

Evaluation of a Pre-Pregnancy Whole Person Care Program to Support Nutrition Related Biomarkers Among People Planning Pregnancy

Introduction

Previous Studies

Explored how to optimize health and nutrition during pregnancy and less attention has been given to the preconception period.

The Goal:

How to enhance health and nutrition before conception is essential, as it lays the foundation for a healthy pregnancy and fosters a supportive postpartum environment.

Gaps in Care

Less emphasis has been placed on evaluating these factors in women who are trying to conceive naturally.

Several Key Biomarkers

Thyroid antibodies, insulin resistance, folate, and vitamin D – are known to influence fertility during the preconception period and play a vital role in shaping reproductive outcomes.

Objective

To describe and explore changes in blood markers of nutritional status, blood glucose regulation and thyroid health, among women participating in a preconception care program that incorporates culinary medicine at a Southern California Integrative Health Institute.

Methods

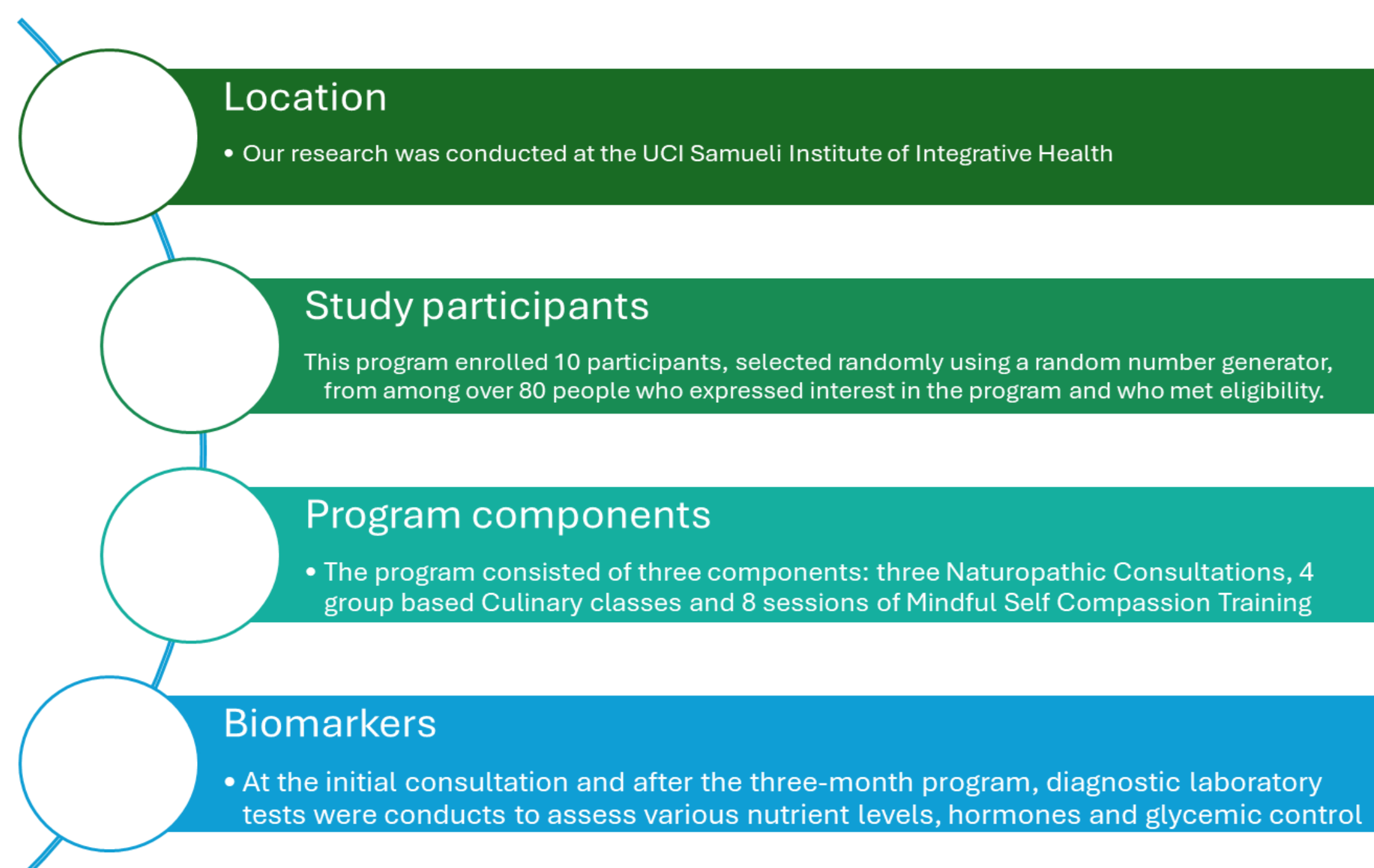


Table 1: Participant Demographics (n=10)

