Body composition measurement:

Total body and regional fat and lean body masses (LBM) were assessed with dual-energy x-ray absorptiometry (DXA) (Lunar Radiation, Madison, WI) (26). Leg fat mass was considered as lower-body subcutaneous (LBSQ) fat. Visceral fat mass was estimated using a combination of a single slice CT at the L_2-L_3 interspace (to determine the visceral to total abdominal adipose tissue ratio) and DEXA-measured total abdominal fat (using a region of interest). The estimate of visceral fat mass during this approach correlates extremely well ($r = 0.98$, $P < 0.001$) with multi-slice CT-measured visceral fat (27) and substantially reduces radiation exposure without compromising the accuracy of visceral mass determination. Total body fat (DXA) minus visceral and LBSQ fat masses were used to derive upper body subcutaneous (UBSQ) fat mass. Whole body subcutaneous (WBSQ) fat was the sum of UBSQ and LBSQ fat masses.

Daytime indirect calorimetry data:

Elderly men had a significantly lower respiratory exchange ratio (RER) throughout the meal fat utilization study day compared to young men ($P<0.001$, Supplemental figure 1). Although the daytime RER was somewhat lower in elderly than young women throughout the meal fat utilization study, the difference did not achieve statistical significance (P=0.09, Supplemental figure 2). However, RER values at the 60, 120, and 180 minute time points were significantly lower in elderly women ($P<0.001$). The increment in VO_2 over baseline did not differ between age groups in either men ($P=0.16$) or women ($P=0.22$).

Daytime RER did not differ between treatment groups compared to placebo in elderly men (DHEA P=0.8; testosterone P=0.7), nor between DHEA and placebo in

women (P=0.08) In addition, VO_2 was similar between treatment and placebo groups in men (DHEA P=0.7; testosterone P=0.7) and women (DHEA P=0.9).