Diabetic Management with GLP1-RA Ozempic and Diabetic Education

Submitted to the
Faculty of Liberty University
In partial fulfillment of
The requirements for the degree
Of Doctor of Nursing Practice

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Introduction

- The focus of this research is to study Type 2 Diabetics who are already on GLP-1 RA Ozempic (Semaglutide).
- Patients enrolled in the study will be given additional information pertaining to their lifestyle and methods for modification.
- The desired outcome is to support improved glycemic control through study of A1C, improved weight control through study of the patient's BMI/weight in Lbs., and improved education of diabetic management through pre and post test knowledge.

Background

- Type 2 Diabetes Mellitus prevalence
- Obesity Prevalence
- Death rates of Diabetes in the United States

Problem Statement

- Further exploration is required to assess Ozempic's effectiveness towards both type 2 diabetes and weight management.
- There has been little research conducted to assess the use of Ozempic with assisted lifestyle education for modification(s).

Purpose of the Project

- GLP-1 RA Ozempic (Semaglutide) with use of Diabetic education to improve A1C, BMI and Diabetic management comprehension.

Clinical Question

- Will patients over the age of 18, with an A1C over 7, a BMI over 30, and a diagnosis of Type 2 Diabetes Mellitus, show improvement to their AIC, BMI, weight in pounds, and diabetic management comprehension with the use of GLP1-RA Ozempic (Semaglutide) and education for lifestyle modification over a 12-week period?

Essentials of Doctoral Education for Advanced Practice Nursing

- I Scientific Underpinnings for Practice
- III. Clinical Scholarship and Analytical Methods for Evidence-Based Practice
- VI. Interprofessional Collaboration for Improving Patient and Population Health Outcomes
- VII. Clinical Prevention and Population Health for Improving the Nation's Health
- VIII. Advanced Nursing Practice

Literature Review

- Conducted to familiarize oneself with the existing knowledge on this topic
- To ensure research is not duplicated
- Identify gaps in knowledge
- Provide an overview of existing findings

Search Strategy

- Keywords
  - Ozempic
  - Type 2 diabetes
  - Lifestyle modification
  - Obesity
  - Diabetic management
- Date range
  - 2018-2023

Critical Appraisal

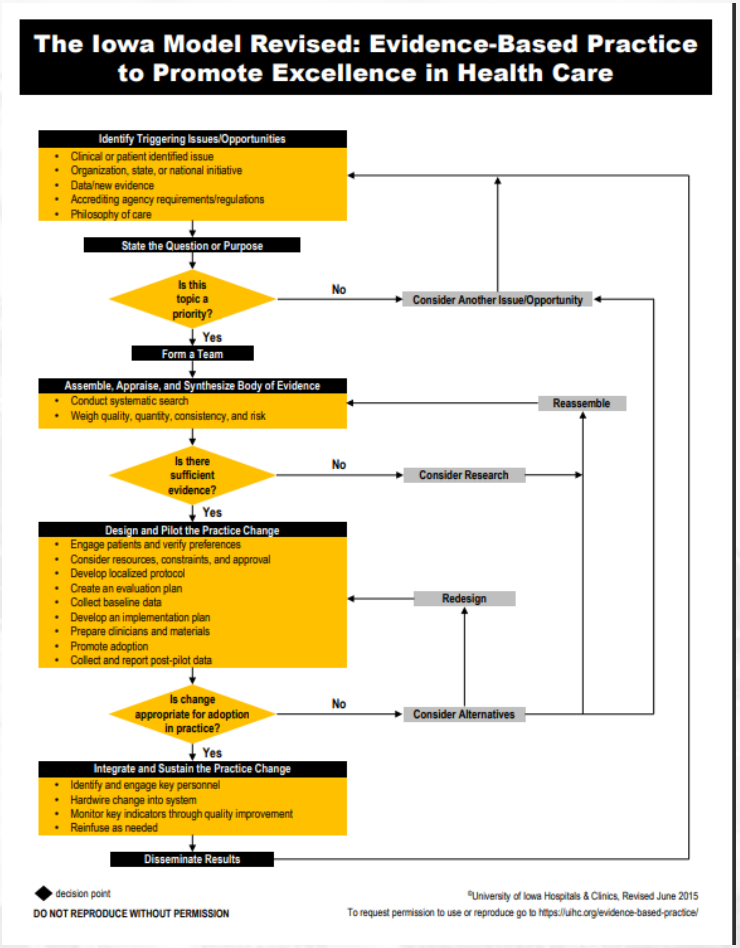
- Aroda et.al (2019)
- Chung et. al (2018)
- Davies et.al (2021)
- Ekber et.al (2021)
- Frias et.al (2021)
- Frias et. al (2021)
- Goldenberg et.al (2019)
- Mahapatra et.al (2022)
- Mohammedi et.al (2023)
- Yale et. al, (2022).
- Chawla et.al (2019)
- Garcia-Molina et.al (2020)
- Wadden et.al (2020)
- Williams et. al (2018)

