



6. WebHealth Outcomes

Geoffrey W. Greene, PhD, RD, LDN

Department of Nutrition and Food Sciences

University of Rhode Island

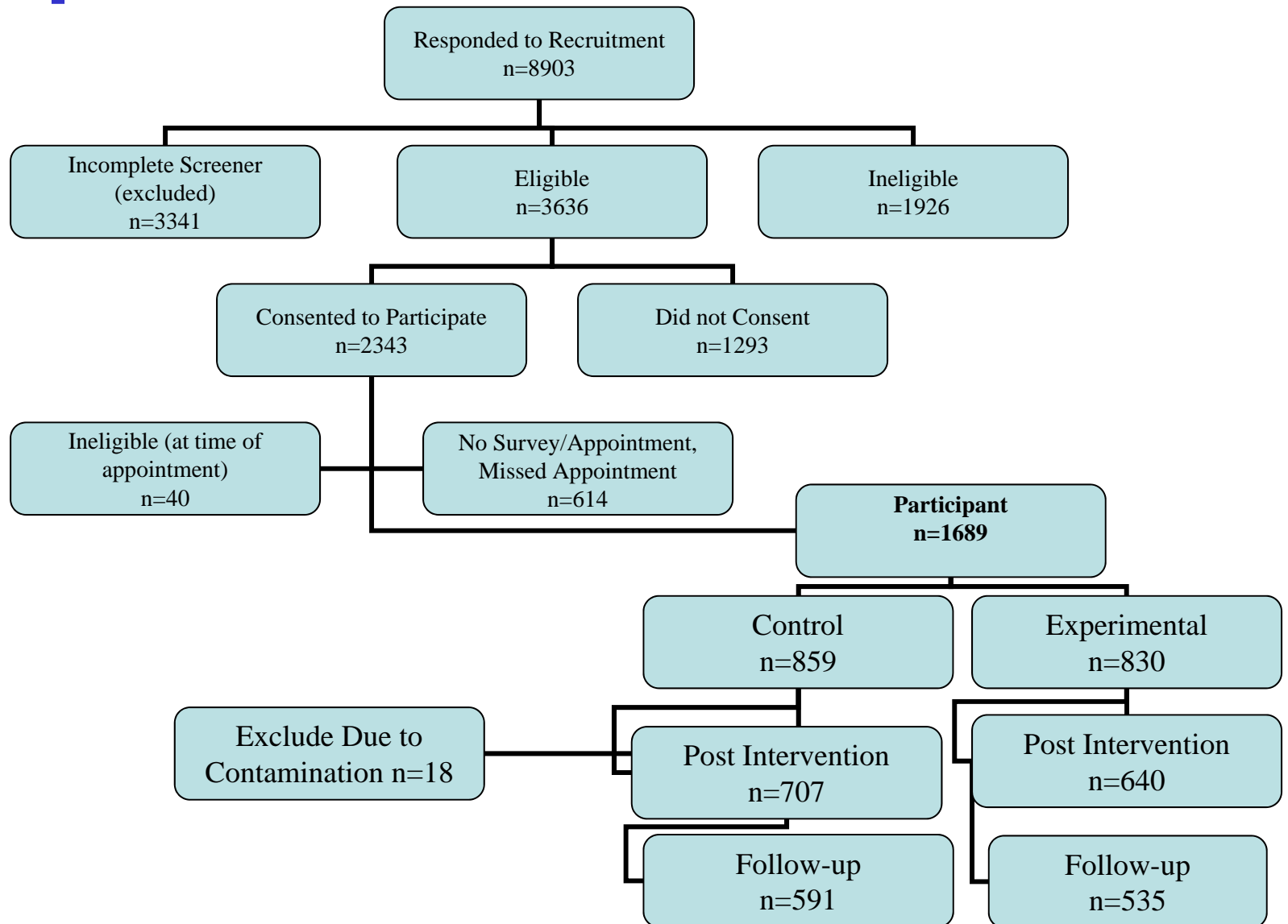


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Design/Hypotheses

- Design: Experimental - participants stratified by school and gender then randomized into Intervention or Delayed Treatment Control
 - Measured Baseline, Post (3 mo.) and Follow-up (15 mo)
 - Control received intervention after 15 month follow-up
- Intervention: Project WebHealth, a 10-lesson, on-line nutrition and physical activity intervention for college students using a Health at Every Size approach
- Hypothesis: Students exposed to the WebHealth intervention will gain less weight and improve behavioral outcomes more than control students
 - Behavioral outcomes include fruit and vegetable intake and physical activity

