## RESERVATIONS ABOUT THE MEDIFASTI PIET

Max Siegrist, Beloit College, Beloit, WI

**ABSTRACT:** I hypothesized that an increase in meal frequency may cause a decrease in caloric intake and help prevent heart disease. Research obtained from peer reviewed scientific journals support my hypothesis. Total cholesterol concentrations are lower in people who eat four or more meals a day than those who eat only one or two. Eating more frequently also lowers low-density-lipoprotein (LDL) concentrations in the body. Healthier weight-height proportions have been observed in those who eat more frequently, along with a decrease in skin fold thickness. The Medifast Diet's 6 meals a day may have significant health benefits.

**INTRODUCTION:** Eating 6 meals each day is unconventional, but is it better for your health? The protein-supplemented modified fasting program known as the Medifast diet is an on-line diet that ships portioned meals to its customers through the mail (4). It is a low calorie diet, only allowing 800 to 1,000 calories a day. The diet is based on a daily 5 & 1 plan, 5 Medifast meals and 1 Lean and Green meal. The 5 Medifast meals are smaller snack sized meals including shakes, soups, bars, and puddings. The 1 Lean and Green meal is made up of a 5-7oz cut of lean meat and 3 servings of low carbohydrate vegetables. The diet also provides a vegetarian option. My hypothesis is that eating 6 meals a day will decrease appetite and caloric intake each day. This poster presents the results of my inquiry, along with my recommendation for a healthy diet.

METHOD: Research obtained from peer-reviewed scientific journals was reviewed.

**RESULTS:** Total cholesterol concentrations are lower in people who eat four or more meals a day than in those who eat only one or two (1). Eating more frequently also lowers LDL concentrations in the body, which is better for health (1). Healthier weight-height proportions have been observed in those who eat more frequently along with a decrease in skin fold thickness (2). Individuals who eat less frequently tend to form more fat deposits than more frequent eaters (2). Those who eat more frequently have a healthier fat distribution with a lower body mass index and weight height ratio (2). When the same food is eaten as 10 meals or 1 meal in a day, the cholesterol concentrations are highest when the food is consumed in 1 meal and lowest in 10 meals (1).

If one decreases the amount of nutrients obtained from each meal by eating more frequently, the total and LDL cholesterol concentrations will drop (3). Fewer carbohydrates in a meal results in less insulin secretion which in turn produces less HmG-CoA reductase, the enzyme that synthesizes hepatic cholesterol (3). An increase in LDL receptors occurs when less cholesterol is synthesized, which causes lower total and LDL cholesterol concentrations (3). Also, fewer nutrients per meal result in less fluctuation of insulin concentrations throughout the day causing lower cholesterol (1). Those who eat four meals each day on average have 2.5% lower cholesterol concentrations than those who eat only once or twice each day (1). If cholesterol is reduced by 1% the risk of a coronary heart attack is lowered by 2% (1).

**DISCUSSION:** The many studies I have cited indicate the benefit to health from eating smaller meals more frequently throughout the day. The information I found supports my hypothesis. The Medifast Diet's 6 meals a day may provide significant health benefits.

The Medifast's 5 & 1 plan is a healthy way to lose weight and lower cholesterol concentrations. Although this is true, one does not have to use the Medifast Diet to obtain these results. Based on my nutrition studies, it is healthier to eat a whole food plant based diet with at least 6 meals each day in smaller portions. Along with a healthy diet it is important to exercise at least thirty minutes each day.

## References:

- 1. Edelstein, Sharon L. "Increase Meal Frequency Associated Choleserol Concentrations." AJCN 55 (1992): 1-6. 15 Sept. 2007.
- 2. Fabry, P. "Effect of Meal Frequency in School Children." AJCN 18 (1966): 1-4. 15 Sept. 2007.
- 3. Jenkins, David J. "Metabolic Atvantages of Spreading the Nutrient Load." AJCN 55 (1992): 1-7. 15 Sept. 2007.
- 4. The Medifast Diet. 1 Jan. 2007. Medifast. 15 Sept. 2007 <a href="http://www.medifastdiet.com">http://www.medifastdiet.com</a>.