Synthesis

- Semaglutide is effective for the management of type 2 diabetes.
- lifestyle modifications are effective in managing both obesity and type 2 diabetes as evidenced by glycemic control (A1C) and BMI.
- Little research to suggest that Semaglutide when paired with diabetic education for lifestyle modifications is equally or more effective.

Conceptual Framework: Iowa Model of Evidence Based Practice

- Identification of issue
- Purpose
- Insufficient evidence
- Statistically significant
- Integration



Summary

- Semaglutide is effective for weight reduction and management of Type 2 Diabetes
- Lifestyle modifications are effective for weight management as well as management of Type 2 Diabetes

Methodology

- How was the research conducted
- What tools were utilized
- Strategy
- Rationale

Design

- Experimental Design
  - Diabetic patients
    - Over the age 18
    - A1c over 7
    - BMI over 30
- Provide Education for Diabetic management every week via email
- At conclusion will compare pre and post study A1C, BMI, weight in Lbs., and pre and post self-assessment of diabetic care management comprehension

Measurable Outcomes

- A1C
- BMI
- Weight in Lbs.
- Diabetic Lifestyle Comprehension

Setting

- Outpatient
- Primary Care Office
  - Southeastern Connecticut
    - _____ Family Health Center

Population

- Adults over the age 18
- A1C over 7
- BMI over 30
- Utilizing Ozempic for Diabetic management

Ethical Consideration

- Ethical Training
- Permission requested from IRB
- Consent from each patient
- Patient confidentiality

Data Collection

- Aid from IT department
- HIPAA compliant connection

Tools

- Self-Care Inventory- Revised
  - Questionnaire/Survey
    - Evaluated diabetic lifestyle comprehension
    - Developed by Annette M. La Greca

Intervention

- Population attained
- Consulted for participation
- Consent attained
- Begin of study data collects
  - A1C, BMI and questionnaire
- One email every week supplied for total of 12 weeks
  - Total of 12 emails
    - Containing diabetic lifestyle education
- End of study data collect
  - A1C, BMI, weight in Lbs., and questionnaire
- Data compared for statistical significance

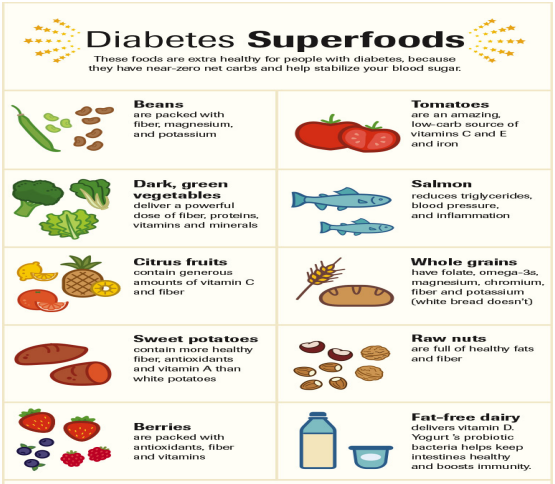
What is Diabetes

- Diabetes is a chronic (long-lasting) health condition that disrupts how your body transitions food into energy.
- Your body breaks down most of the food you consume into sugar (glucose) and releases it into your bloodstream. When your blood sugar goes up, it signals your pancreas to release insulin. Insulin acts like a key to let the blood sugar into your body's cells for use as energy.
- With diabetes, your body doesn't make enough insulin or can't use it as well as it should. When there isn't enough insulin or cells stop responding to insulin, too much blood sugar stays in your bloodstream. Over time, that can cause serious health problems, such as heart disease, vision loss, and kidney disease.

