

# Assessing Patient Perspective of Diet and Exercise in Patients Taking Semaglutide: An Educational Intervention

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## Purpose

The DNP project aimed to: assess the effectiveness of an educational intervention focused on improving patient knowledge and receptiveness of making necessary diet and exercise changes during their semaglutide treatment plan.

## PICOT

“For patients 18 years and older who have received at least one semaglutide injection for weight loss, how will an educational handout compared to current verbal education, enhance patient understanding and perspective of lifestyle modifications necessary during and after treatment with semaglutide?”

## Methodology

Conducted at an outpatient medical facility in Indianapolis, IN.

- Inclusion Criteria:** 1) adult 18 years or older without diabetes; 2) must be either overweight (BMI  $\geq$  27) plus at least one comorbidity, or obese (BMI  $\geq$  30); 3) individual is an established patient who has received an initial evaluation and blood work from the DNP-FNP for clearance; and 4) has received at least one semaglutide injection.
- Project:** 21 days in length with two data collection periods.
- Days 1-14:** Patients were invited to participate in the project via HIPAA-compliant email. An embedded link was used to redirect them to Qualtrics containing the:
  - Pre-survey
  - Education intervention
  - Post-survey
  - Post intervention email containing educational rack card
- Days 15- 21:** Patients were invited for the second data collection point.
  - Post-survey: reassessing knowledge, exercise and diet habits, and readiness to change lifestyle behaviors.
- Surveys:** Assess knowledge, diet and lifestyle habits, and readiness to change utilizing the Readiness Ruler tool.
- Educational intervention:** Evidenced-based diet and exercise changes recommended while on semaglutide.
- Tools used to collect and analyze data:**
  - The Readiness Ruler tool to measure motivation to change
  - PPT development tool for the educational intervention
  - YouTube to host educational 6-minute video
  - Canva development tool for educational rack card
  - Qualtrics to develop, host, collect, and analyze survey data
  - DemandForce to send HIPAA-compliant patient email invitation

## Background

- Obesity is a public health crisis and poses a global health challenge as it is a multifactorial, complex, and progressive chronic disease with a substantial burden on individuals, society, and the economy** (Amaro et al., 2022; Rubino et al., 2021).
- Obesity is defined as a body mass index (BMI) of  $\geq$  30 kg/m<sup>2</sup> in adults (WHO, 2021). Losing  $\geq$  5% of body weight prevents and improves weight-related health complications (Wharton et al., 2022).
- Lifestyle modifications such as healthy eating and physical activity which are foundational to obesity management may not be enough to achieve long-term health benefits.
- Up to 90% of individuals with obesity are unable to keep weight off long term, impartially due to difficulties adhering to lifestyle interventions and compensatory changes in appetite-regulating hormones, which act to maintain normal weight homeostasis (also known as metabolic adaptation), thus leading to weight regain (Bray et al., 2017; Garvey et al., 2016; Kaplan et al., 2018; Rubino et al., 2021; Updike, 2021; Wharton et al. 2022).
- In 2017, the United States Food and Drug Administration (FDA) approved Semaglutide, a subcutaneous injectable glucagon-like-peptide (GLP-1) to combat the obesity and diabetic epidemic.**
- GLP-1 prompts the body to produce more insulin, reducing blood sugar (glucose).
- GLP-1 in higher amounts interacts with parts of the brain to suppress appetite and signal individuals to feel full (satiety).
- The effectiveness of semaglutide is leading society to the misconception that this pharmacological drug can be used without changing lifestyle behaviors such as diet and exercise.**
- When semaglutide is used in conjunction with diet and exercise, it can cause significant weight loss, reduce side effect profile, lead to an enhanced decreased risk of health conditions and diseases, and lead to long-term weight loss (Amaro et al., 2022; Muller, 2019; Rubino et. al., 2021).
- Based on current evidence, there is an underrepresentation of diet and exercise educational materials available to healthcare providers to provide patients using semaglutide for weight loss.**



## SEMAGLUTIDE EDUCATION

While taking semaglutide it is recommended to:

- Engage in 150 min. of physical activity/week**  
Exercising plays a large role in successful weight loss with semaglutide. If a workout plan is not put in place while taking this medication and maintained after, your weight can come back. This is called "metabolic adaptation."  
Average weight loss with diet and exercise is 10-20% of bodyweight. 5-10% without exercise.
- Reduce daily caloric intake by 500 kcal/day**  
Check the nutrition facts label for serving sizes and number of calories.
- Drink half of your body weight (lbs.) in ounces of water/day**  
Drinking water can boost your metabolism and help you feel fuller.

### Common Side Effects:

Decreased appetite  
Nausea  
Vomiting  
Diarrhea  
Constipation  
Abdominal pain  
Reflux

### Foods to AVOID:

Saturated fats  
Processed food  
Fried, greasy food  
Sugar  
Alcohol

### Food Suggestions:

**Non-starchy vegetables:** These include leafy greens, broccoli, zucchini, brussels sprouts, asparagus, cabbage, cucumber, cauliflower, squash, tomatoes, peppers, and mushrooms. They are low calories and carbohydrates and high in fibers, vitamins, and minerals.

**Whole grains:** These include brown rice, quinoa, whole wheat bread, and oatmeal. They are high in fiber, giving you energy without elevating your blood sugar.

**Lean protein:** This includes chicken, fish, tofu, and legumes. They are low in fat and can help you feeling full.

**Healthy fats:** These include nuts, seeds, avocado, and olive oil. They are high in monounsaturated and polyunsaturated fats, which can help lower cholesterol.

**Fruits:** These include berries, apples, oranges, and bananas. They are high in fiber and vitamins and can help satisfy your sweet tooth.

**Low-fat dairy:** This includes fat-free milk products, less butter, or low-fat cheese.

### 10 Tips to Get the Best Results:

- Minimize daily caloric intake by 500 kcal/day.
- Make sure you get in your exercise. Walking is a low-impact exercise that yields high results.
- Stay hydrated.
- Eat slowly- this gives your brain time to tell your body that you are full, so you do not overeat.
- Be mindful of portion control. Sometimes using a smaller plate will help keep you from taking too much food.
- Do not skip breakfast or avoiding eating at night. Eating throughout the day boosts your metabolism for fat and calorie burn.
- Stay on a consistent schedule.
- Avoid purchasing food or beverages that you are not supposed to eat. This way, you won't have access to them, and you won't be tempted.
- Spend time prepping meals and snack so they are ready to eat and easily accessible.
- Avoid getting bored of eating the same things by getting creative with your food choices. Explore low-calorie recipes online or join a social media group dedicated to healthy eating and weight loss.

## Conclusion

Currently in data collection phase.  
Survey questions and educational intervention available upon request.

## References

Available upon request.