Sample



Target Audience (n=1,689)

- **Full-time students, age 18-24 yr, BMI ≥ 18.5 kg/m², recruited from 8 US universities**
- **Mean: age=19.1 yrs, BMI=23.9, FV=3.1 cups, Est. VO₂max=42.5 ml O₂/kg/min, IPAQ MET min/wk⁻¹=2920, ecSatter eating competence=31**
- **71% fresh/soph., 71% live on campus, 79% white, 5.5% meet DG FV recommendations but 85% ACSM fitness and physical activity standards**
- **No difference I vs. C for any variable but...**
 - Age (C 0.3 years younger than I)
 - Class year (C 4.5% more likely to be 1st year than I)

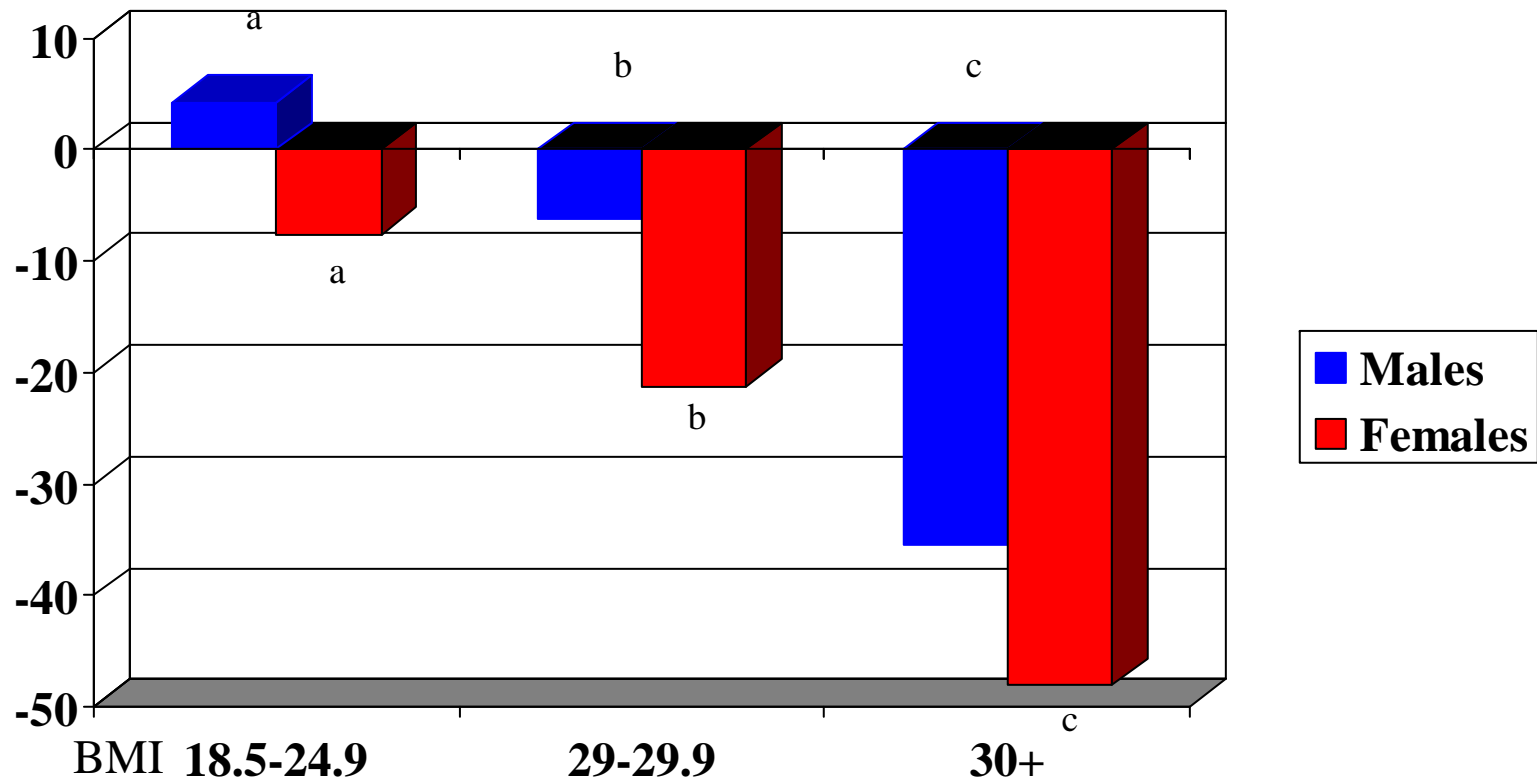
Baseline Comparisons

Differences in psychosocial and behavioral variables by gender and body weight category, e.g. desired weight change and fitness