  (CDC, 2023)

- Healthier lifestyles alterations to help manage Diabetes are

• losing weight
• eating healthier foods
• being active



Diabetes Portion Control

- Knowing what to eat can be confusing—harder to manage when life gets hectic and you're trying to maintain a healthy lifestyle.
- Regardless of what cuisine you prefer, here's what all healthy eating plans have in common.
  - •Fruits and vegetables
  - •Lean meats and plant-based sources of protein
  - •Less added sugar
  - •Less processed foods

•Trying to keep it simple, try the Diabetes Plate Method. This helps to create a stress-free option to creating portion control.

- nine-inch plate
- fill half your plate with non-starchy vegetables
- one quarter of the plate of protein foods
- last quarter of the plate with carbohydrate foods
- glass of water or another zero-calorie drink

Non-Starchy Vegetable

•Amaranth or Chinese spinach
•Artichoke
•Artichoke hearts
•Asparagus
•Baby corn
•Bamboo shoots
•Beans (green, wax, Italian
•Bean sprouts
•Beets
•Brussels sprouts
•Broccoli
•Cabbage (green, bok choy Chinese)
•Carrots
•Cauliflower
•Celery
•Chayote
•Cucumber
•Daikon
•Eggplant
•Greens (collard, kale, mustard, turnip)
•Hearts of palm
•Jicama
•Kohlrabi
•Leeks
•Mushrooms
•Okra
•Onions
•Pea pods
•Peppers
•Radishes
•Rutabaga
•Salad greens (chicory, endive, escarole, lettuce, romaine, spinach, arugula, radicchio, watercress)
•Sprouts
•Squash (cushaw, summer, crookneck, spaghetti, zucchini)
•Sugar snap peas
•Swiss chard
•Tomato
•Turnips
•Water chestnuts
•Yard-long beans

Healthy Fats

•Avocado
•Canola oil
•Nuts like almonds, cashews, pecans and peanuts
•Olive oil and olives (look for low/reduced sodium)
•Peanut butter and peanut oil
•Safflower Oil
•Oily fish (salmon, sardines, herring, mackerel, tuna)
•Walnuts
•Flaxseeds and flaxseed oil
•Canola Oil
•Chia seeds
•Tofu
•Walnuts
•Flaxseed and flaxseed oil
•Canola oil
•Eggs
•Sunflower seeds
•Peanut butter

Reading Food Labels

Reading food labels can help you make better choices.

- Watch for heart healthy ingredient such as whole-wheat flour, soy, oats, olive oil, canola oil, peanut oil, nuts and seeds
- **Avoid unhealthy ingredients:** excessive salt, added sugars, saturated fats, and/or hydrogenated oil
- **Total Carbohydrates:** evaluate the grams of total carbohydrates to include sugar, complex carbohydrates, and fiber. Focusing on sugar only allows for you to miss foods which may possess added sugar or refined carbohydrates.
- **Fiber:** Look for foods with 3+ grams of fiber
- **Sugar free does not mean Carbohydrate-free**
- **No Sugar Added does not mean no Carbohydrates**
- **Fat-Free can have higher Carbohydrates, check your labels!**
- **Aim for healthier fats that were previously discussed**
- **Free Food is one with fewer than 20 calories per a serving and less than 5 grams of carbohydrates per a serving**
- **Pay attention to the serving size! If you consume more than intended then the calories will also rise, as well as carbohydrates and everything else on the label.**
- **Stay within your calorie goals**

- **Calories** = unit of energy, this is what your body consumes and utilizes for body function

- **Total Carbohydrates**= Sugar, starch, and fiber
  - **Added sugar** – not what occurred naturally
  - **Fiber** – part of plant foods that is not digested, on average healthy adults need between 25-38 grams daily
  - **Sugar alcohols** – aka sugar substitutes, (Sorbitol, Xylitol and/or mannitol, these sugar substitutes have few calories but do not ensure less carbohydrates
  - **Fats** – avoid high saturated fats or trans fats, consume more monounsaturated and polyunsaturated fats.
  - **Sodium** – 2300 mg or less per day is general recommendation, However, if you have cardiac concerns speak with your provider as they may recommend less.

