

Competition Nutrition Strategies

Freestyle Wrestling



FILA ADVANCED SCHOOL FOR COACHES - FREESTYLE WRESTLING

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Overview

- “ Physiological implications of poor weight management
- “ Coaching the weight management process
 - . Pre, during and post weigh in nutrition and hydration strategies



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Pre Competition Preparation

Non-Weight Class Sports

Taper training & Carb load + hydration increase

- “ Increase muscle glycogen
- “ Increased rest/repair
 - helps physically and mentally
- “ Increase muscle function/strength
- “ Increase red blood cell mass

Weight Class Sports

“Hard Cut” = Decrease in food intake + increase exercise + dehydration

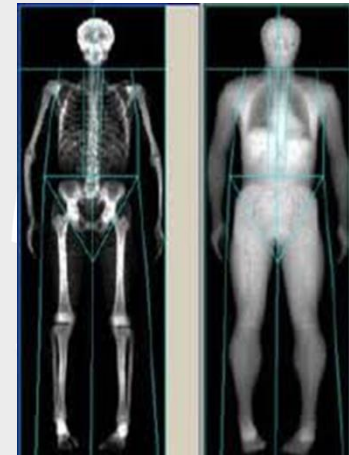
- “ Decrease muscle glycogen
- “ Decrease rest/increased activity = Increase stress mentally and physically
- “ Decreased muscle function/strength
- “ Decrease red blood cell mass (potentially)
- “ Increased risk for illness



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Common Reported Weight Loss Methods

<u>Activity – Usually last minute</u>	<u>% Using</u>
" Frequent Fasting/Starving	" 75%
" Severe Fluid Restriction	" 75%
" Run or Jog	" 73%
" Exercise Devices	" 59%
" Rubber Suits	" 34%
" Sweat in Sauna	" 14%
" Vomiting	" 8%
" Diuretics	" 2%



This impacts:

- " **Water**
- " **Muscle**
- **Glycogen**



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(Perriello, Almquist, et. al 1995)

Acute Weight loss Danger Zone

Body Weight %	Corresponding Weight
>3-5%	<ul style="list-style-type: none">• 55kg = 56.6 - 57.7kg• 60kg = 61.8 - 63kg• 66kg = 67.9 - 69.3kg• 74kg = 76.2- 77.7kg• 84kg = 86.5 -88kg• 96kg = 98.9 -100kg• 120kg = 123.6 -126kg



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Impacts of Extreme Weight Management Practices

Acute....

- " Decreased cognition
- " Electrolyte imbalances and loss of fluids
- " Poor storage of glycogen
- " Cardiovascular & thermoregulatory impairment
- " Death

Chronic...

- " Micronutrient deficiencies
- " Lowering of resting metabolic rate
- " Depression of sex hormone concentrations
- " Reduction in markers of bone synthesis
- " Loss of muscle mass & impairment of growth in adolescent athletes
- " Disordered eating & disturbed food relationship



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Karlson, Becker, Merkur, 2001; Burke, 2007; Steen, Oppliger & Brownwell, 1988; Morris, Payne, Wark, 1998; Grinspoon et al., 1995; Steen, Oppliger & Brownwell, 1988;

BOTTOM LINE ON COMPETITION DAY

*“ The body takes from **4 to 48 hours** to fully recover from moderate dehydration, and **24-48 hours to recover glycogen** which means with severe weight cutting techniques, there isn't enough time between weigh-in and the competition to ensure peak performance and health.”
(4).*



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Coaching the Weight Management Process



A. Pick the Right Weight Class

B. Try to Manipulate

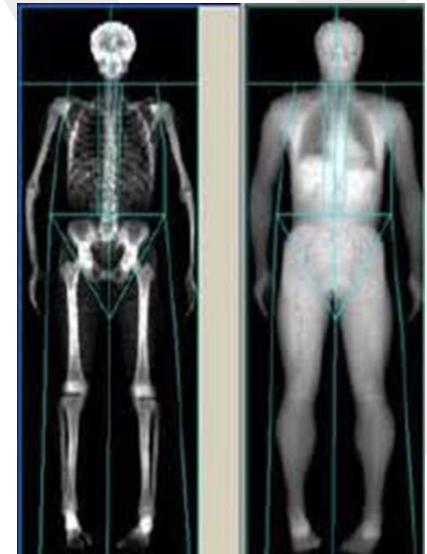
- . **Fat**
- . **Stomach contents**
- . **Water**
- . **Sparing muscle mass & glycogen**



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Weight Class Selection Strategies

1. Using body composition measurements + database information
2. Assess athletes stage of growth
3. Coach education, especially at the developmental level
4. Physiology 101



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How Do I Decrease Body Fat?