Difference by cluster

- 1. Carefree - favorable physiological and psychological but not behavioral attributes**
- 2. Pro-active - most favorable attributes and moderate desired weight change (gain for males, loss for females)**
- 3. Vulnerable - largest proportion of overweight but least favorable physiological, behavioral and psychosocial attributes and greatest desired weight loss (both genders)**

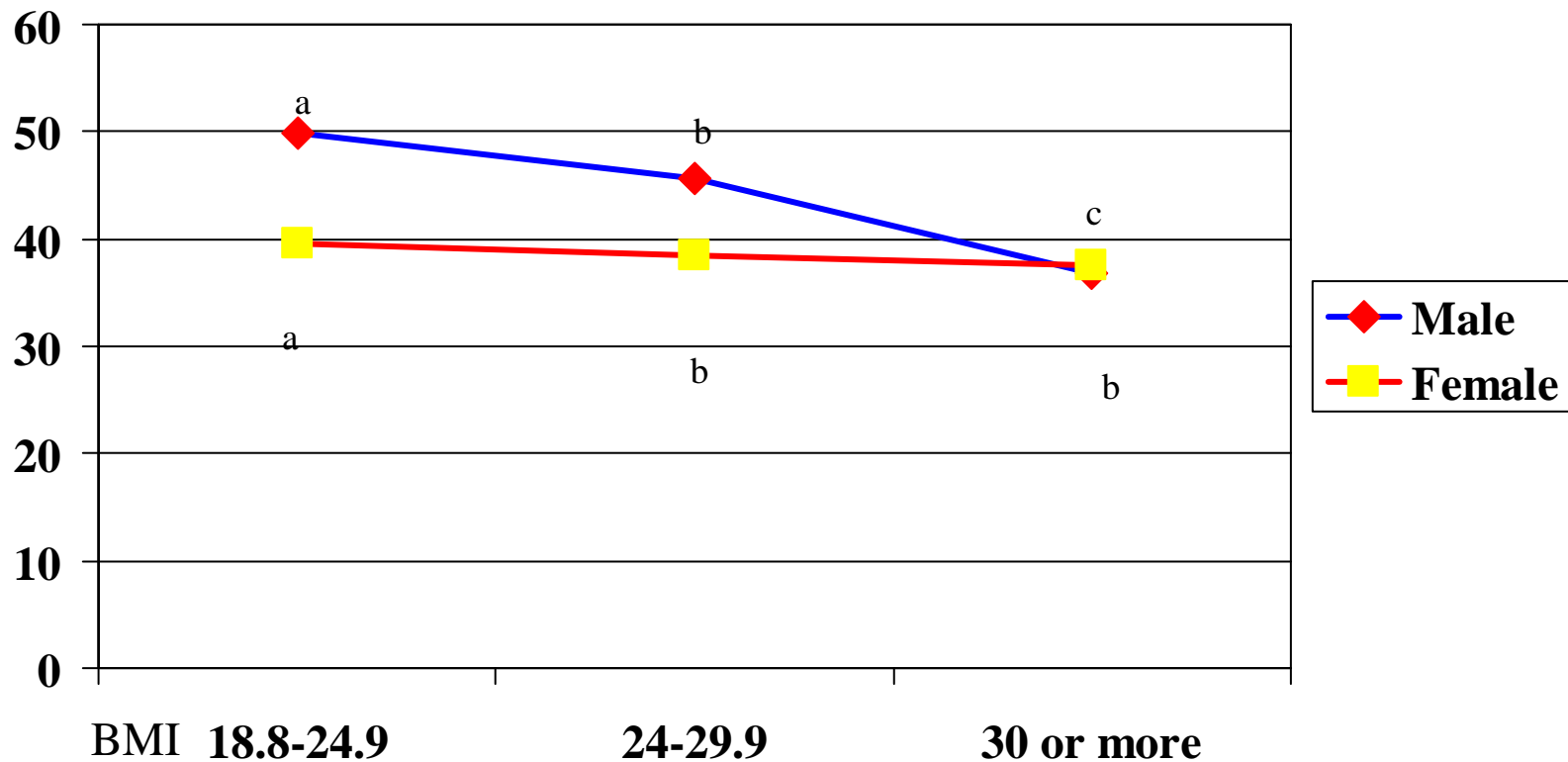
Desired Weight Change (lbs) by Gender and BMI Category