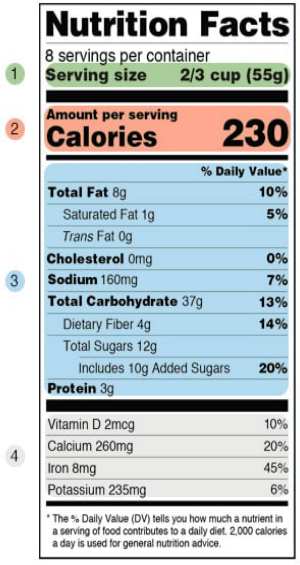
Calories
- **Calories free:** less than 5 calories per serving
- **Low calorie:** 40 calories or less per serving

Fiber
- **High fiber:** 5 grams or more of fiber per serving
- **Good source of fiber:** 2.5 to 4.9 grams of fiber per serving

Total, saturated and *trans* fat
- **Fat free:** less than 0.5 grams of fat
- **Saturated fat free:** less than 0.5 grams of saturated fat
- ***Trans* fat free:** less than 0.5 grams of *trans* fat
- than the regular version
- **Low fat:** 3 grams or less of total fat
- **Low saturated fat:** 1 gram or less of saturated fat
- **Reduced fat or less fat:** at least 25% less fat

Sodium
- **Sodium free or salt free:** less than 5 mg of sodium per serving
- **Very low sodium:** 35 mg of sodium or less
- **Low sodium:** 140 mg of sodium or less
- **Reduced sodium or less sodium:** at least 25% less sodium than the regular version

Sugar
- **Sugar free:** less than 0.5 grams of sugar per serving
- **Reduced sugar:** at least 25% less sugar per serving than the regular version
- **No sugar added or without added sugars:** no sugar or sugar-containing ingredient is added during processing



Nutrition Facts

8 servings per container

1 **Serving size** 2/3 cup (55g)

2 **Amount per serving**
Calories 230

	% Daily Value*
Total Fat 8g	**10%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
3 **Sodium** 160mg	**7%**
Total Carbohydrate 37g	**13%**
Dietary Fiber 4g	**14%**
Total Sugars 12g	
Includes 10g Added Sugars	**20%**
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
4 Potassium 235mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Exercise and Diabetes

- Patients with diabetes can benefit from exercise.
  - lower your stress levels
  - lower your blood sugar level
  - may even reduce your insulin requirements.

Recommendations

- 150 minutes of aerobic exercise weekly
- Avoid missing more than 2 days of exercise in a row

Forms of Exercise

- **Walking** – 30 minutes of brisk walking, five times each week
- **Tai Chi** - slow, smooth body movements to relax the mind and body. Research reveals improvements to blood sugar control
- **Yoga** – fluid movements that build flexibility, strength, and balance. This form of exercise lowers stress and improves nerve function, leading to an enhancement to mental health and wellness. Yoga has been shown to improve blood glucose levels due to improved muscle mass.
- **Dancing –** The mental work to remember to steps boosts brain power and improves memory. Dancing helps diabetics increase physical activity, promote weight loss, improve flexibility, lowers blood sugar and reduces stress. In 30 minutes a 150-pound adult can burn up to 150 calories
- **Swimming** – allows for stretching and relaxation of muscles while avoiding pressure applied to joints. Recommendation is to swimming 3 times weekly for at least 10 minutes while gradually increasing the length of the workout

Diabetes and Stress

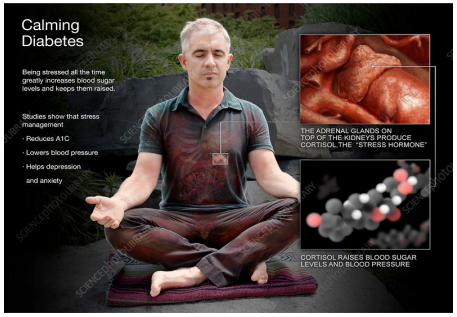
- Stressed can cause your blood sugar levels to go up.
- Anxiety can lead to poor management of your diabetes.
  - You may forget to exercise, eat right, or take your medicines.