Patient Characteristics	n (%)	Patient Characteristics	n (%)
Race		Marital Status	
Black / African American	10%	Married	80%
White	40%	Living with Partner	20%
Hispanic / Latino	50%	Education	
Asian	30%	4 Year College Degree	50%
American Indian	20%	Advanced Degree (Master's or Doctorate)	50%
Native Hawaiian	10%		

Results

Figure 1: Proportion (%) with Abnormal Lab Values at Baseline

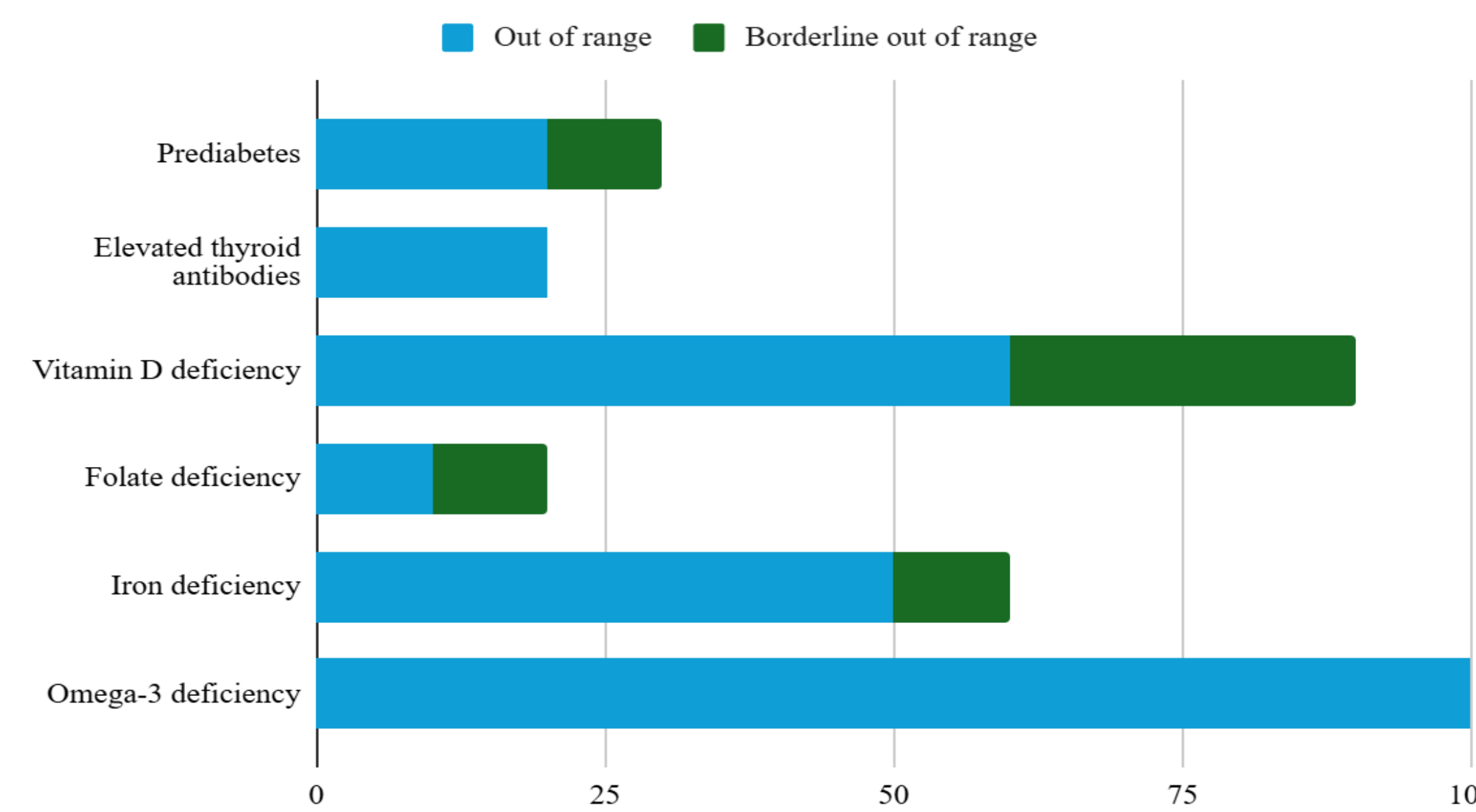


Figure 2: Changes in Hemoglobin and Ferritin Pre and Post Program