1. Get it measured

- Skinfolds, DXA scan, BodPod



2. Get to work

- Diet and exercise plan for fat loss

3. Give it time

- Start 6-8 week out or in off season!
- Realistic safe fat loss (1-2% or 0.5-2lbs) per week



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Steps to Fat Loss 6-8 ++ weeks out



Try to Manipulate

- 1. Fat**
- 2. Sparing muscle mass & glycogen**



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Nutrition Changes for Fat Loss

Manipulation of Calories In...

1. Change all liquids = water & skim milk (NO ALCOHOL, SODA, JUICE)
2. Stop eating after 7pm
3. Eat half your normal portion for dinner or no starch at evening meals
4. PLATE model for Lunch/Dinner
5. Replace one meal a day with a calorie controlled shake
6. Limit fast food/restaurant food to 2x per month
7. Calorie reduced meal plan to follow every day
8. No skipping meals – no longer than 4 hours without food
9. Balanced meals & snacks – Lean protein/high fiber carb/antioxidants

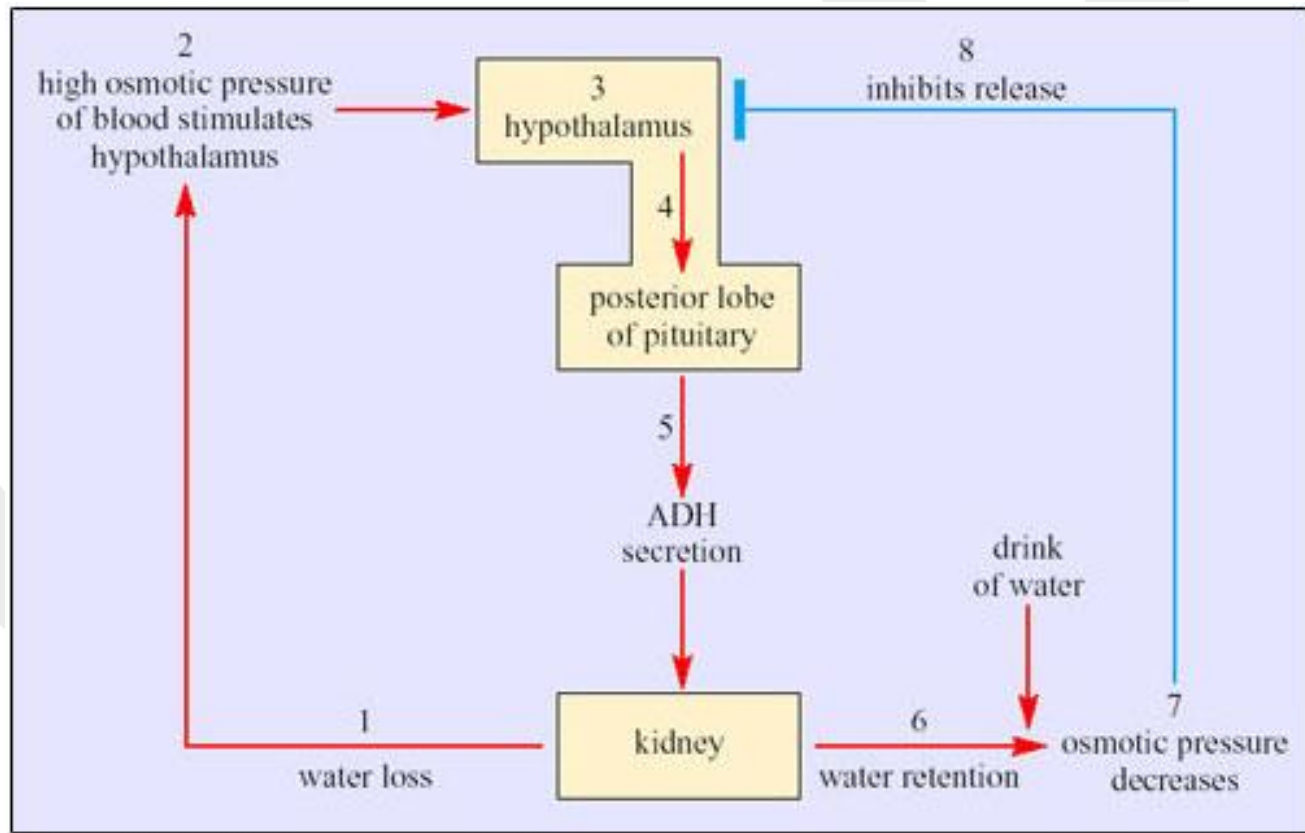
MANDATORY - KEEP HYDRATION HIGH (& REPLACE LOSSES!!!)



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Staying Hydrated!