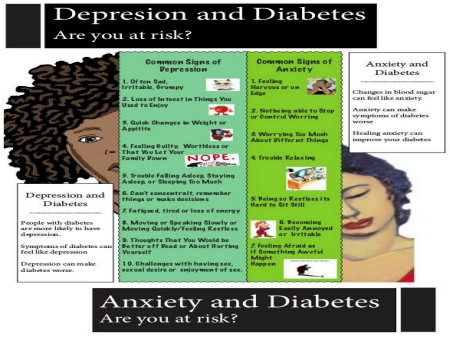
Diabetes and Depression

- Depression can affect the way, and how well you care for yourself, including your diabetic management.
- Diabetics are 2-3 tikmes more likely to develop depression.
- Only 25-50% of people with diabetes and depression attain a diagnosis and treatment.
- Symptoms of depression
  - Feeling sad
  - Lose of interest in desired activities
  - Increased or decrease appetite
  - Sleeping too much or not enough
  - Lack of concentration
  - Fatigued
  - Feeling hopeless, irritable, anxious, and/or guilty
  - Digestive symptoms

Diabetes and Stress/Anxiety

- Stressed indivudals often do not take care of themselves as well as needed.
- Stress can raise Blood sugar levels
- Diabetics are 20% more likely to have anxiety at some time in their life.
- Often Therapy is more effective than medications
- Ways to help anxiety:
  - Stay active, the calming result of exercise can last hours
  - Relaxation exercises like meditation or yoga
  - Call/test a friend
  - Create time for yourself
  - Go outside, and/or read
  - Limit alcohol, caffeine, eat a healthy diet,





- If under stress, the body releases hormones that can cause blood glucose levels to increase.
- If you're experiencing stress or feeling threatened, your body exhibits a fight-or-flight response.
- During this response, your body releases adrenaline and cortisol into your bloodstream, and your respiratory rates increase.
- This can increase blood glucose levels

Diabetes Food List

What Can I Eat?

DO EAT:

Protein

Eggs (omega3 enhanced)

Fish

- bass
- bluefish
- cod
- drum
- eel
- flatfish
- grouper
- haddock
- halibut
- herring
- mackerel
- monkfish
- mullet
- N. pike
- orange roughy
- perch
- red snapper
- rockfish
- salmon
- scrod
- striped bass
- sunfish
- tilapia
- tuna
- turbot
- walleye
- *any other wild fish*

Lean Beef

- chuck steak
- flank steak
- extra lean hamburger
- lean veal
- london broil
- top sirloin
- *any other lean cut*

Lean Pork

- lean cuts
- pork chops
- pork loin

Lean Poultry

- chicken breast
- hen breasts
- turkey breasts

Organ Meat

- liver (beef, lamb, pork, chicken)
- marrow (beef, lamb, pork)
- "sweetbreads" (beef, lamb, pork)
- tongue (beef, lamb, pork)

Other Meat

- alligator
- bear
- bison
- caribou
- elk
- emu
- goat
- goose
- kangaroo
- ostrich
- pheasant
- quail
- rabbit
- rattlesnake
- reindeer
- squab
- turtle
- venison
- wild boar
- wild turkey

Shellfish

- abalone
- clams
- crab
- crayfish
- lobster
- mussels
- oysters
- scallops
- shrimp

Fats

- avocado
- almonds
- brazil nuts
- cashews
- chestnuts
- coconut
- coconut oil
- flaxseed oil (refrigerated)
- macadamia nuts
- olive oil (extra virgin, cold pressed
- pecans
- pine nuts
- pistachios
- pumpkin seeds
- sesame seeds
- sunflower seeds
- walnuts

Carbohydrates

Vegetables

- artichoke
- asparagus
- beet greens
- beets
- bell pepper
- broccoli
- brussels sprouts
- cabbage
- carrots
- cauliflower
- celery
- collards
- cucumber
- dandelion
- eggplant
- endive
- green onion
- kale
- kohlrab
- lettuce
- mushroom
- mustard greens
- onions
- parsley
- parsnip
- peppers
- pumpkin
- purslane
- radish
- rutabaga
- seaweed
- seaweed
- spinach
- squash
- swiss chard
- tomatillos
- tomato
- turnips
- turnip greens
- watercress

Fruits

- apple
- apricot
- banana
- blackberry
- boysenberry
- cantaloupe
- carambola
- cassava melon
- cherimoya
- cherries
- cranberry
- figs
- gooseberry
- grapefruit
- grapes
- guava
- honeydew
- kiwi
- lemon
- lime
- lychee
- mango
- nectarine
- orange
- papaya
- passion fruit
- peaches
- pears
- persimmon
- pineapple
- plums
- pomegranate
- raspberry
- rhubarb
- star fruit
- star fruit
- strawberry
- tangerine
- watermelon

EAT IN MODERATION:

