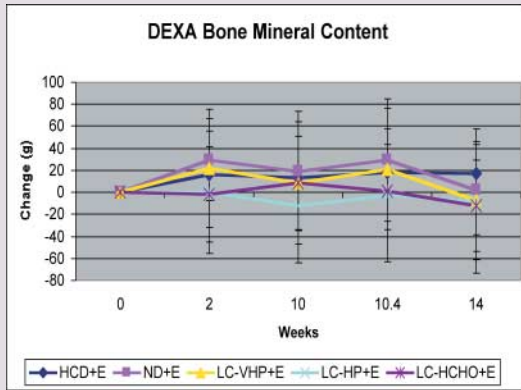
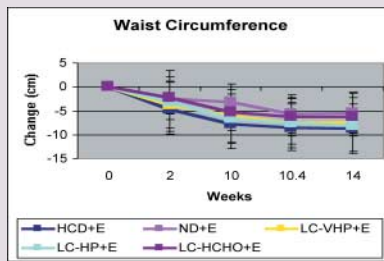
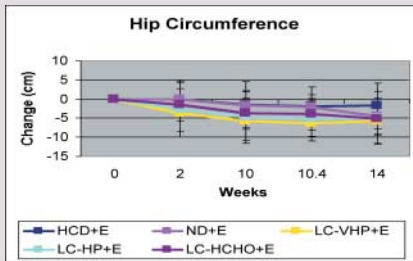


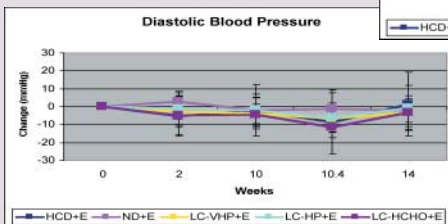
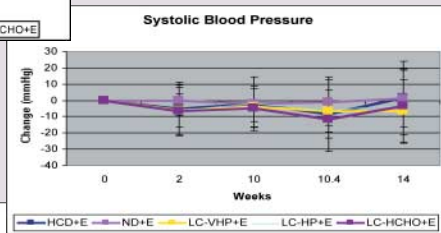
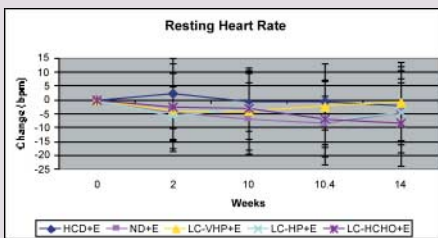
HEALTH MARKER CHANGES



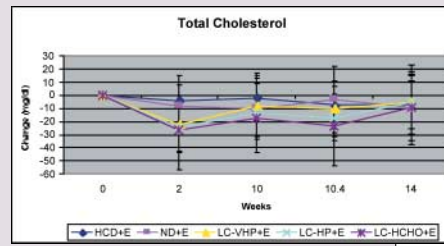
- BMC Significantly increased in all groups over time (+/- 0.26%)



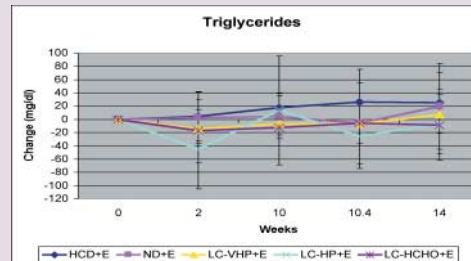
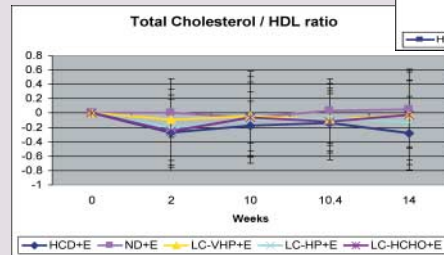
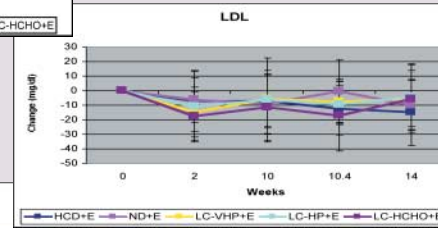
- Subjects experienced a significant decrease in hip (-1.9 +/- 2.2 in) and waist circumference (-2.8 +/- 2.1in)



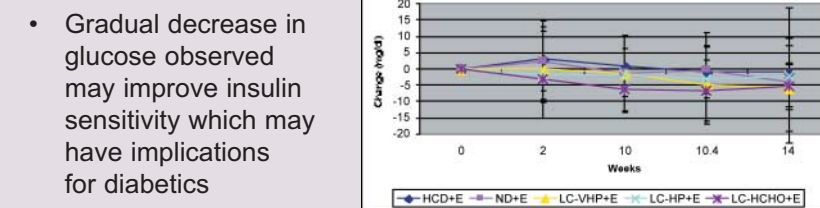
- Subjects experienced significant decreases in
 - RHR (-4.0 bpm)
 - SBP (-2.6%)
 - DBP (-2.5%)



