Exploring Optimal Macronutrient Composition in Nutrition Therapy for Type 2 Diabetes

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Key Areas of Focus
- Comparison in variance of macronutrient compositions in Type 2 diabetes nutrition therapy
- Studies emphasizing higher protein diets in comparison to higher CHO diets
- Studies emphasizing higher fat diets in comparison to higher CHO diets
- Overall conclusions derived from research review

Diabetes Is On the Rise

Fat vs. CHO Studies

Brehm Study:
Test population: 124 participants (overweight/obese, T2D)
Diet groups: high CHO group, high MUFA group
Diet compositions:
- High MUFA diet (45% CHO, 15% protein, 40% fat) half of the fats being from MUFA
- High CHO diet (60% CHO, 15% protein, 25% fat)
Study duration: 12 months
Findings: Similar changes in parameters experienced in both diet groups

Davis Study:
Test population: 105 participants (overweight/obese, T2D)
Diet groups: (55) low CHO group, (50) low fat group
Diet compositions:
- Low CHO diet (Instruction given, data not recorded)
- Low fat diet (Instruction given, data not recorded)
Study duration: 12 months
Findings: According to the results, a low CHO diet is superior to a low fat diet in nutrition therapy for Type 2 diabetes

References:

Common Parameters Analyzed
- HbA1c (%)
- Fasting glucose (mg/dL)
- Blood Pressure (mmHg)
- Body Weight (kg)
- Insulin (pmol/L)
- Triglycerides (mmol/L)
- Body Fat (%)
- HDL-cholesterol (mg/dL)

Protein vs. CHO Studies

Sargrad Study:
Test population: 12 participants (overweight/obese, T2D)
Diet groups: (6) high CHO group, (6) high protein group
Diet compositions:
- High protein diet (40% CHO, 30% protein, 30% fat)
- High CHO diet (55% CHO, 15% protein, 30% fat)
Study duration: 8 weeks
Findings: Similar changes in parameters experienced in both diet groups

Larsen Study:
Test population: 99 participants (overweight/obese, T2D)
Diet groups: (46) high CHO group, (53) high protein group
Diet compositions:
- High protein diet (40% CHO, 30% protein, 30% fat)
- High CHO diet (55% CHO, 15% protein, 30% fat)
Study duration: 12 months
Findings: Similar changes in parameters experienced in both diet groups

Overall Conclusions
- Collectively, a concise conclusion on the superiority of a specific diet for Type 2 diabetes nutrition therapy was not met.
- A consistent outcome in each study was the improvement of overall health in the test participants, despite the variations of macronutrient composition in the diets test participants were prescribed.
- Therefore, based off of the reviewed studies, there is no optimal macronutrient composition for diet intervention in patients with Type 2 diabetes. The better diet is the one that the patient can adhere to the most, as long as nutrient recommendations are met.