a,b,c differ within gender, $p < 0.05$

Gender effect, $p < .001$, BMI effect, $p < .001$, interaction NS

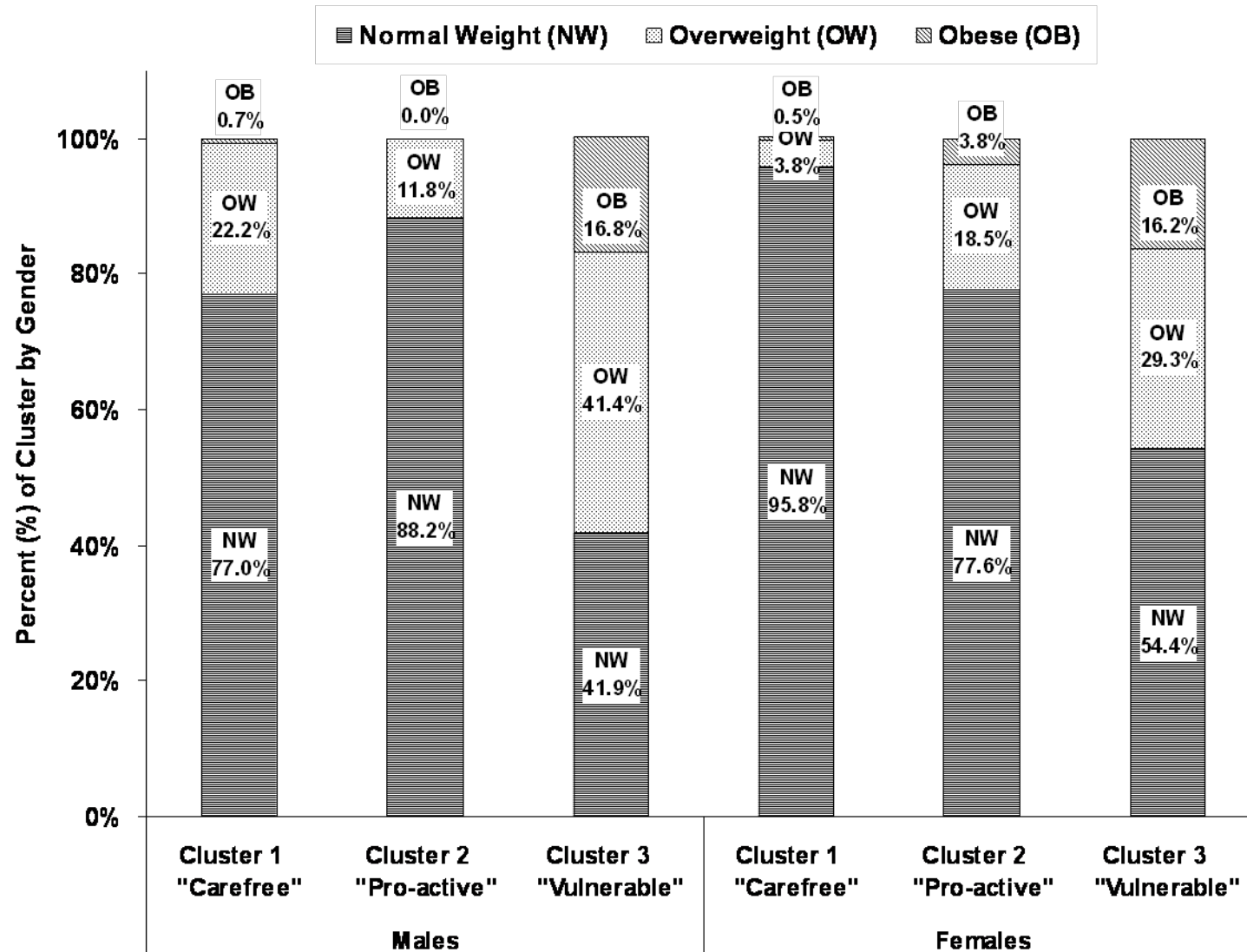
Est. VO_2max by BMI & Gender



a,b,c differ within gender, $p < 0.05$

Gender effect, $p < .001$, BMI effect, $p < .001$, interaction NS

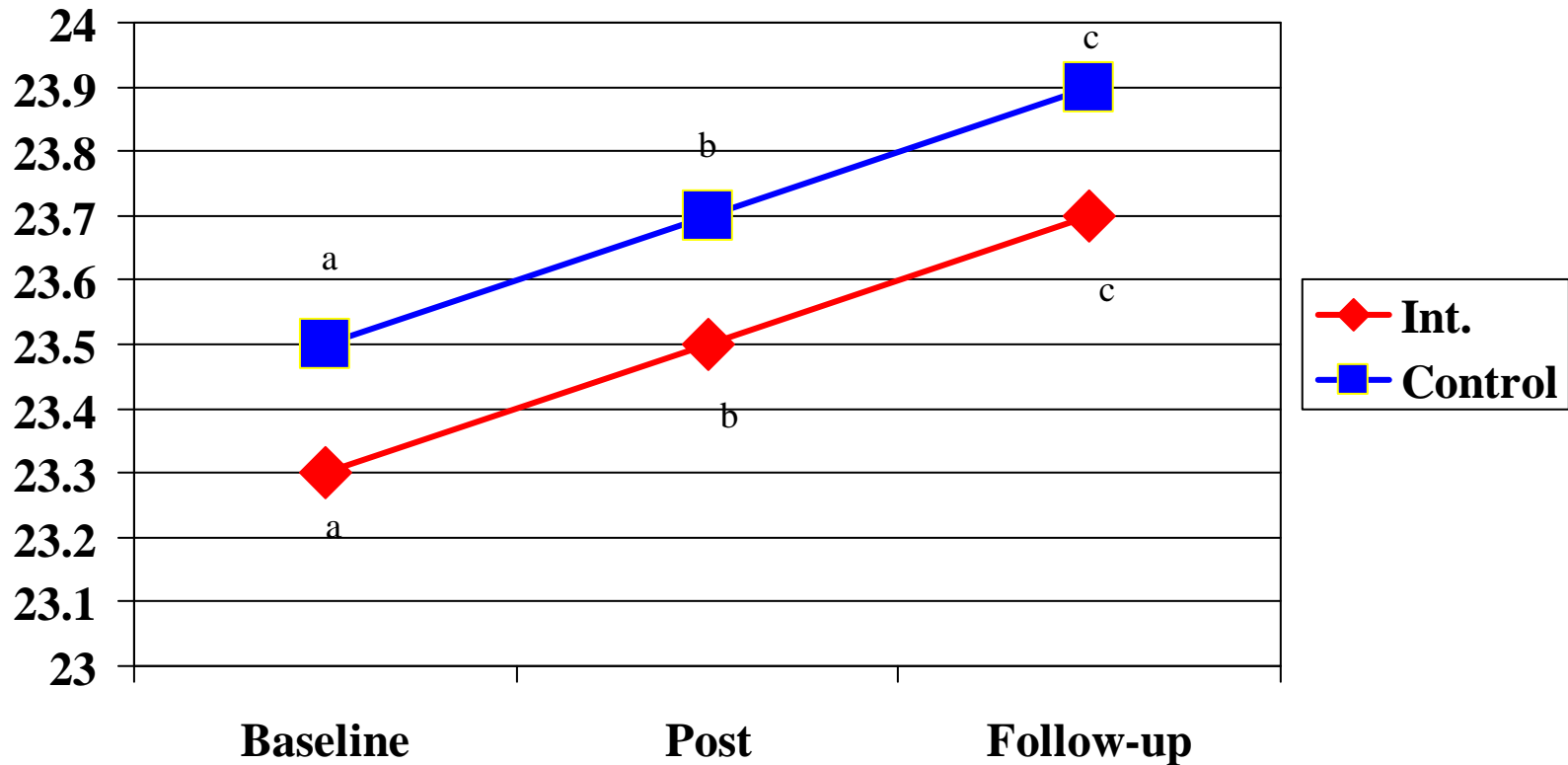
Distribution of Weight by Cluster



Attrition

- **67% completed the study (attended FU physical assessment)**
 - **5.8% > attrition in experimental than control group ($p < .05$)**
- **Difference in baseline BMI and weight**
 - **Completers BMI=23.5; non-completers BMI=24.8, $p < .001$**
 - **Non-completers 8.1 lbs heavier than completers, $p < .001$**
- **Difference by university ($p < .001$), year in school (non-completers more likely to be first year ($p < .05$), TFEQ-18R emotional eating & eating competence (EC))**
 - **Completers lower emotional eating scores than non-completers ($p < .05$)**
 - **Completers greater EC than non-completers ($p < .01$)**
- **No difference in baseline age, ethnicity gender, dietary, physical activity or other psychosocial variables**