- Subjects experienced significant decreases in
 - Total CHL (-4%)
 - LDL (-7%)
 - Ratio of TCHL/HDL (-2%)



- Program promotes general improvement in blood lipid profiles



- Gradual decrease in glucose observed may improve insulin sensitivity which may have implications for diabetics

PRELIMINARY FINDINGS

- The highest protein diet produced the greatest weight loss
- Strength training and dietary protein limited the loss of muscle tissue
- Eating appears to raise metabolism
- Alternative eating and dieting maintained weight loss while increasing resting energy expenditure
- Subjects were stronger and increased their aerobic capacity
- A high protein diet had no adverse affects on blood lipid levels, bone density, or other health markers

Curves®

The Curves Fitness and Diet Program
Promotes Weight Loss & Improves
Markers of Fitness and Health



Exercise • Nutrition • Health • Performance

ESNL

Exercise and Sport Nutrition Laboratory
BAYLOR UNIVERSITY

PRELIMINARY RESULTS OF STUDY

- Investigating effects of Curves fitness and weight loss program on body composition, metabolic rate and markers of health
- ways of getting the most out of the Curves program through optimizing nutrition and exercise

- This preliminary analysis includes 123 women who have completed the first 14 weeks of study.

- Subjects in this study were:

38.7±8 years
64.7±3 inches
93.2±19 kg
44.8±4.8 % body fat
BMI of 35.5±7



- 14 week study involving 2 familiarization sessions and 5 testing sessions (T1-T5) performed at 0, 2, 10, 10.4, and 14 weeks.



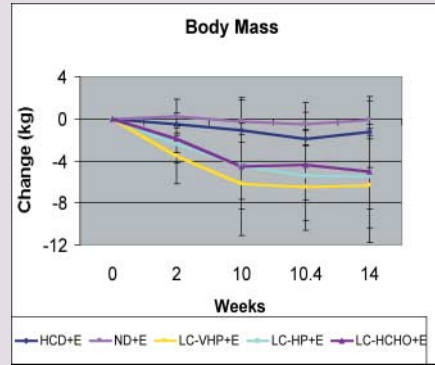
30 Minute circuit training program performed 3 days/week

- Assigned to following groups based on baseline testing and responses to CHO tolerance questionnaire
- Exercise + NoDiet (ND+E)**
- Exercise + HCD (n=11) – High Calorie Diet**
Women ≤ 90% of estimated REE (low metabolic rate)
Phase I – 2,600 kcal/d for 2 W (55% CHO, 15% PRO, 30% F)
Phase II – 2,600 kcal/d for 8 W (40% CHO 30% PRO, 30% F)
Phase III – 2,600 kcal/d for 4 W (55% CHO, 15% PRO, 30% F)
- Exercise + LC-VHP (n=35) – Very High PRO/Low CHO Diet**
Women positive on CHO intolerance questionnaire*
Phase I – 1,200 kcal/d for 2 W (7% CHO, 63% PRO, 30% F)
Phase II – 1,600 kcal/d for 8 W (15% CHO, 55% PRO, 30% F)
Phase III – 2,600 kcal/d (15% CHO 55%, PRO, 30% F) and 1,200 kcal/d (7% CHO, 63% PRO, 30% F) for 3/2, 3/2, 5/2, & 10/2 days
- Exercise + LC-HP (n=28) – High PRO/Low CHO Diet**
Phase I – 1,200 kcal/d for 2 W (20% CHO, 50% PRO, 30% F)
Phase II – 1,600 kcal/d for 8 W (15% CHO, 55% PRO, 30% F)
Phase III – 2,600 kcal/d (15% CHO, 55% PRO, 30% F) and 1,200 kcal/d (20% CHO, 50% PRO, 30% F) for 3/2, 3/2, 5/2, & 10/2 days
- Exercise + LC-HCHO (n=32) – High CHO Diet**
Phase I – 1,200 kcal/d for 2 W (55% CHO, 15% PRO, 30% F)
Phase II – 1,600 kcal/d for 8 W (55% CHO, 15% PRO, 30% F)
Phase III – 2,600 kcal/d (55% CHO, 15% PRO, 30% F) and 1,200 kcal/d (55% CHO, 15% PRO, 30% F) for 3/2, 3/2, 5/2, & 10/2 days

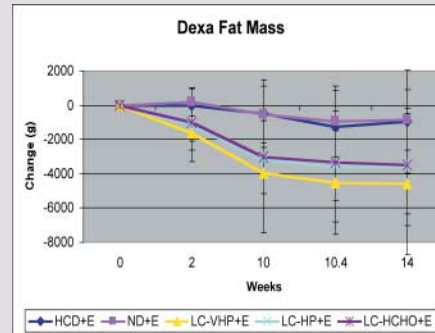
HCHO or CHO = Carbohydrate PRO = Protein F = Fat LC = Low Calorie

All subjects were provided a low-dose liquid multivitamin to take during the course of the study
* Testing for carbohydrate intolerance demonstrated they were candidates for the high protein diet