Beverages

- Diet sodas (if you must)
- Dry Wine
- Spirits (tequilla, gin)

Carbohydrates

- Dried fruits

DON'T EAT:

Dairy

- butter
- cheese
- creamer
- ice cream
- milk
- yogurt

Grains

- barley
- corn
- maize
- millet
- oats
- rye
- rice
- sorghum
- wheat
- wild rice

Grain-like Seeds

- amaranth
- buckwheat
- quinoa

High Glycemic Vegetables

- cassava root
- manioc
- potatoes
- tapioca

Legumes

- all beans
- black-eyed peas
- cashews
- chickpeas
- lentils
- miso
- peas
- peanuts/peanut butter
- soybean and soy products

Sugar

- candy
- fruit drinks
- honey
- soft drink

Diabetes and Food

Healthy eating is a foundation of healthy living — with or without diabetes. However, if you have diabetes, you need to know how foods affect your blood sugar levels. It may not only be the type of food you eat, but also how much you eat and the combinations of food types you ea

What to do:

•**Learn about carbohydrate counting and portion sizes.**

- many diabetes management plans involve learning how to count carbohydrates. Carbohydrates often have the biggest impact on your blood sugar levels. Those taking mealtime insulin, it's important to know the amount of carbohydrates in your food, so you get the proper insulin dose.
- •Learn what portion size is appropriate for each food type.
- •Simplify your meal planning by writing down portions for foods you eat often.
- •Use measuring cups or a scale to ensure proper portion size and an accurate carbohydrate count.

•**Make every meal well balanced.**

- •Plan for every meal to have a good combination of starches, fruits and vegetables, proteins, and fats.
- •Pay attention to the types of carbohydrates you choose.
- •Some carbohydrates, such as fruits, vegetables and whole grains, are better for you than others.
- •These foods are low in carbohydrates and have fiber that helps keep your blood sugar levels more stable.

•**Coordinate your meals and medications.**

- •Too little food in proportion to your diabetes medications — especially insulin — may result in dangerously low blood sugar (hypoglycemia).
- •Too much food may cause your blood sugar level to climb too high (hyperglycemia).

•**Avoid sugar-sweetened beverages.**

- •Sugar-sweetened beverages tend to be high in calories and offer little nutrition.
- •They also cause blood sugar to rise quickly
- •The exception is if you are experiencing a low blood sugar level. Sugar-sweetened beverages, such as soda, juice and sports drinks can be used as an effective treatment for quickly raising blood sugar that is too low.

Diabetes and Exercise

Physical activity is an important part of your diabetes management plan. When you exercise, your muscles use sugar (glucose) for energy. Regular physical activity aids your body to use insulin more efficiently. These factors work together to lower your blood sugar level. The more strenuous your workout, the longer the effect lasts. However, even light activities — such as housework, gardening, or being on your feet for extended periods — can improve your blood sugar.

What to do:

- **Talk to your doctor about an exercise plan.**
  - Most adults should get at least 150 minutes a week of moderate aerobic activity. Aim for about 30 minutes of moderate aerobic activity a day on most days of the week.
  - If you've been inactive for a long time, you may want to start slow and increase your time as tolerated.
- **Keep an exercise schedule.**
  - Think about the best time of day for you to exercise so that your workout routine is coordinated with your meal and medication schedules.
- **Know your numbers.**
  - Confirm what blood sugar levels are appropriate for you before you begin exercise.
- **Check your blood sugar level.**
  - Check your blood sugar level before, during and after exercise, especially if you take insulin or medications that lower blood sugar.
  - Exercise can lower your blood sugar levels even up to a day later, especially if the activity is new to you, or if you're exercising at a more intense level.
  - Be aware of warning signs of low blood sugar, such as feeling shaky, weak, tired, hungry, lightheaded, irritable, anxious or confused.
- **Stay hydrated.**
  - Drink plenty of water or other fluids while exercising because dehydration can affect blood sugar levels.
- **Be prepared.**
  - Have a small snack or glucose tablets with you during exercise in case your blood sugar level drops too low.
  - Wear a medical identification bracelet.

