



# Exploring Optimal Macronutrient Composition in Nutrition Therapy for Type 2 Diabetes

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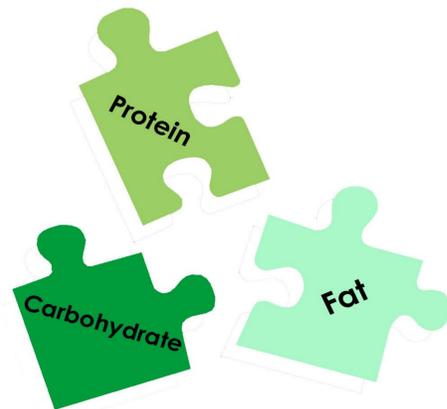


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## Common Parameters Analyzed

- 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)

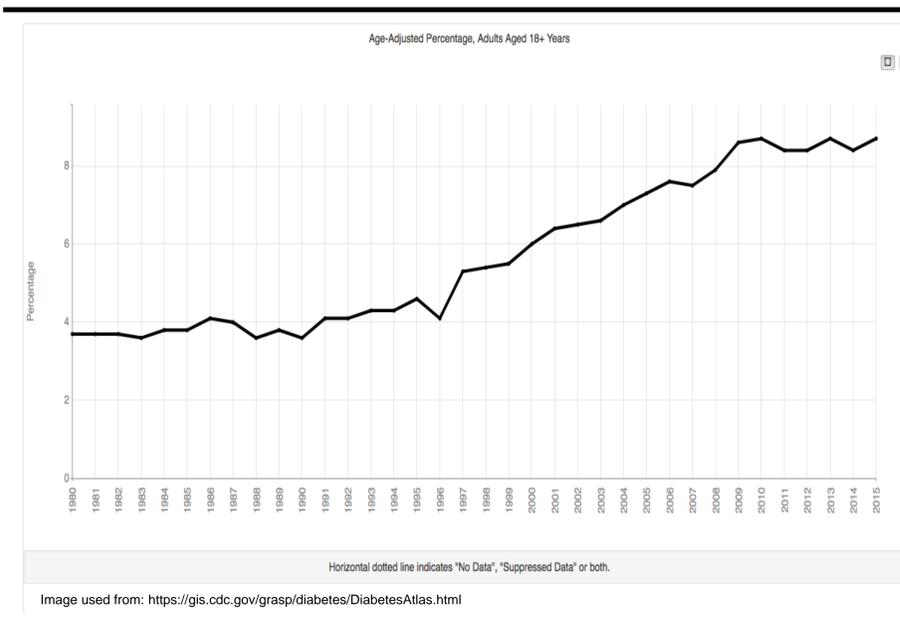
**Study duration:** 12 months

**Findings:** Similar changes in parameters experienced in both diet groups

## Key Areas of Focus

- Comparison in variance of macronutrient compositions in Type 2 diabetes nutrition therapy
- Common parameters analyzed among all six studies used
- 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



## 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**.

## 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:

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