ± 13.0) but was greater than that for half-LMCR (30.3 ± 9.3). O2 consumption, heart rate, and rating of perceived exertion were not affected by meal type but did increase over time for each stage of the SCM. We conclude that the amount of calories ingested was responsible for the differences noted in time to exhaustion. We further conclude that the CSD represent a readily available source of energy and fluid that could be used to replace and/or supplement the current LMCR.