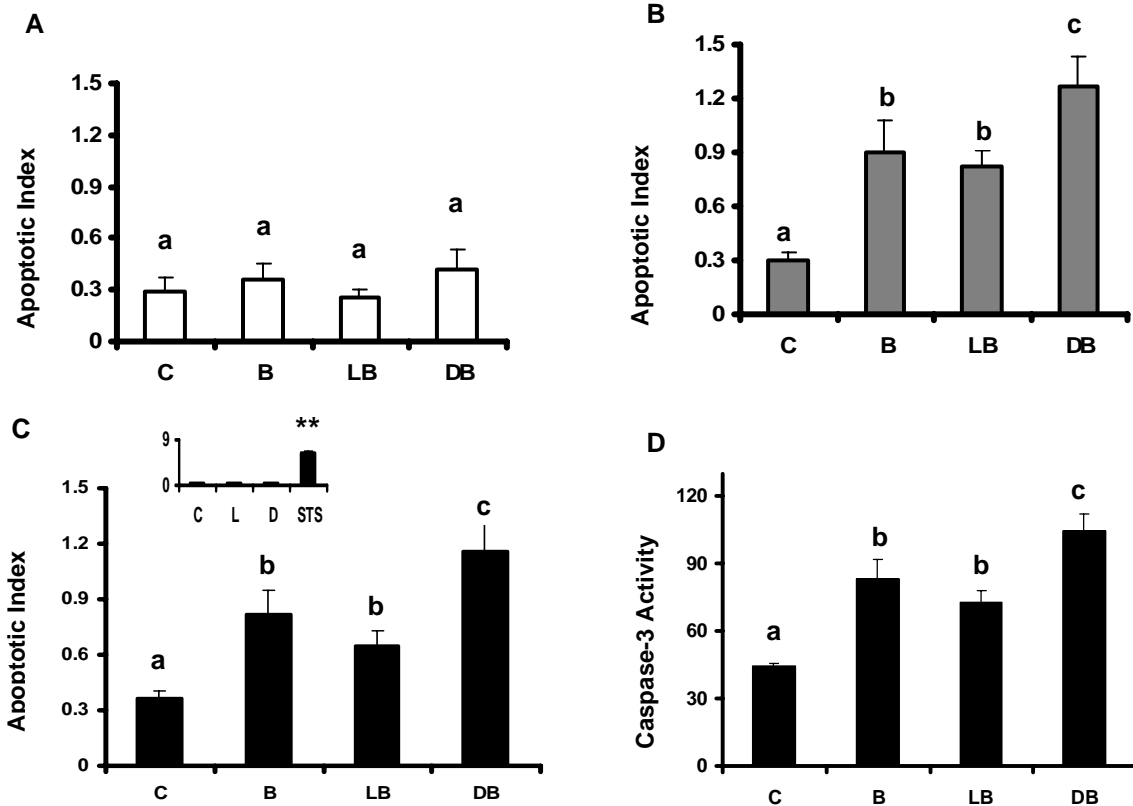
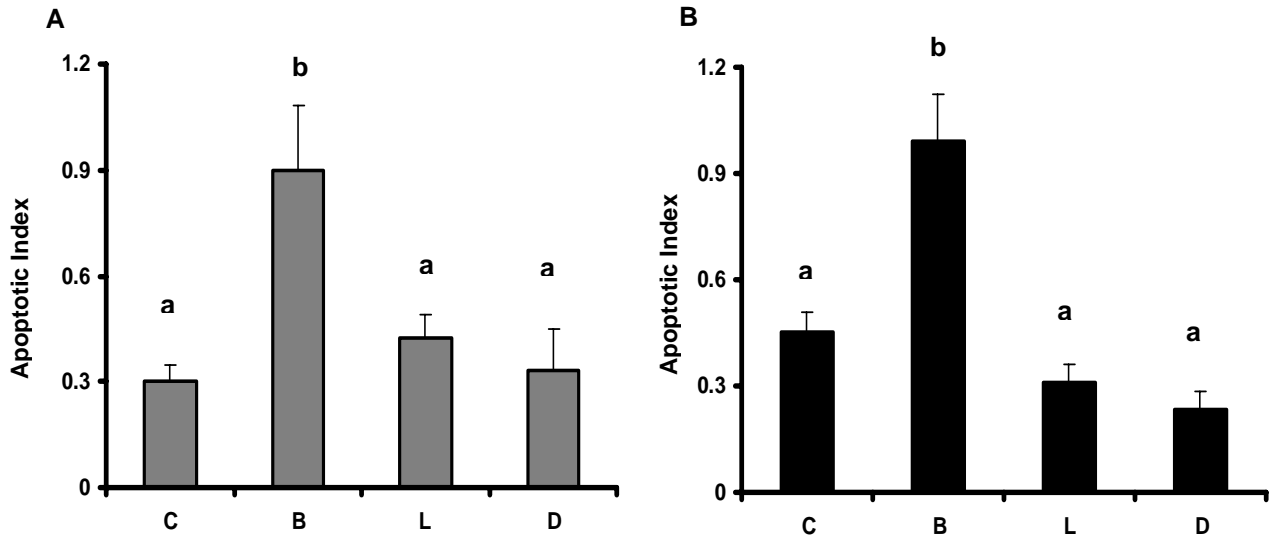


Supplementary Figure S1. Thapsigargin-induced Ca²⁺ response in the presence or absence of SOC inhibitor SKF-96365. YAMC cells were treated with 50 μ M fatty acid for 72 h with or without 5 mM butyrate for the final 12 h (Panel A) and 24 h (Panel B), followed by Fluo-4 (3 μ M) incubation for 1 h. Select cultures were pre-incubated with SKF 96365 (10 μ M) for 5 min prior to measuring basal Ca²⁺ levels. Cells were stimulated with thapsigargin (5 μ M) after 15 sec of basal Ca²⁺ quantification. Refer to Figure 1 for legend details. Data are means \pm S.E. from a representative experiment, $n = 2$ independent experiments. SKF-96365 significantly blocked SOC entry indicating that SOC are major contributory plasma membrane channels.