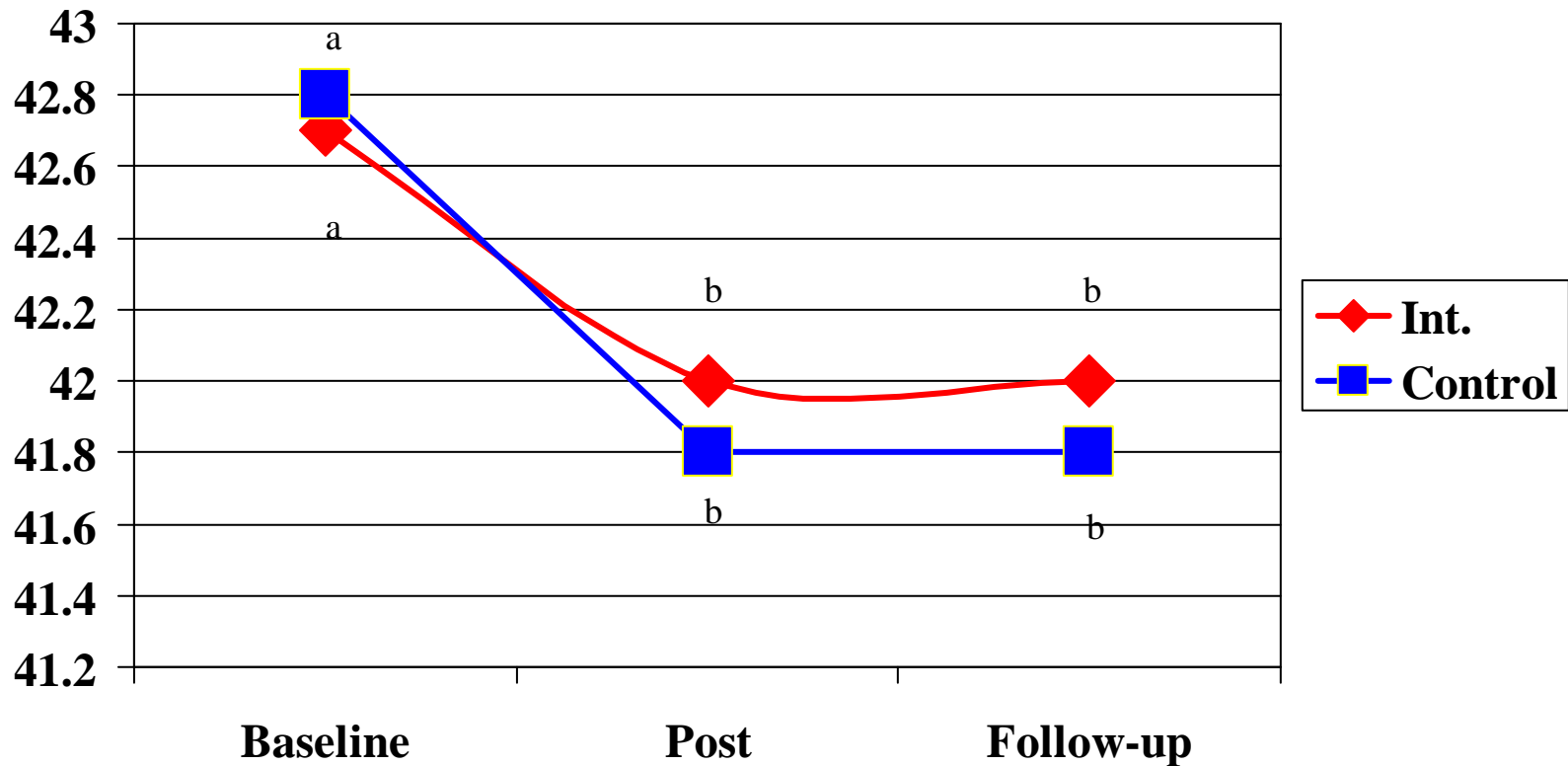
Results - BMI



a,b,c differ within group, $p < 0.05$

Time effect $p < .001$,
time x group interaction NS

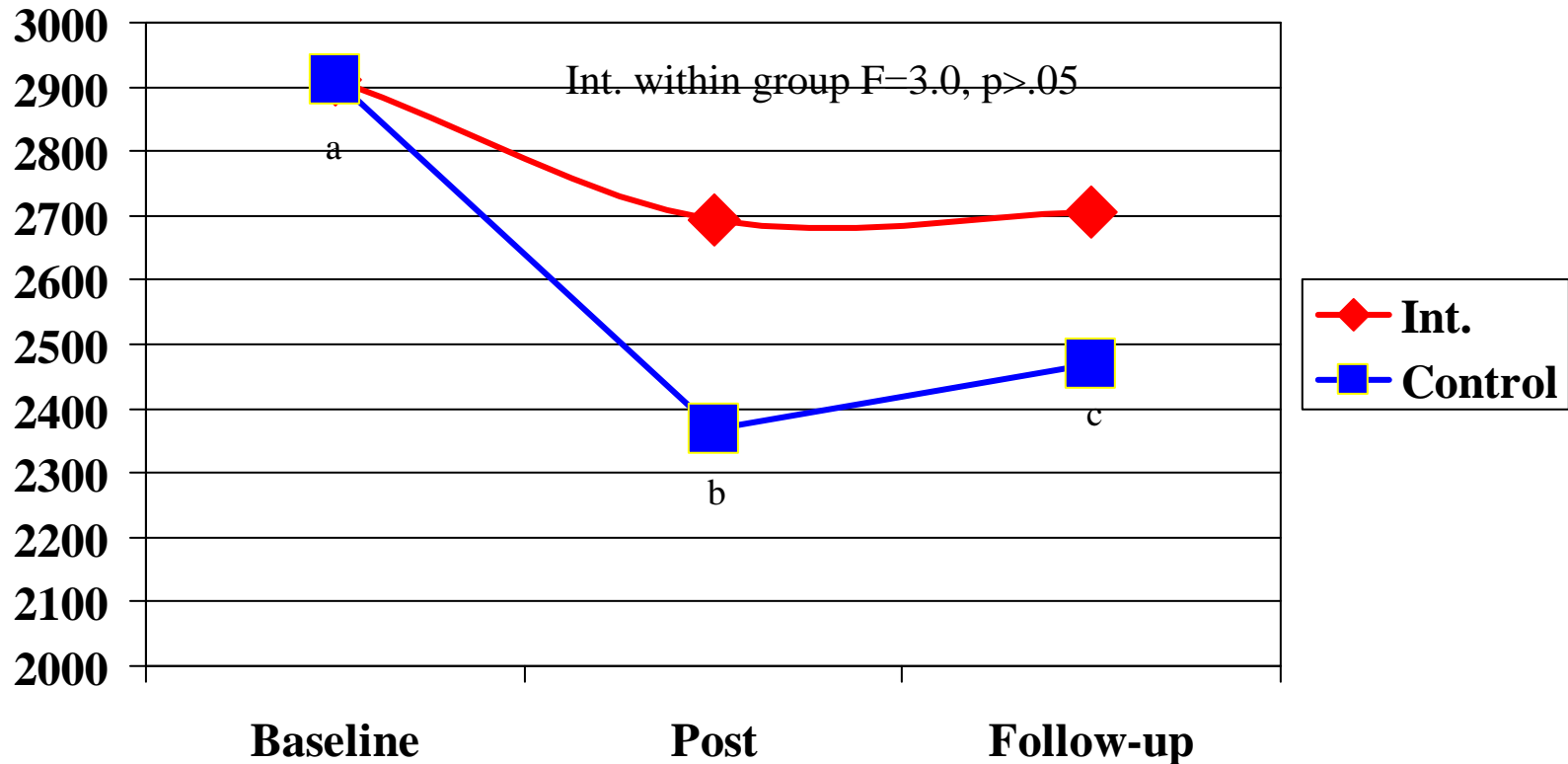
Results - Est. VO₂max



a,b,c differ within group, $p < 0.05$

Time effect $p < .001$,
time x group interaction NS

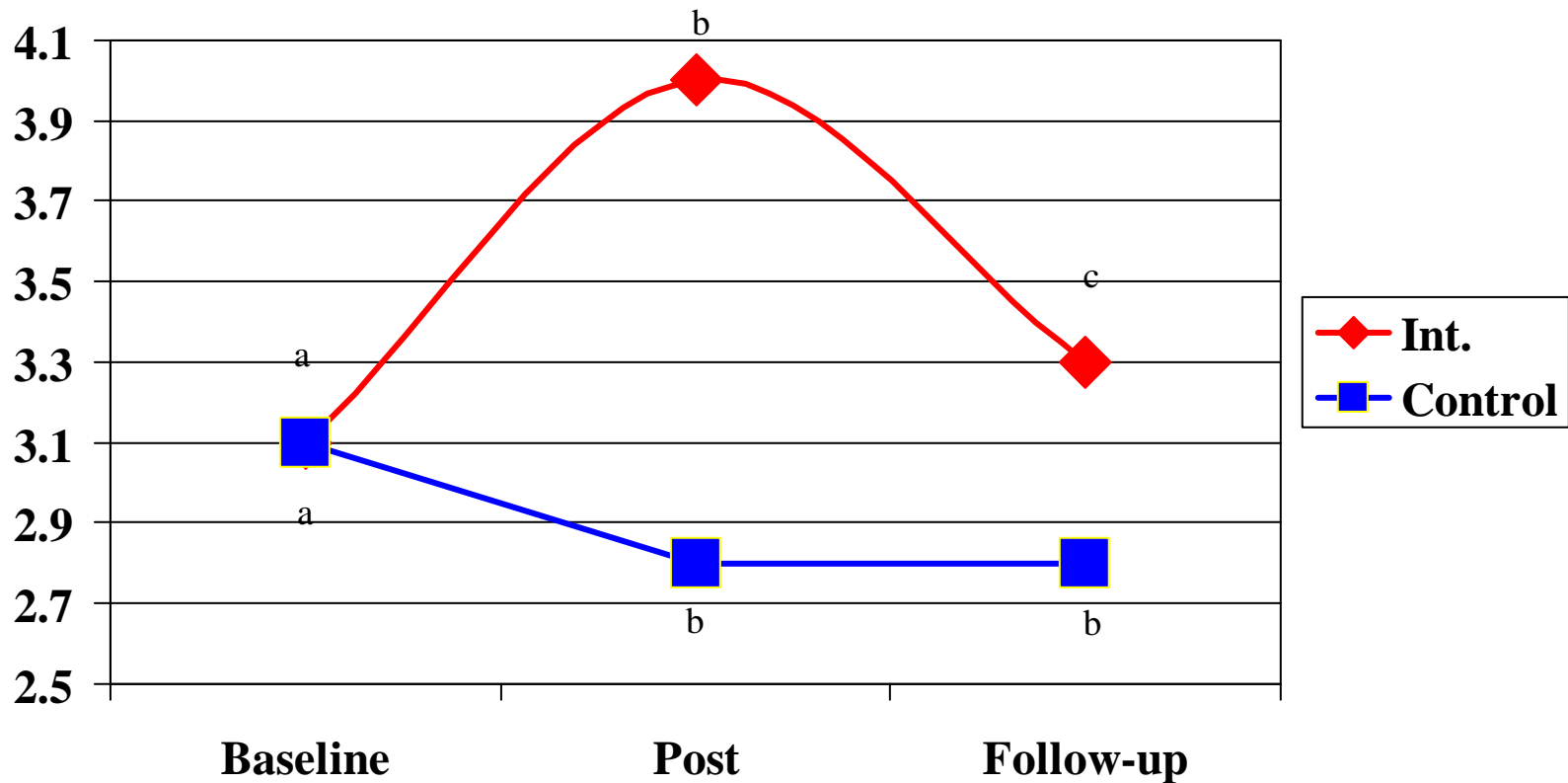
Results - IPAQ MET min/wk⁻¹



a,b,c differ within group, $p<.05$

Time effect $p<.01$,
time x group interaction $p<.05$

Results - FV (cups/day)



a,b,c differ within group, $p < 0.05$

Time effect $p < .001$,

time x group interaction $p < .001$

Outcomes of Intervention

- **84% completed all 10 lessons (5.1% no lessons); mean time/lesson=7.81 ± 4.73 minutes**
- **The intervention did not reduce rate of weight gain or affect cardiorespiratory fitness**
- **The intervention reduced the rate of decline in physical activity**
- **The intervention group increased FV intake by 0.9 cups post-intervention compared to a 0.3 cup decrease in control**
 - **The increase was not completely sustained at follow-up but intervention 0.5 cups > control at follow-up**

Lessons Learned

- **Feedback post intervention was, “More fun, less text” - “Tell me what I need to know.”**
- **Need more powerful interventions (individually tailored) to reduce rate of weight gain or change cardiorespiratory fitness**
- **WebHealth reduced rate of decline in physical activity but more needs to be done**
- **WebHealth had a strong effect on FV consumption but needs a “booster” to sustain the effect**