Losing Weight, Making Weight, Rowing Fast
Ed McNeely & Tracy Cameron
Introduction

- Many lightweight rowers fail to reach their true potential because of mistakes made when reaching competitive weight.
- Coaches often avoid discussions of making weight
- Dieticians avoid discussions of making weight
- Our goal is to present the theory and practical application of three key issues related to getting to competitive weight for lightweights
Being Lightweight

- Very few rowers sit as natural lightweights.
- An Australian study found that a kilogram of muscle mass was worth 10.2s on the water (Slater et al. Br. J. Sports Med. 39; 736–741).
- Loss of muscle mass is a common side effect of weight loss.
Being Lightweight

- Heavyweights who want to move down to lightweight should meet the following criteria:
  - Erg scores as a heavyweight should at least be good lightweight scores.
  - High enough body fat that they can get to around 59 kg for women and 73.5 kg for men with body fat levels not lower than 12% and 8% respectively.
  - Have a long term plan of losing not more than 0.5 kg per week.
Energy Neutral Training

- Negative energy balance is necessary for weight loss to occur.
- How we go about creating a negative energy balance can affect the outcome of the program.
Energy Balance

- Relationship between calories in and calories out
- Positive energy balance
  - More calories in than out
    - Improved performance
    - Increased muscle mass
    - Adaptation to training
    - Normal growth
Energy Balance

- Most programs advocate the use of exercise as a means of burning calories to create a daily negative energy balance.
- Negative energy balance during exercise can result in up to 25% of energy coming from protein sources – muscle tissue.
- As metabolically active tissue is used for energy there is a decrease in resting metabolic rate.
# Metabolic Rate

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<tr>
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<th>Weight</th>
<th>Feb Kcal/day</th>
<th>Feb Kcal/kg</th>
<th>March Weight</th>
<th>March Kcal/day</th>
<th>March Kcal/kg</th>
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Body Composition Changes

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<td>105</td>
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Energy Neutral Training

- Energy expenditure in each workout pre planned
- From 60 min pre to 60 min post all calories used must be replaced
- Mix of CHO and protein
- Negative energy balance created throughout the rest of the day
## Energy Neutral Training

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Why?

- During and post exercise protein synthesis rates are the highest during the day
  - Adequate energy
  - Adequate CHO
  - Adequate protein
- Protein and CHO intake increases insulin levels which decrease cortisol
- Muscle tissue can be built
**Why?**

- Prevents potential catabolic affects of exercise
- Subjects report suppression of appetite following exercise
  - Easier to eat less throughout the day
- All subjects had personal best performance in rowing ergometer tests at the end of April; there had been no change from Feb to March
Applying the Concept

- Need to know total energy expenditure
  - RMR
  - Exercise energy expenditure
  - Daily energy expenditure
Planning

- Calorie goals need to be calculated for each session the day before the session
- Nutrition has to be planned in advance and nutrients need to be available during the training session
Making Weight

- Done in the final 24-48 hours pre weigh in
- Mostly done through dehydration
- Coming down the morning of weigh in more effective than trying to stay down or coming down the night before
Making Weight

- Lots of individual variation
- Careful planning and practice
- Experiment with different approaches
- Food day of the race not for fuelling
  - A race will only burn about 100–120 kcal
    - 2008 Olympic final Tracy burned about 115 kcal and 28g CHO
Making Weight

- Planning
  - Start from weigh in time and work backwards
  - Different plans needed for morning and afternoon races
  - Set specific goals for night before and morning of weight
  - Need to know how different foods affect water balance
    - High sodium foods increase water retention
Making Weight

- **Dehydration**
  - 100g weight loss per hour through insensible fluid losses
  - 1.5–3% weight loss acceptable
  - Passive sweating better than an active sweat run
  - Aggressive rehydration in the two hours pre race
    - Water and electrolyte based drinks immediately after stepping off the scale