# Retrospective study of weight loss and reduction in body mass index (BMI) using a 10 day ketogenic feeding tube diet in 231 patients

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### **Abstract**

Obesity is a worldwide health concern with about 35% of adults (age 20 and over) in the United States qualifying as obese [1]. Obesity is additionally correlated with multiple adverse comorbidities [2, 4]. Weight loss can help eliminate these conditions while increasing vitality and decreasing morbidity. Single or multiple cycles of a 10 day ketogenic feeding tube diet in obese patients can help induce rapid weight loss and reduce body fat mass [2, 3, 4].

# Purpose

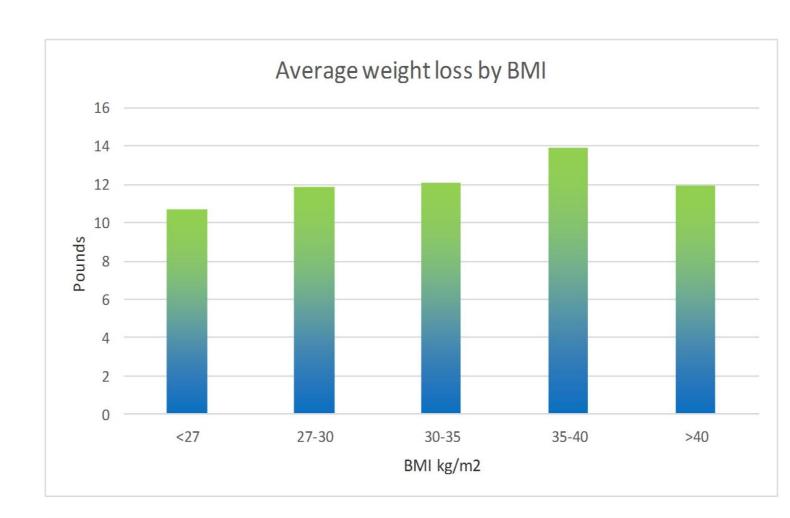
This retrospective study was to examine weight loss utilizing a medically supervised weight loss therapy using a ketogenic feeding tube diet for 10 days.

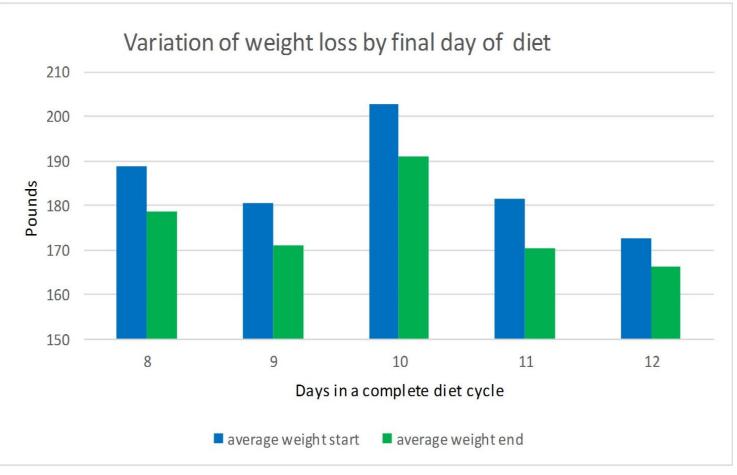
## Methods

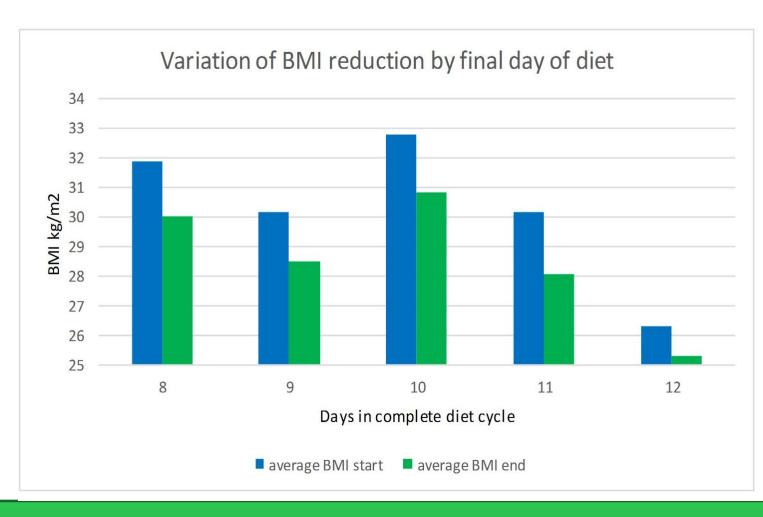
The KE Diet® Patient Registry data of 231 patients from four obesity medicine specialists were analyzed. Patients were counseled not to eat and received approximately 800 kcal/day of protein and fat. 124 patients out of 231 completed a 10 day cycle (8 patients completed more than 10 days, 99 patients completed less than 10 days). Data were analyzed for the subset of 183 patients who completed 8 to 12 days. While most patients target a 10 day treatment, when the final day falls on a weekend or the patient is unable to have the tube removed on the designated day, then the number of days can vary from 8 to 12. Male and female patients' weight and BMI were evaluated on the day the tube was inserted "day 0" and the day the tube was removed "day 10" respectively.

# Results

- Initial weight ranged from 128-464 lbs., with an average weight of 196.5 lbs.
- Initial BMI ranged from 24.2-62.9 kg/m² with an average BMI of 32.1 kg/m².
- Ending weight ranged from 116.7-447.2 lbs. with an average final weight of 185.5 lbs.
- Ending BMI ranged from 22.1-60.6 kg/m² with an average final BMI of 30.2 kg/m².
- Average total BMI loss over a 10 day diet cycle was 2.0 kg/m².
- The average total weight loss over the 10 diet cycle was 12.1 lbs.







#### Results



## Conclusions

A carbohydrate free, ketogenic feeding tube diet for 10 days is a viable option for obese patients needing weight loss. The diet was tolerated well with minimal hunger, diarrhea & cramps.

#### References

- 1. Carroll, M., Flegal, K., Kit, B., & Ogden, C. (2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. *Journal of the American Medical Association, 311*(8), 806-814.
- 2. Barisione, G., Borrini, C., Gradaschi, R., Ivaldi, C., Machello, N., Nanetti, E., ... Sukkar, S. (2013). Feasibility of protein-sparing modified fast by tube (ProMoFasT) in obesity treatment: a phase II pilot trial on clinical safety and efficacy (appetite control, bady treatment: a phase II pilot trial on clinical safety and efficacy (appetite control, body composition, muscular strength, metabolic pattern, pulmonary function test). *Mediterranean Journal of Nutrition and Metabolism, 6*, 165-176.
- 3. Cappello, A., Cappello, G., De Luca, P., & Franceschelli, A. (2012). Ketogenic enteral nutrition as a treatment for obesity: short term and long term results from 19,000 patients. *Nutrition & Metabolism*, *9*(96), 1-7.
- 4. Cappello, A., Cappello, G., De Luca, P., & Franceschelli, A. (2012). Weight loss and body composition changes following three sequential cycles of ketogenic enteral nutrition. *Journal of Research in Medical Sciences*, 17(12), 1114-1118.