

Simple to Advanced Strategies of Body Fat Reduction of Competition

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Section I

Rational for Reduced Fat

- Rational for reduced percent fat in athletes
 - Why?
 - Rational for reduced percent in most all Americans
 - Why?
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Rational For Reduced Fat

- National level athletes what you see most of
 - Usually less fat
 - Usually more basic strength
 - Is your goal to get beginning and local athletes to national level ASAP?
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Rational for Less Fat

- ❑ Why national level athletes usually have less
 - ❑ Longer experience in sport resulting in less fat
 - ❑ Usually stronger resulting in less fat
 - ❑ Mental discipline and toughness weeds people out
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Section II

The Science of Body Weight Control

- Is it complicated and lots is yet to be determined.
 - Use as much common knowledge as possible
 - Fewer calories?
 - Adjust composition of choices.
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Section II

Science of Body Fat Reduction

- Human Biology
 - Human Chemistry
 - Human Physiology
 - Human Psychology
 - Integration of the above on an individual person level is why it seem like there's no agreement
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Science of Fat Reduction

- Fat is reduced in one of two ways and both:
 1. Oxidation in the mitochondria to form ATP, CO₂ and water (exercise)
 2. Gluconeogenesis, the making of glucose using protein and fat (diet and metabolic adaptations in body)
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Science of Food Energy Intake

□ Macronutrients

- Food Energy Density
calories/gram weight
- Sensory Qualities of Food
- Effects of Satiety

□ Hunger Signals

- Ghrelin
 - Transient decreases in blood glucose
 - Neuropeptide Y and other factors
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Science of Food Energy Intake

□ Satiety Signals

- Cholecystokinin
- Insulin Levels
- Leptin
- Gastric Stretch Receptors

□ Environmental Factors

- Food Serving Size
 - Food Energy Density
 - Social Cultural Norms
 - Personal History
 - Peer Pressure
 - Socioeconomic Level
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Energy Expenditure Output

- Actual ATP Consumers
 - Skeletal Muscle contraction
 - Heart Muscle contraction
 - Nervous System Function
 - Biosynthesis of lots of stuff in body
 - Sodium/Potassium ATPase
 - Adaptive Thermogenesis (influence rate ATP use)
 - Substrate Cycles
 - Cell membrane Ion leak channels
 - Thermogenic Hormones
 - Thyroid Hormone (T3)
 - Insulin
 - Leptin
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Energy Expenditure Output

- Metabolic Inefficiency
 - Energy Transfer (2nd Law of Thermodynamics)
 - Inter-individual Differences
 - Mechanical Motor Inefficiency
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Strategies

- These are based on my own experience in working with successful and non successful athletes at local and national levels
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Section III

Simple Strategies

- Assessment of current fat level
- Diet diary and record of what all passes the lips including water, supplements, etc...
- Weigh and measure all foods
- Elimination of crap foods
- Increase consumption of quality protein
- ~~Eat more vegetables and salads~~

Simple Strategies

- ❑ No calorie counting (yet?)
 - ❑ Learning basic food energy intake and food composition education
 - ❑ Comfortable weighting, measuring and recognizing sizes
 - ❑ Learning likes, dislikes, choices while eating out, how to cook, store, plan, and etc...
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Simple Strategies

- ❑ Bottom Line: This is a lifestyle change that most all athletes and Americans can benefit from
 - ❑ Teaching an athlete to eat like an athlete (if a stranger saw you eating would they think you're an athlete)
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Section IV

Advanced Strategies

- ❑ To move to this level one must have fully mastered simple methods
 - ❑ This is temporary eating behavior modification for a time period
 - ❑ Lately there has been discussion of protein with liver and kidney issues
 - ❑ An error is to take a beginner to this level
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Advanced Strategies

- Eat 5 to 9 small feedings a day 1.5 to 3 hours apart
 - Follow strict calorie intake guidelines
 - Certain meals are protein only
 - Diet supplements are highly encouraged
 - Advanced preparation is 100% required
 - Learn how to cook
 - Learn your body
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Advanced Strategies

- ❑ Serving sizes are clearly known
 - ❑ Protein Sources: egg whites, poultry breast, flank steak, white fish, whey protein powder (vegetarians)
 - ❑ Complex Carbs: oatmeal, potatoes, hot breakfast cereal, rice
 - ❑ Vegetables: broccoli, asparagus
 - ❑ Fruit: apples
 - ❑ Water: liquid beverage 16 cups/day
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Advanced Strategies

- Typical day (repeat)
 - 7am egg whites, hot cereal
 - 9am poultry breast
 - 11am red meat
 - 1pm rice, egg whites
 - 3pm poultry breast
 - 5pm vegetables, fish
 - 7pm egg whites
 - 9pm protein shake
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Advanced Strategies

- High/Low Carbohydrate-Protein Rotation (repeat)
 - Day 1 Protein all day till bed time, have hot cereal
 - Day 2 Same as day one
 - Day 3 Remove protein calories add fruit to match calories
 - Day 4 Remove 50% protein and increase complex carbohydrates to match calories
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