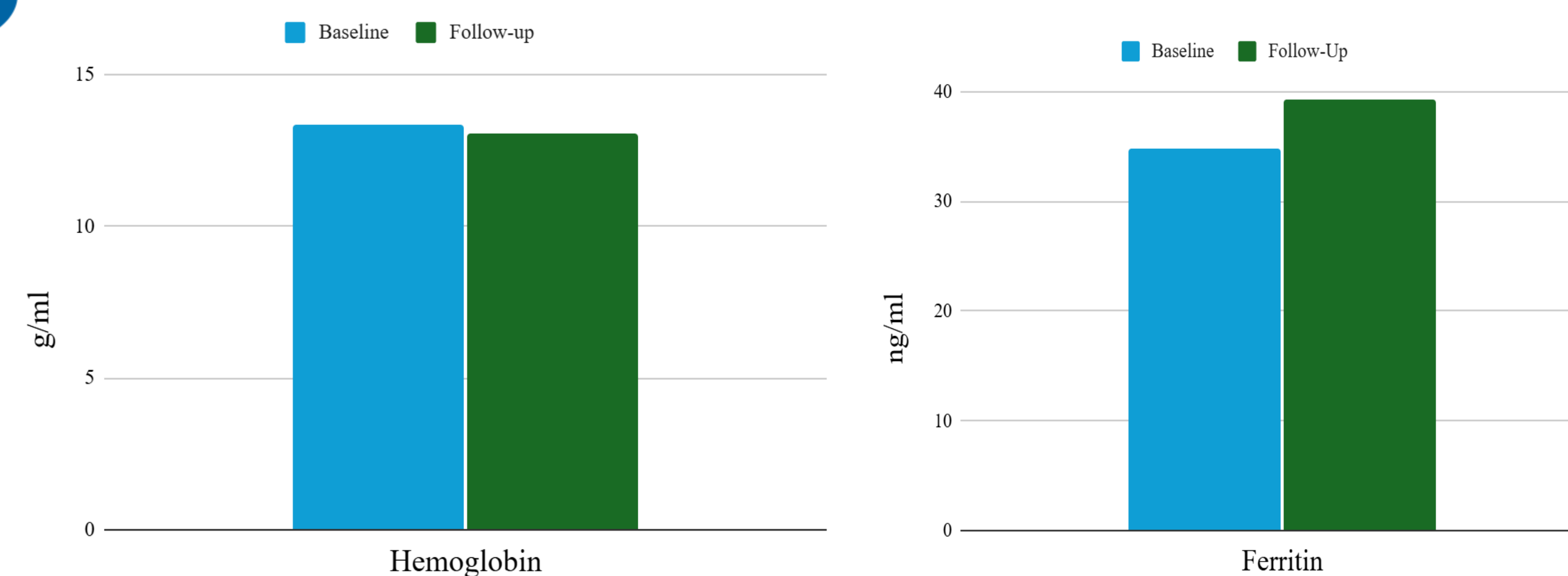
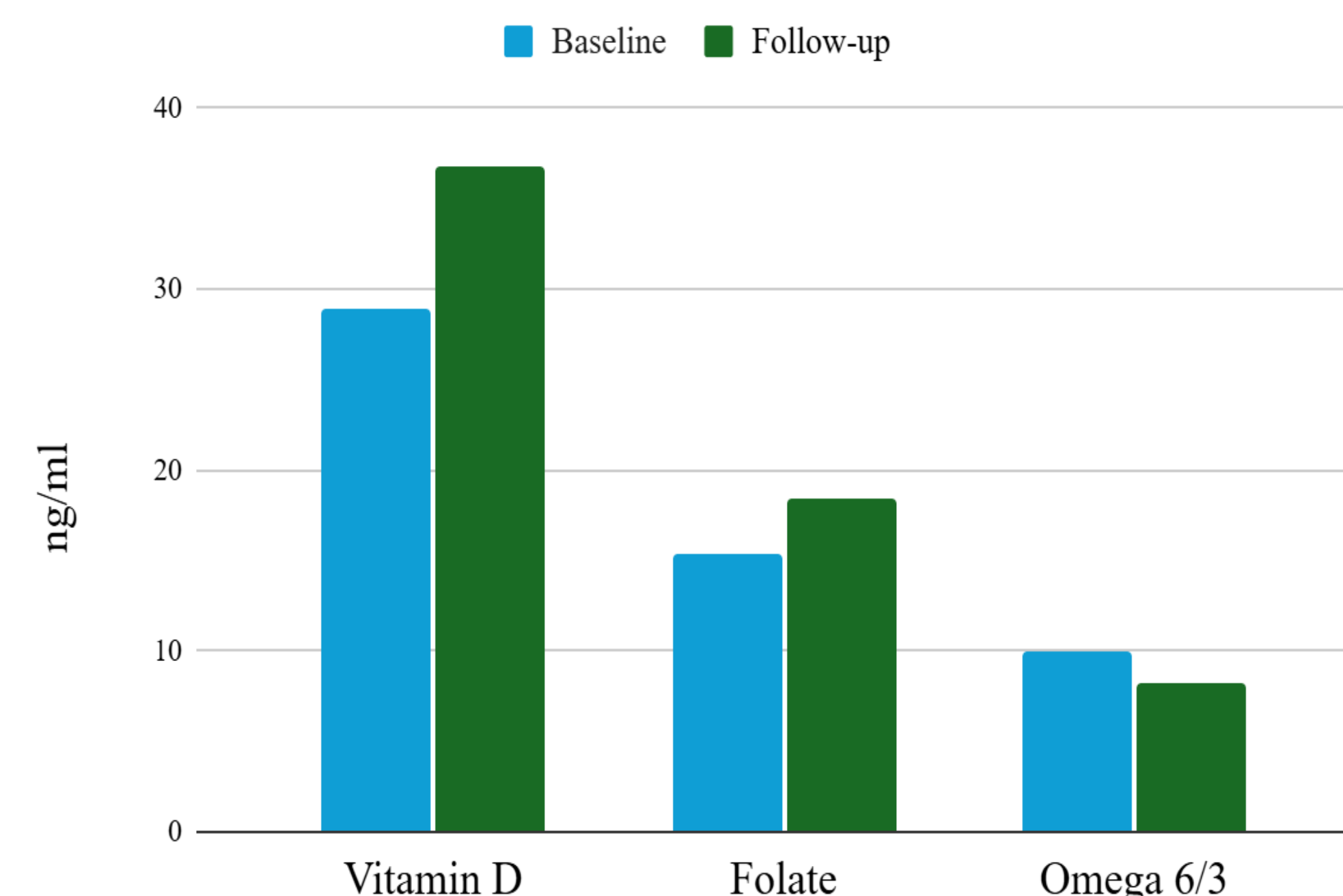
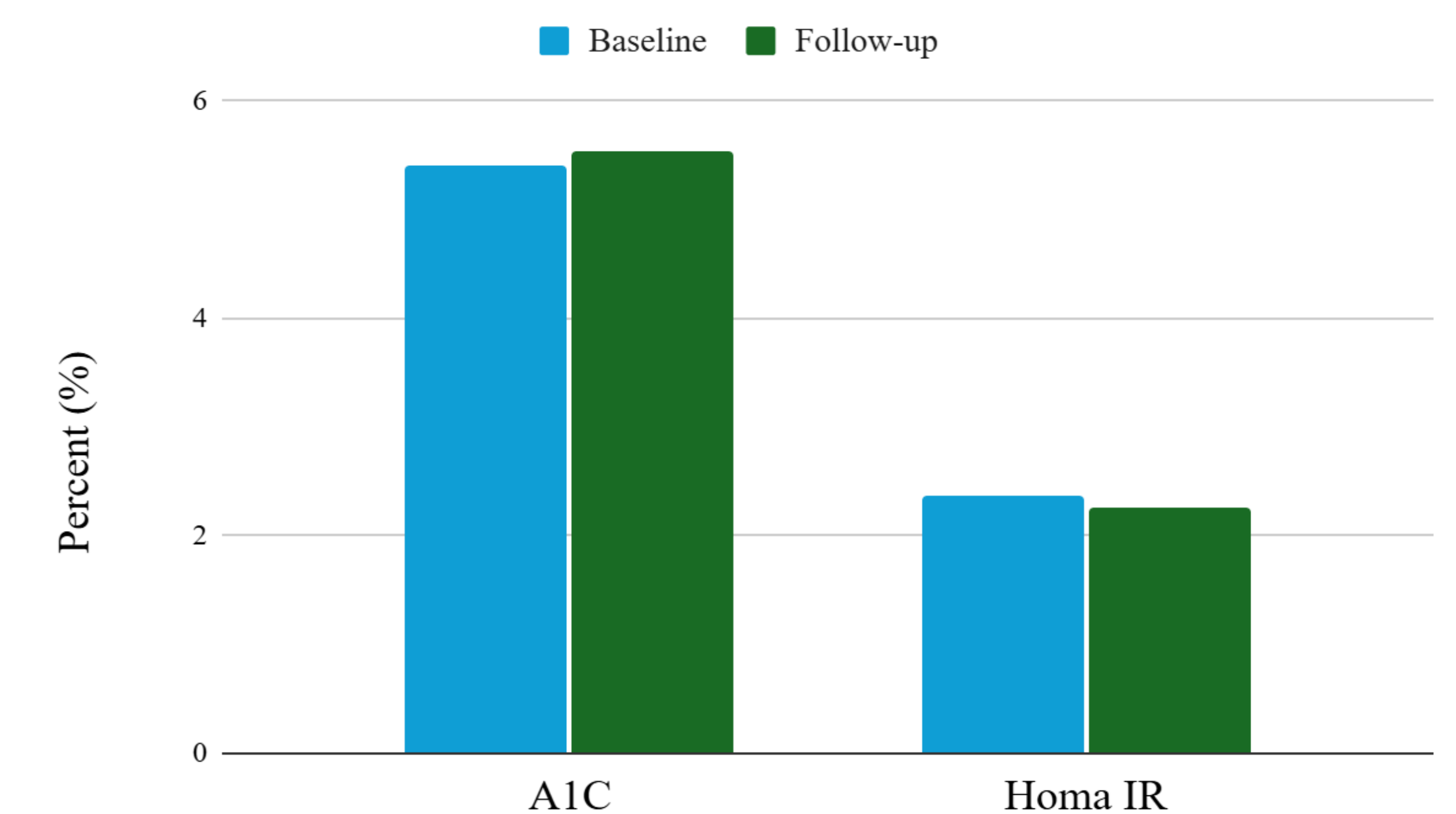


Figure 3: Changes in Blood Nutrient Levels Pre and Post Program



Note: omega-6/omega-3 ratio is unitless

Figure 4: Changes in Glucose Control and Insulin Resistance Pre and Post Program



Note: Units are provided for A1C levels; Homa-IR is unitless.

Discussion

Key Findings

This program was able to detect several nutritional deficiencies and, in some cases, untreated medical conditions which are known to impact fertility and healthy pregnancies

Limitations

The short timeframe between blood draws may not have allowed sufficient time for participants to fully integrate the tools provided in the classes and consultations, limiting the potential for significant biomarker changes.

Future Avenues

- We plan to extend the duration and increase the time between blood draws to better capture physiological changes in response to lifestyle modifications.
- We aim to expand the program's holistic care components by incorporating acupuncture, one-on-one nutrition counseling and health coaching, and a structured fitness component.
- We plan to integrate virtual sessions via Zoom to improve accessibility and flexibility for participants. By refining the program structure and broadening its scope, we hope to create a more comprehensive and impactful approach to preconception health.

Acknowledgment & References

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