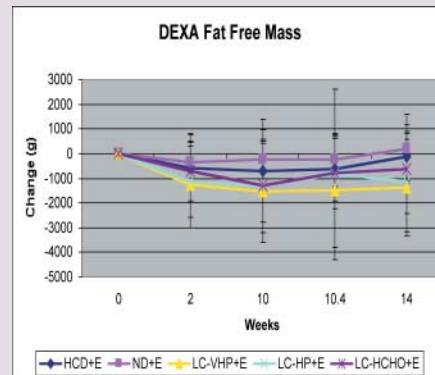
BODY COMPOSITION CHANGES



- Women lost as much as **-4.1 +/- 6 lbs (1.88 +/- 2.5 kg)** on **HCD**
- Subjects on the **HCHO (-11.1 +/- 8 lbs; -5.05 +/- 3.5 kg)** and **HP (-12.0 +/- 11 lbs; -5.44 +/- 4.9 kg)** diets lost significantly more weight than ND and HCD groups
- Subjects in the **VHP group (-14.0 +/- 12 lbs; -6.34 +/- 5.4 kg)** had greatest weight loss
- Subjects maintained or continued modest weight loss during maintenance phase



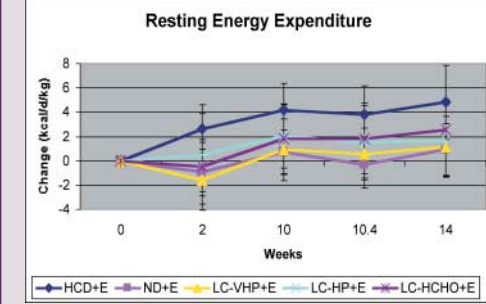
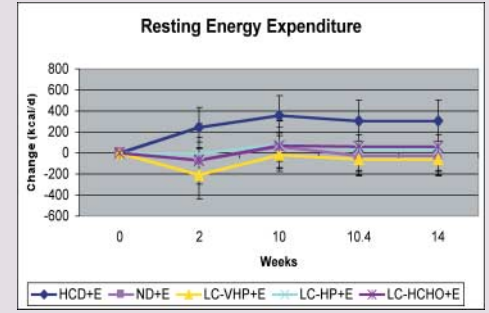
- Exercise** alone promoted a **-2.0 +/- 4 lbs (0.9 +/- 1.8 kg)** loss in fat mass
- Women lost **-2.2 +/- 7 lbs (1.0 +/- 3.0 kg)** of fat on **HCD**
- Subjects on the **HCHO (-7.7 +/- 6 lbs; -3.5 +/- 2.8 kg)** and **HP (-7.9 +/- 8 lbs; -3.6 +/- 3.4 kg)** lost significantly more fat mass than ND and HCD groups
- Subjects in the **VHP group (-10.1 +/- 9 lbs; -4.6 +/- 4.1 kg)** observed greatest fat mass loss



- FFM typically accounts for 40-50% of weight loss on low calorie diets
- Resistance training and increased dietary protein reported to lessen loss of FFM during weight loss
- FFM decreased in all dieting groups (-1.8 +/- 4 lbs; -0.8 +/- 1.8 kg) but it only represented 18% of weight loss

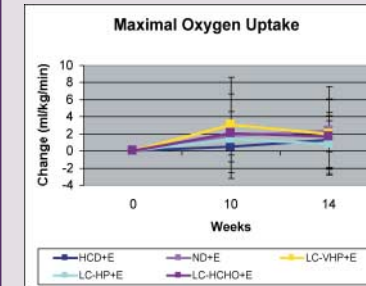
METABOLIC RATE CHANGES

- Weight loss typically decreases REE due to a reduction in FFM and hormonal influences
- Resistance training and increasing dietary PRO intake seems to be effective as a means of minimizing loss of FFM and reductions in REE
- Increasing caloric intake raised REE significantly for the HCL group as much as 400 kcal/d

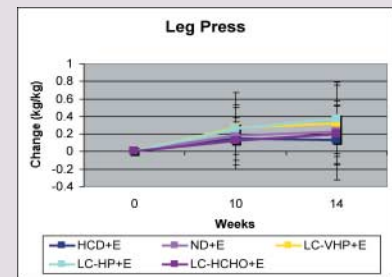
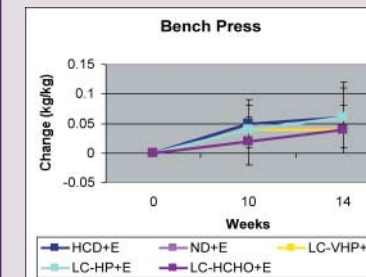


- After adjustments for lower body weight, results show alternating eating and dieting increased REE while maintaining weight loss during the maintenance phase

FITNESS CHANGES



- Subjects experienced a significant increase (~7%) in maximal oxygen uptake (aerobic capacity) in all groups



- Subjects significantly increased their Bench Press and Leg Press strength by 14.5% and 13.5%, respectively