Blunted Suppression of Acyl-Ghrelin in Response to Fructose Ingestion in Obese Adolescents: the Role of Insulin Resistance

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Supplemental Methods:

Liver fat content was measured by MRI using a GE or Siemens Sonata 1.5 Tesla system (1-4), using the 2-point Dixon method modified by Fishbein et al (5). Within the MRIcro software program, five regions of interest were drawn on each image and mean pixel signal intensity was determined. The hepatic fat fraction (HFF percent) was calculated in duplicate based on the mean pixel signal intensity using the formula [(Sin-Sout)/ (2xSin)] x 100. Imaging parameters included were: matrix size = 128x256, flip angle (α) =30°, TR = 18 ms, TEs = 2.38/ 4.76 ms out-of-phase and in-phase, respectively, bandwidth = 420 Hz/pixel, six averages, slice thickness = 10 mm, one slice, 2.3 seconds/slice (for 2 points), scan time = 14 seconds in a single breath-hold (6).

Validation of Fast-MRI against 1H-NMR was previously performed in 28 lean and obese subjects, revealing a strong correlation between these two methods ($r = 0.954$, $p<0.001$), and the within subject standard deviation HFF was 1.9%. (6).

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