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EASY TRAINING / WEIGHT MANAGEMENT:

FATS

1 Teaspoon



Avocado
Oils
Nuts
Seeds
Cheese
Butter



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages

Coffee
Tea

FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



Exercise Changes for Fat Loss

“ Calories Out – in addition to training

1. Add in **one extra cardio session 4x per week (low intensity)**
2. Find extra ways to burn calories (eg. bike instead of walk to practice)
3. Metabolic training in the gym
4. Wear a pedometer – go for 10000 steps outside of training



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CONSISTANCY & MOTIVATION

- “ *Consistency – at least 6/7 days per week*
- “ *Motivation & Determination – up to you*

“Gold medals aren't really made of gold. They're made of sweat, determination, and a hard-to-find alloy called guts.”

Dan Gable

Track Track Track!

Regular, hydrated weights, same scale, same time of day as weigh in, ideally with hydration test



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FINE TUNING WEIGHT

2 weeks out



Try to Manipulate

- 1. Fat**
- 2. Stomach contents**
- 3. Water retention**
- 4. Sparing muscle mass & glycogen**



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Fine Tune



Try to Manipulate

1. Fat
2. Stomach contents
3. Water retention
4. Sparing muscle mass & glycogen

- Continue making nutrition changes and exercise changes
- Change gut contents (0.5-2kg)
 - “ Lower fiber foods starting 5-10 days out
- Mild restriction of salt (>1000 - 1500 mg/day)
- Know your float weight
- Know your sweat rate
- **STAY HYDRATED!**



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Burke, L. (2007) *Practical Sport Nutrition*. Belconnen Australia, Human Kinetics.

Low Sodium Options

<i>High Sodium</i>	<i>Low Sodium</i>
Crackers or rolls with salt topping; biscuits, cornbread; stuffing mix	Regular breads, unsalted crackers and breadsticks
Instant Hot cereals	Low fiber, Low sodium choices: Cheerios, Cornflakes, Cream of Wheat, Rice Krispies, Special K
Canned, cured, processed, smoked and other highly salted foods	Drained and rinsed canned salmon and tuna, fresh or frozen fish, and eggs
Cheese (other than low sodium cheeses and some cottage cheese)	Yogurt
Commercially prepared entrees (tv dinner type meals)	Plain rice and pasta
Bouillon; broth; Soups and dehydrated soups	Fresh frozen vegetables
Commercial spreads and dips	Homemade hummus with fresh products, homemade guacamole
Salted nuts	Natural peanut butter (no added salt)
Pasta and rice packaged mixes	Regular pasta and rice
Seasonings/Sauces : -celery salt, garlic salt, onion salt, seasoned salt, poultry seasoning, BBQ, soy, steak, teriyaki, Worcestershire sauces	Fresh herbs----cilantro, basil, rosemary, and thyme

Lower Fiber Options

<i>High Fiber</i>	<i>Low Fiber</i>
Salads! Many vegetables are high in fiber	Alfalfa sprouts, beets, green / yellow beans, carrots, cauliflower, celery, cucumber, eggplant, lettuce, mushrooms, green / red peppers, potatoes (peeled), squash, zucchini
Whole fruits or juice with lots of pulp	applesauce, apricots, 1/2 banana, cantaloupe, canned fruit cocktail, grapes, honeydew melon, peaches, watermelon
Bran cereals or other fiber-rich breakfast cereals/foods (kashi), oatmeal, bran muffins, whole wheat waffles/pancakes	Plain cereals e.g. Cheerios, cornflakes, Cream of Wheat, Rice Krispies, Special K
Whole grains---in bread, cereals, buns, bagels, some pastas, rice, and barley	Enriched white breads, buns, bagels and English muffins
Popcorn and some nuts	Soda crackers, plain melba toast, and rice cakes
Legumes	Vegetable juice
Edible seeds: Berries, kiwi, figs, etc	Fruit juices- except prune juice

Final Acute Weight Loss



Try to Manipulate

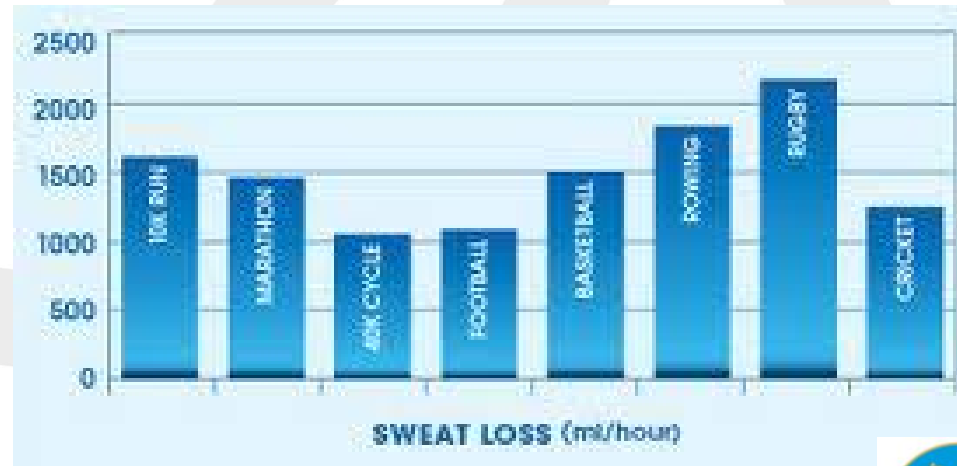
1. **Water**
2. **Sparing muscle mass & glycogen**