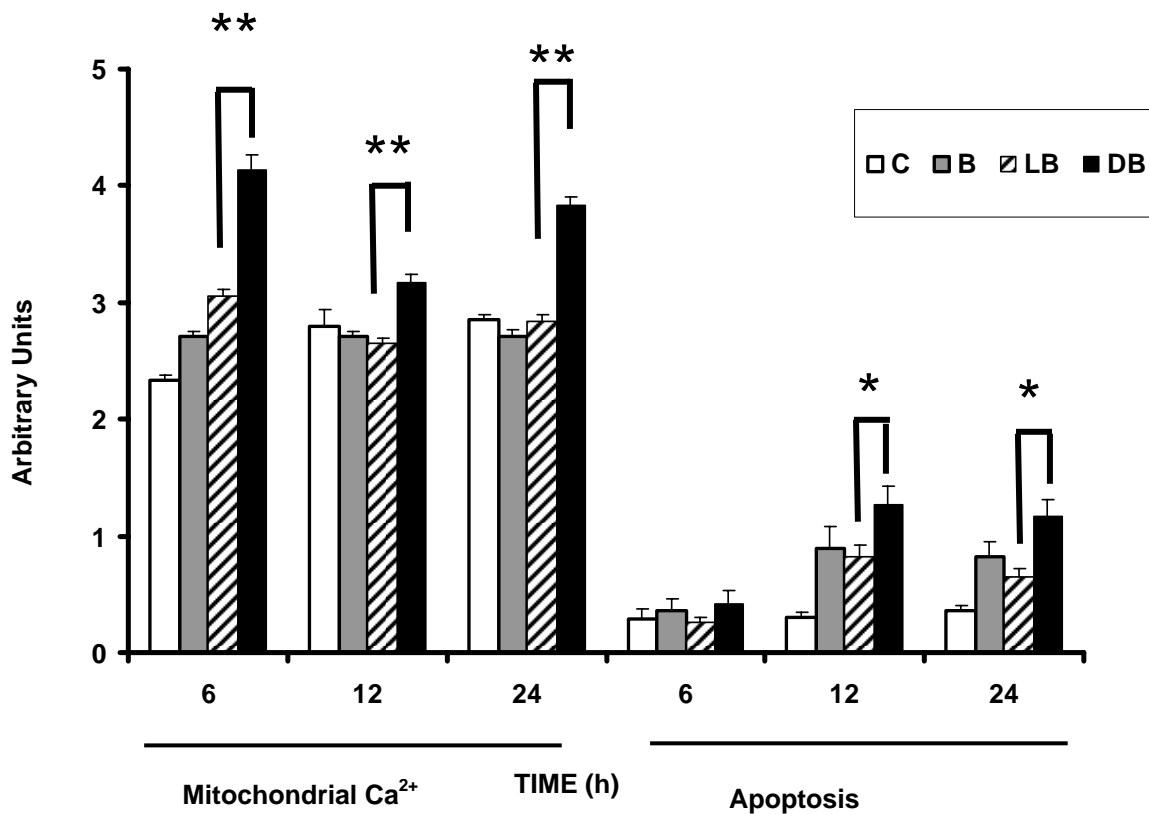


Supplementary Figure S2. Effect of fatty acid and butyrate treatment on apoptotic index and caspase-3 activity in YAMC cells. YAMC cells were treated with fatty acid (50 μ M) for a total of 72 h and 0 or 5 mM butyrate for the final 6 (Panel A), 12 (Panel B) or 24 h (Panels C and D). Nonadherent cells were harvested, and apoptosis was measured by the nucleosomal fragmentation release assay (Panels A, B and C) or both adherent and floating cells were processed and caspase-3 activity was measured as a marker of apoptosis (Panel D). Inset: Control cultures containing no treatment (C), LA only (L), DHA only (D) and 1 μ M staurosporine (STS) 4 h prior to the addition of butyrate. Data are means \pm S.E. from 2 separate experiments, $n = 6$ wells per treatment. Refer to Figure

1 for legend details. Data show that the combination of DHA and butyrate significantly enhanced apoptosis as compared to LA and butyrate or no treatment control.



Supplementary Figure S3. Effects of fatty acid controls on apoptosis. YAMC cells were treated with fatty acid (50 μ M) for a total of 72 h or 0 or 5 mM butyrate for 12 (Panel A), or 24 h (Panel B). Nonadherent cells were harvested, and apoptosis was measured by the nucleosomal fragmentation assay. Data are means \pm S.E. from 2-4 separate experiments, $n = 10$ wells per treatment. Refer to Supplemental Figure 1 for legend details.



Supplementary Figure S4. Effect of DHA and butyrate treatment on induction of mitochondrial Ca²⁺ and apoptosis. The time-dependent effect of fatty acid (72 h) and butyrate co-treatment (6, 12, 24 h) were compared. Induction of mitochondrial Ca²⁺ and apoptosis were measured as described in the Materials and Methods. Data are expressed as a percentage of control (no treatment), mean ± S.E. from *n* = 3 separate experiments; (*, Apoptotic index, control vs treatment at each time point *p* < 0.05; **, Mitochondrial Ca²⁺, control vs treatment at each time point, *p* < 0.0001).