Curves Research Update

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Overview

• Curves WHFI Update
• Optimizing the Curves workout
• Curves vs. Popular Weight Loss Program
Curves WHFI Update

Impact of Curves program on risk factors and health status.
Characteristics of Metabolic Syndrome:
NCEP-ATP III

Abdominal obesity
Glucose intolerance/
Insulin resistance
Hypertension
Atherogenic dyslipidemia
Proinflammatory/
Prothrombotic state

Diabetes
CVD

National Cholesterol Educational Program (NCEP), Adult Treatment Panel (ATP) III; 2001.
Metabolic Syndrome: Impact on Mortality

Metabolic Syndrome

Body Composition and Blood Pressure

Oliver et al. FASEB National Meeting, Anaheim, CA. 4/28/10
Metabolic Syndrome

Fasting Blood Values

<table>
<thead>
<tr>
<th></th>
<th>Glucose*</th>
<th>TG**</th>
<th>CHL</th>
<th>HDL</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-MS</td>
<td>1.2</td>
<td>4.2</td>
<td>-5.7</td>
<td>-3.8</td>
</tr>
<tr>
<td>MS (3+)</td>
<td>-3</td>
<td>-8.7</td>
<td>-5.3</td>
<td>-1.8</td>
</tr>
</tbody>
</table>

Oliver et al. FASEB National Meeting, Anaheim, CA. 4/28/10
Metabolic Syndrome

Difference Between Diets

<table>
<thead>
<tr>
<th>Percent Change</th>
<th>Weight*</th>
<th>TG**</th>
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<tbody>
<tr>
<td>HP</td>
<td>-4.2</td>
<td>-7.9</td>
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<tr>
<td>HCHO</td>
<td>-3.6</td>
<td>3.6</td>
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Oliver et al. FASEB National Meeting, Anaheim, CA. 4/28/10
Women with high TG’s, leptin, and insulin resistance experience greater weight loss, fat loss, and reductions in TG when following the HP diet.
Health Impact Analysis

Participation in the Curves program can help reduce risk to markers of metabolic syndrome which can have real health benefits!
Optimizing Curves

Curves Circuit with Zumba
Optimizing Curves

- Traditional Resistance Training Program
  - 2-3 sets
  - 8-12 repetitions @ 60-80% 1RM
  - 2-3 workouts/wk
- Curves 30-sec station format follows these guidelines
- Recovery stations help maintain HR and promote cardiovascular fitness.
- Efficient & effective 30-min workout
Promoting Strength & Hypertrophy

• NSCA Training Principles

<table>
<thead>
<tr>
<th>Goal</th>
<th>1RM %</th>
<th>Repetitions</th>
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</thead>
<tbody>
<tr>
<td>Strength</td>
<td>&gt;85</td>
<td>&lt; 6</td>
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<tr>
<td>Hypertrophy</td>
<td>70 - 85</td>
<td>6 - 12</td>
</tr>
<tr>
<td>Endurance</td>
<td>60 - 70</td>
<td>&gt; 12</td>
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</table>

• Recent research indicates that performing sets of 15 to 25 repetitions can be as effective in stimulating protein synthesis than performing traditional sets of 8 to 12 repetitions at higher intensities.
Performing sets of 18 repetitions at 60 to 65% of max stimulated muscle protein synthesis as well as performing sets of 9 repetitions at 80-85% of maximum.

**Table 1. Resistance exercise repetitions.**

<table>
<thead>
<tr>
<th>Bout</th>
<th>Leg press repetitions</th>
<th>Leg extension repetition</th>
</tr>
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<tbody>
<tr>
<td>60-65%</td>
<td>17.94 ± 0.96</td>
<td>17.71 ± 0.83</td>
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<tr>
<td>80-85%</td>
<td>8.79 ± 0.82</td>
<td>9.27 ± 0.77</td>
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</table>

Data are mean ± SD.
Performing low-load high volume resistance exercise sets lasting 45-seconds markedly stimulated markers of muscle protein synthesis.
Conclusion

- 1 minute interval is safe and effective
- 50% training intensity is appropriate for our population
Curves Circuit with Zumba

• Provides 1-min to train on each machine so more repetitions can be performed to provide a different workload stimulus to muscle

• Adding variety to the Curves program can promote additional training adaptations (S.A.I.D. Principle)

• Over time, incorporating different repetition and intensity schemes to the Curves program may lead to further training adaptations.
Curves vs. WeightWatchers
Curves vs. WW Study

- 78 pre-menopausal women (32 ± 7 yrs, 64.5 ± 2.6 in, 211 ± 42 lbs, 47.4 ± 7 % fat)
- Women matched and randomized to Curves Circuit with Zumba or WW for 16-weeks
- Weekly weight and compliance check in Curves group
- Preliminary results on 33 women completing first 6-weeks of program
Fat Loss
Preliminary Results (n=33)

Change (lbs)

0  4  6
-35 -30 -25 -20 -15 -10 -5  0  5  10
Curves  WW
Body Fat

Preliminary Results (n=33)

Change (%)

Curves  WW

-6.1  -7.1
-3.6
-2.2
0

0  4  6
Curves Circuit with Zumba

- Most impressive results we have seen to date
- Participants love the Curves Circuit with Zumba workouts!
- Higher intensities, 1-min RE exercise bouts, and weekly weight / diet compliance checks appear to be promoting greater benefits
- It’s time to shake up the Curves Circuit with Zumba!
Moving Forward

• Very important and cutting edge data.
• Counselors privileged to this information
• Counsel members through weight management program to help the make better choices and see better results.
• Curves is leading the industry with our weight management program!
curves.tamu.edu

ExerciseAndSportNutrition.com