

2012

# Metabolic complications of obesity

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## Recommended Citation

Klein, Samuel, "Metabolic complications of obesity" (2012). *2012 Ethics Series: What Makes Research Ethical*. Paper 1 Human Research Protection Office.

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# Metabolic Complications of Obesity

**Coronary Heart  
Disease**



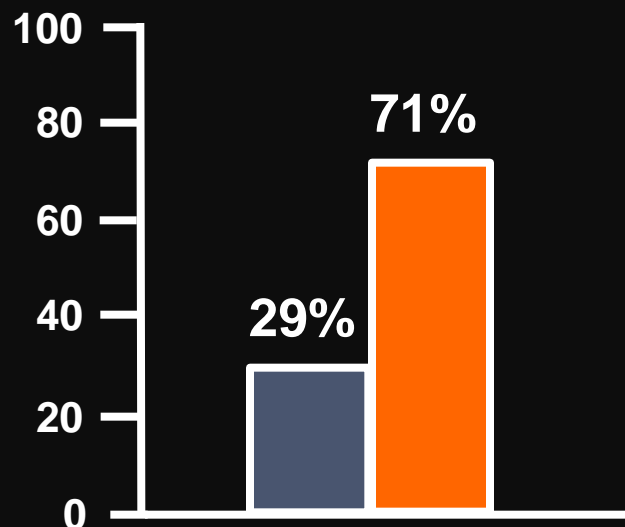
**Insulin resistance  
(Diabetes)**

**Atherogenic  
Dyslipidemia**

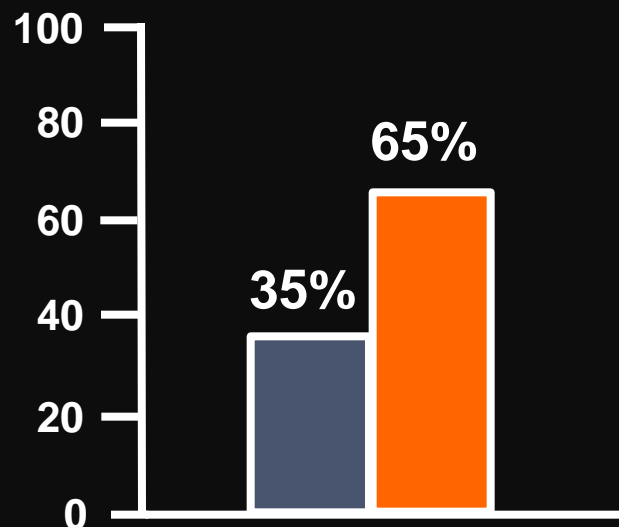
**Nonalcoholic fatty  
liver disease**

# Prevalence of Metabolically-normal and Metabolically-abnormal Obesity in US Adults

## Men



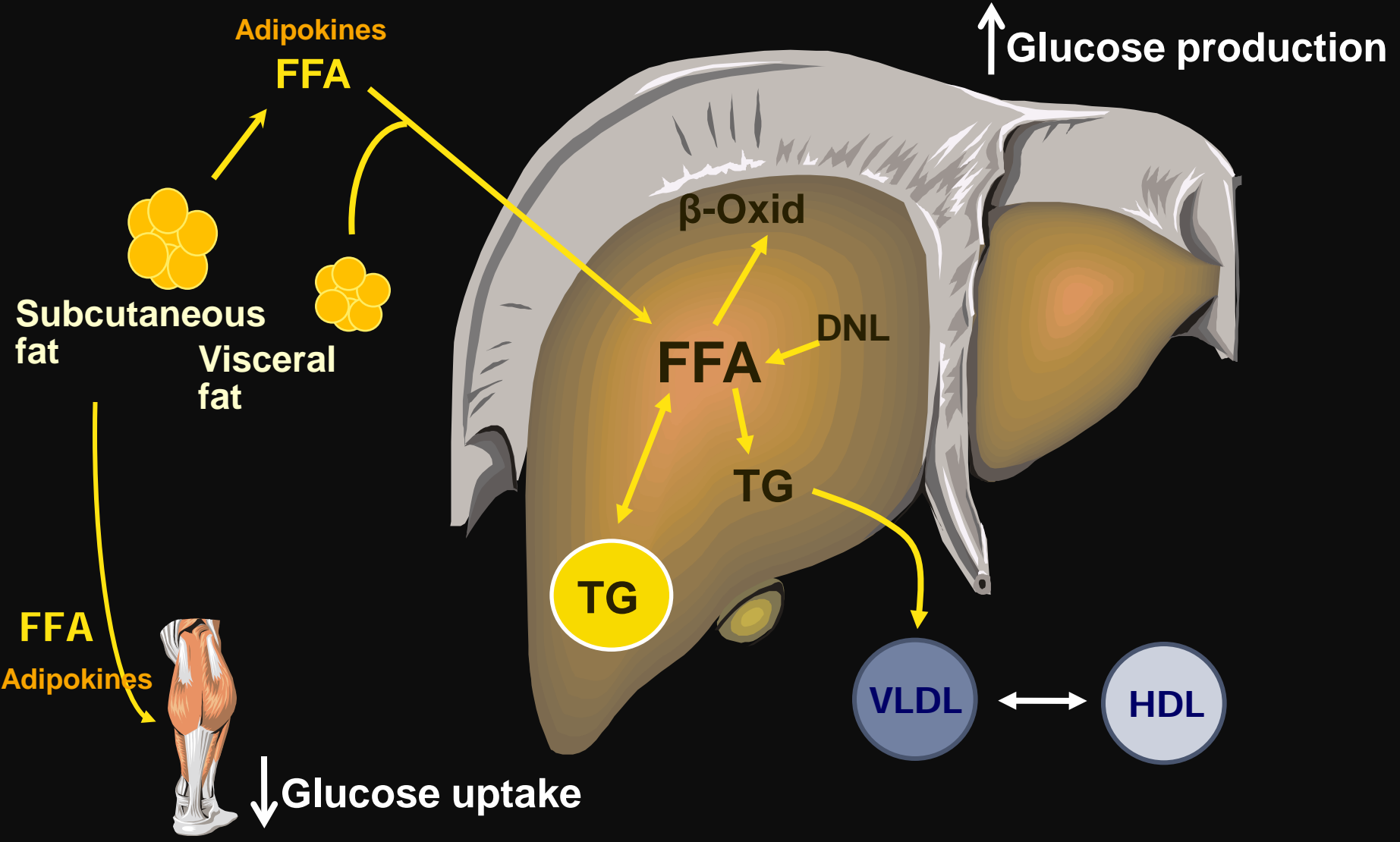
## Women

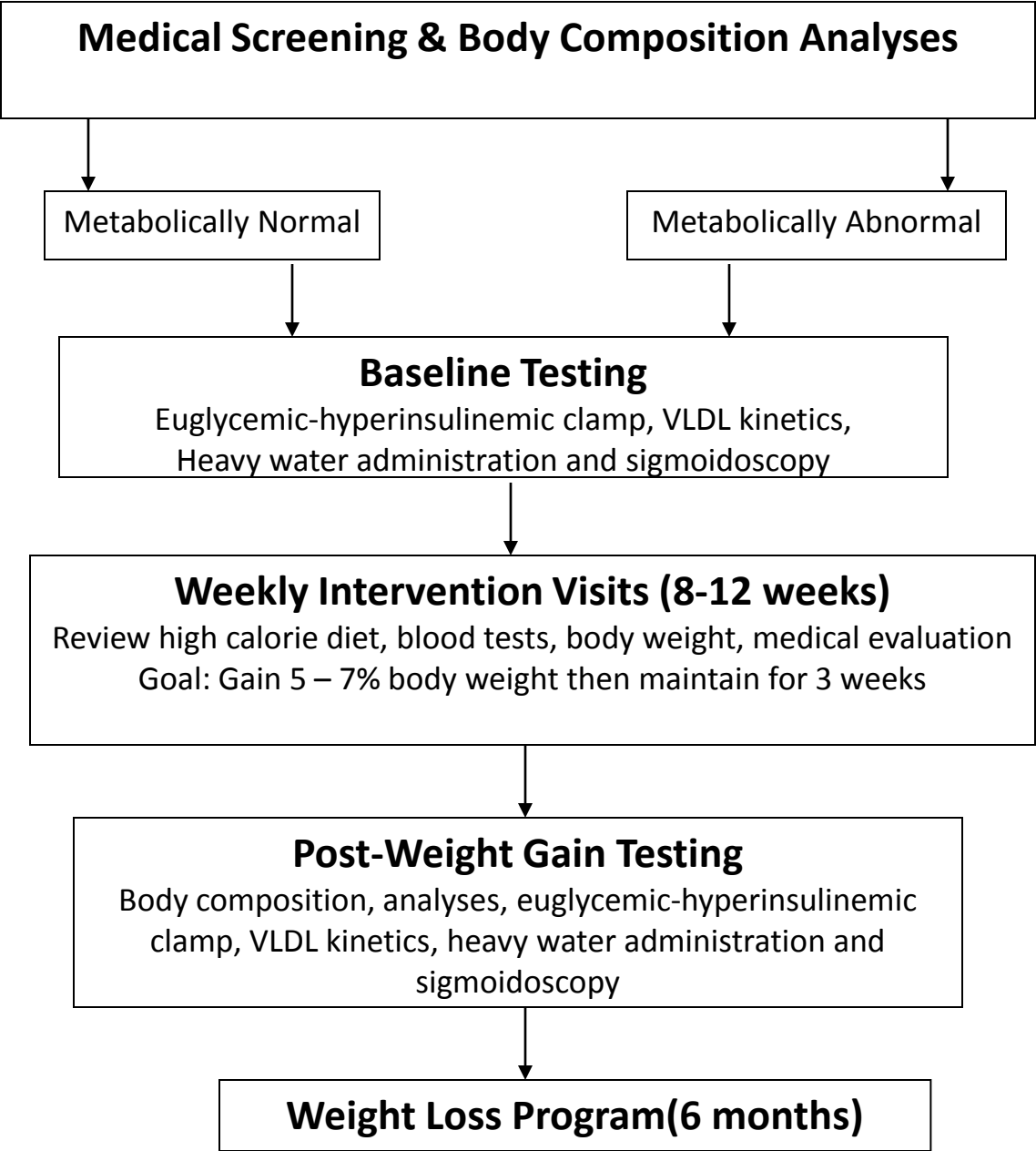


 Metabolically normal