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Water Manipulation

- Knowing your float weight and sweat rate:
 - Passive sweating with heart rate and heat regulation (ie. hot baths)
 - Active sweating with heart rate and heat regulation
 - Decrease water intake 48 hours out (remembering - 24oz, 3 cups = 1lbs)



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After Weigh In

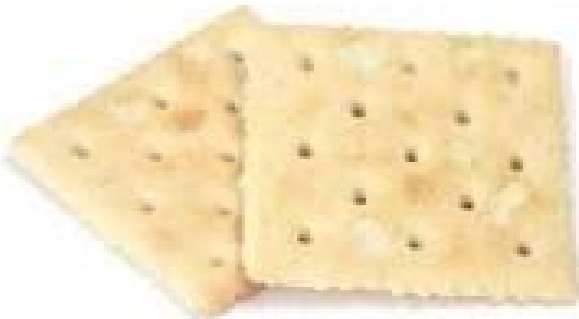
- “ Replace
 - “ ~28ml/kg of volume fluid
 - “ ~34 mg/kg sodium
 - “ ~2.3g/kg CHO
- “ Familiar tested food, small snacks over big meals
- “ Watch fiber content if athlete has been reducing intake
- “ Avoid high sugar beverages like soda & juice in high volume = Diarrhea
- “ SLOW progress



Competition Nutrition

During Competition:

- “ Breakfast is most important
- “ Avoid high fat, greasy foods, may cause cramping and stomach upset
- “ Avoid high fiber vegetables.
- “ Small frequent snacking and hydration during the day, aim for a hydrated urine color
- “ If appetite is low, aim for liquid over solid calories
- “ Carbohydrates, small protein and fluids



Tournament Foods (between matches/grazing)	Serving Size	Calories (kcal)	Carb (g)	Protein (g)	Fat (g)
• 1% chocolate milk	2 cups	320	54	16	6
• Low fat (fruit) yogurt	175g	150	26	6	2
• Peanut butter & jam sandwich	1	430	73	13	14
• Raisin bagel	1 small	200	39	7	1.7
• Sport drink	591ml	150	37	0	0
• Sport bar	1 bar	250	44	10	3.7
• Dried fruit bar	1 bar	135	34	0.5	0.4
• Bananas	1 large	109	28	1.2	0.6
• Low fat granola cereal	$\frac{3}{4}$ cup	120	28	8	1
• Commercial fruit smoothie	300 ml	270	49	7	5
• Meal replacement	1 bar	229	33	14	4.5
• Meal replacement drink	1 can	240	41	10	4



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Competition Nutrition

In between prelims and finals

- Light meal/snacks/hydration
 - Eat:
 - Plain carbs - rice, pasta, bread , bananas, applesauce, crackers,
 - Lean protein - chicken, fish or lean meat
 - Avoid – vegetables, fried foods, cream sauces, cream soups or fruits with skin on them



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Summary

- Develop a long term weight management program with the athlete and coach that includes a sensible choice of weight class
- Do not lose more than 3-5% in the last weight cut for best success
- Long term moderate energy restriction at least 6-8 weeks out from competition
- Work with the sport health team professionals exercise scientists, sport psychologist, sports physician ad coach
- Fine tune techniques in training before competition and track and record plan that works best



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Burke, L. (2007) Practical Sport Nutrition. Belconnen Australia, Human Kinetics.

Questions?



USOC
SPORTS NUTRITION



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ADDITIONAL RESOURCES

American Dietetic Association

Sports, Cardiovascular and Wellness Nutrition (SCAN)

Locate a Sports Dietitian:

<http://www.scandpg.org/>

<http://www.scandpg.org/sports-nutrition/consult-a-sports-dietitian/>

Australian Institute of Sport

Australian Institute of Sport

<http://www.ausport.gov.au/ais/nutrition/publications/cookbooks>

Burke, L. 2007. Practical Sports Nutrition.

United States: Human Kinetics

<http://www.HumanKinetics.com>



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