Diabetes and Medication

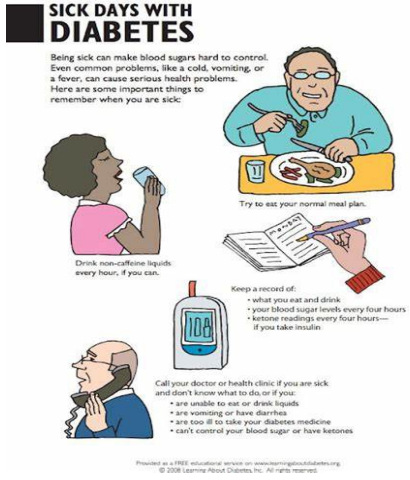
Insulin and other diabetes medications are designed to lower your blood sugar levels when diet and exercise alone aren't sufficient for managing diabetes. But the effectiveness of these medications depends on the timing and size of the dose. Other medications you take for other conditions can also affect your blood sugar levels.

What to do:

- **Store all medications properly.**
  - Insulin that's improperly stored or past its expiration date may not be effective.
  - Insulin is especially sensitive to extremes in temperature.
  - Ozempic requires refrigeration to maintain its potency
  - All Medications should be used within their labeled expiration window.
- **Report problems to your doctor.**
  - If your diabetes medications cause your blood sugar level to drop too low or if it's consistently too high, the dosage or timing may need to be adjusted.
- **Be cautious with new medications.**
  - If you're considering an over-the-counter medication or your doctor prescribes a new drug to treat another condition, ask your doctor or pharmacist if the medication may affect your blood sugar levels.
  - Sometimes an alternate medication may be recommended.

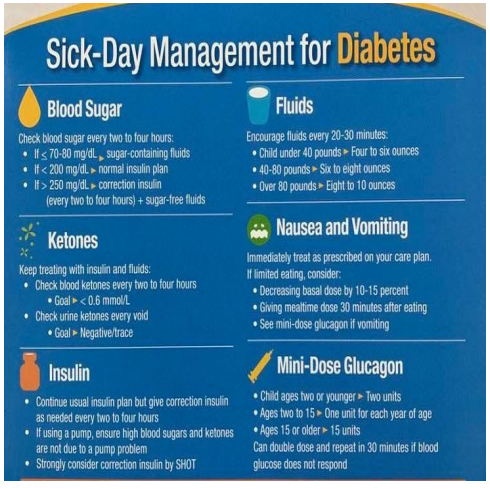
Diabetes and Illness

When you're sick, your body produces stress-related hormones that help your body fight the illness, however they can also raise your blood sugar level. Alterations in your appetite and normal activity levels can also complicate diabetes management.



What to do:

- **Plan ahead.**
  - Create a sick-day plan.
  - Include instructions on which medications to take, how often to measure your blood sugar and urine ketone levels (if applicable), how to adjust your medication dosages, and when to call your doctor.
- **Continue to take your diabetes medication.**
  - If you're unable to eat because of nausea or vomiting, contact your provider.
  - You may need to adjust your insulin dose or temporarily reduce or withhold short-acting insulin or diabetes medication because of a risk of hypoglycemia.
  - Do not stop your long-acting insulin.
  - During times of illness, it is important to monitor your blood sugars frequently, you may be instructed to check your urine for the presence of ketones.
- **Stick to your diabetes meal plan.**
  - Eating as usual will help you control your blood sugar levels.
  - Keep a supply of foods that are easy on your stomach, such as gelatin, crackers, soups and applesauce.
  - Drink lots of water or other fluids that don't add calories to ensure hydration.



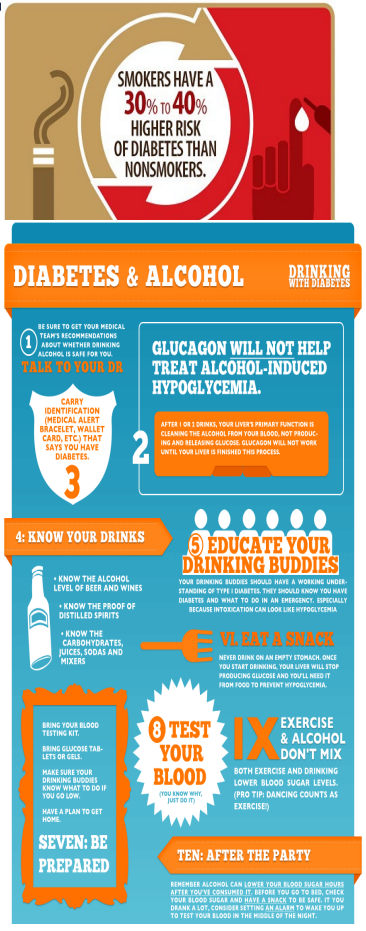
Diabetes Alcohol and Smoking

The liver releases stored sugar to counteract falling blood sugar levels. However, if your liver is busy metabolizing alcohol, your blood sugar level may not get the boost it needs. Alcohol can create low blood sugar shortly after you drink, and last as long as 24 hours afterward.