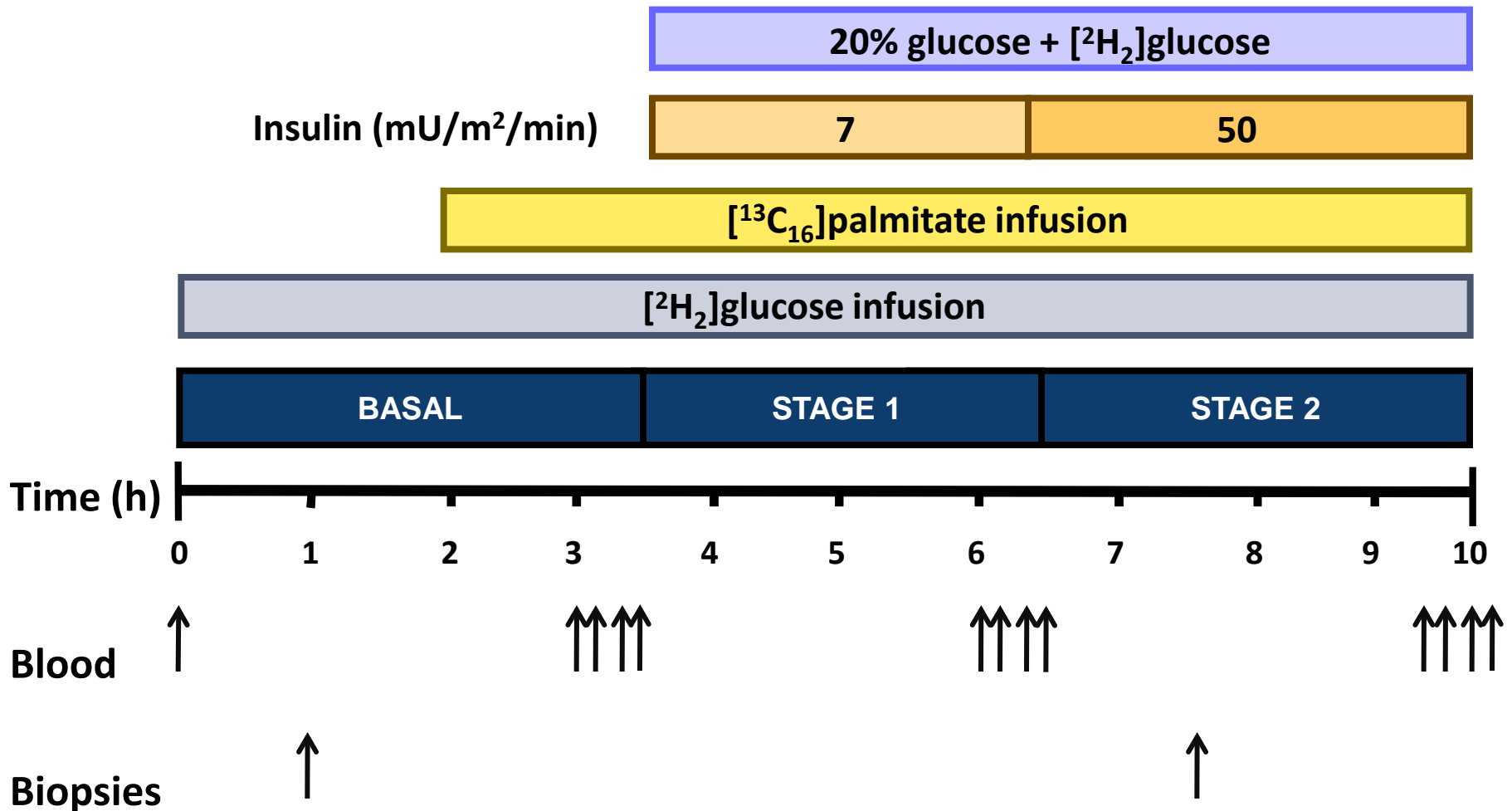
 Metabolically abnormal

# Pathogenesis of Obesity-related Metabolic Dysfunction and NAFLD

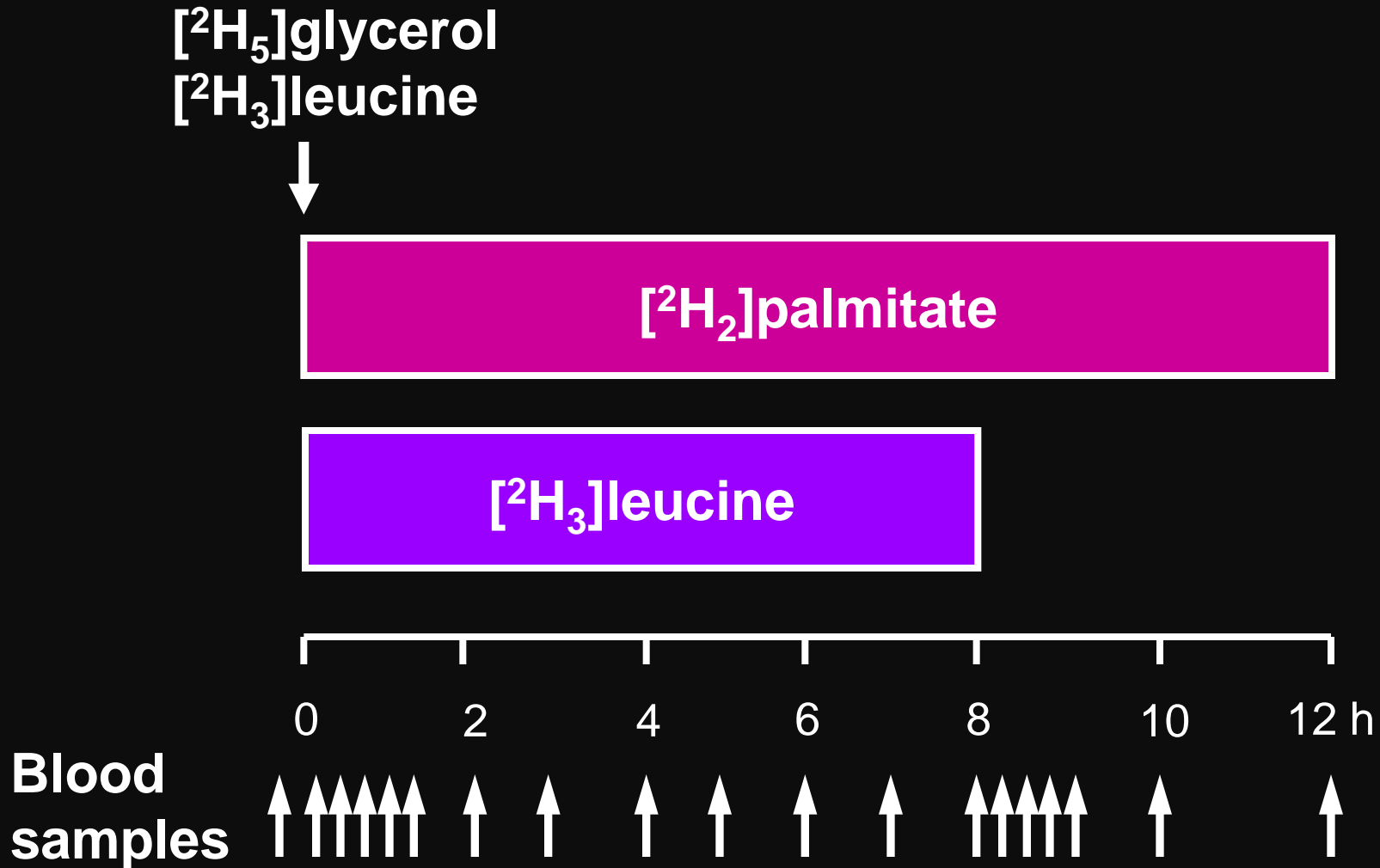




# Two-stage hyperinsulinemic-euglycemic clamp procedure



# Measurement of VLDL Kinetics



# Weight Gain Intervention

- Estimated total daily energy expenditure + 1,000 additional calories
- Additional calories must come from:
  - McDonald's
  - Burger King
  - Kentucky Fried Chicken
  - Pizza Hut
  - Taco Bell



# Supervised Weight Loss after Weight Gain

- Eliminate 1,000 additional fast food calories
- Decrease daily calorie intake by 30% of estimated total daily energy expenditure
- Structured meal plan
- Increase physical activity
- Cognitive Behavioral Techniques include:
  - Self-monitoring
  - Goal-setting