Nicotine increases your blood sugar levels and makes diabetes harder to handle. Those with diabetes who smoke often need larger doses of medicatio
blood sugar close to target levels.

What to do:

- **Get your Providers OK to Consume Alcohol.**
  - Alcohol can aggravate diabetes complications, such as nerve damage and eye disease. However, if your diabetes is under control an occasional alcoholic drink is fine.
  - Moderate alcohol consumption is no more than one drink a day for women of any age and men over 65 years old and two drinks a day for men under 65.
  - One drink equals a 12-ounce beer, 5 ounces of wine or 1.5 ounces of distilled spirits.
- **Don't drink alcoholic beverages on an empty stomach.**
  - Be sure to eat before you drink, or drink with a meal to prevent low blood sugar.
- **Choose your drinks carefully.**
  - Light beer and dry wines have fewer calories and carbohydrates than other alcoholic drinks.
  - If you prefer mixed drinks, sugar-free mixers — such as diet soda, diet tonic, club soda or seltzer — won't raise your blood sugar.
- **Tally your calories.**
  - Remember to include the calories from any alcohol you drink in your daily calorie count.
  - Check your blood sugar level before bed, alcohol can lower blood sugar levels long after you have had your last drink.
  - Check your blood sugar level before you go to sleep.
  - If your blood sugars is not higher than 100, have a snack before bed to counter a drop in your blood sugar level.
- **Nicotine and Diabetes.**
  - •Nicotine changes cells so they don't respond to insulin, which increases blood sugar levels.
  - •Chemicals in cigarettes harm cells in your body and cause inflammation, which encourages cells to stop responding to insulin.
  - •Smokers have a higher risk of belly fat, which increases the risk for type 2 diabetes even if they aren't overweight.
  - •Smokers are 30% to 40% more likely to attain a diagnosis of type 2 diabetes, and the more you smoke, the higher your risk.



Diabetes and Sleep

Too little sleep can negatively affect every area of your management, including how much you eat, what you choose to eat, how you respond to insulin, and your mental health. Proper rest is important for your diabetes management, it can put you in a better mood and give you more energy.

<u>If you get less than 7 hours of sleep per night regularly</u>

- your diabetes will be harder to manage.
- Too little sleep can:
  - Increase insulin resistance.
  - Lead to hunger the next day and reduce how full you feel after eating.
  - Make you more likely to reach for junk foods
  - Make it harder to lose weight.
  - Raise blood pressure and seriously increase the risk of a heart attack.
  - Make your immune system less able to fight infections.
  - Increase your risk of depression and anxiety.

<u>What to do:</u>

- Wake up and go to bed at around the same time every day, even on weekends
- Keep your bedroom dark, quiet, relaxing, and cool. Recommendation of a temperature of 65 degrees for your best rest.

•Remove electronic devices such as TVs, computers, and smartphones from the bedroom.
•Get some physical activity during the day.
•Mentally unwind and relax before bedtime.
•Have a routine that gets you ready for bed, like taking a shower, reading, or writing in a journal.
•Get in bed only when you're tired.

<u>Avoid:</u>

•Afternoon and evening caffeine. It can affect your body for up to 8 hours.
•Alcohol in the evening. It can affect how you breathe when you sleep. It can also wake you up and affect your sleep quality.
•Large meals late at night. Eating late can cause indigestion and higher blood sugar levels overnight.
•Naps after 3 p.m.
•Nicotine. It acts like caffeine.

Data Analysis

- A1C
  - Before and after study
- BMI
  - Before and after study
- Weight in Lbs.
  - Before and after study
- Questionnaire of Diabetic Comprehension
  - Before and after study

Pre Study Findings

- Out of 25 participants
  - 16 males, and 9 females
  - Preliminary data reveals an average:
    - BMI : 38.18
    - Weight in Lbs. : 237.37
    - A1C ; 8.38
    - SCI-R : 36.11

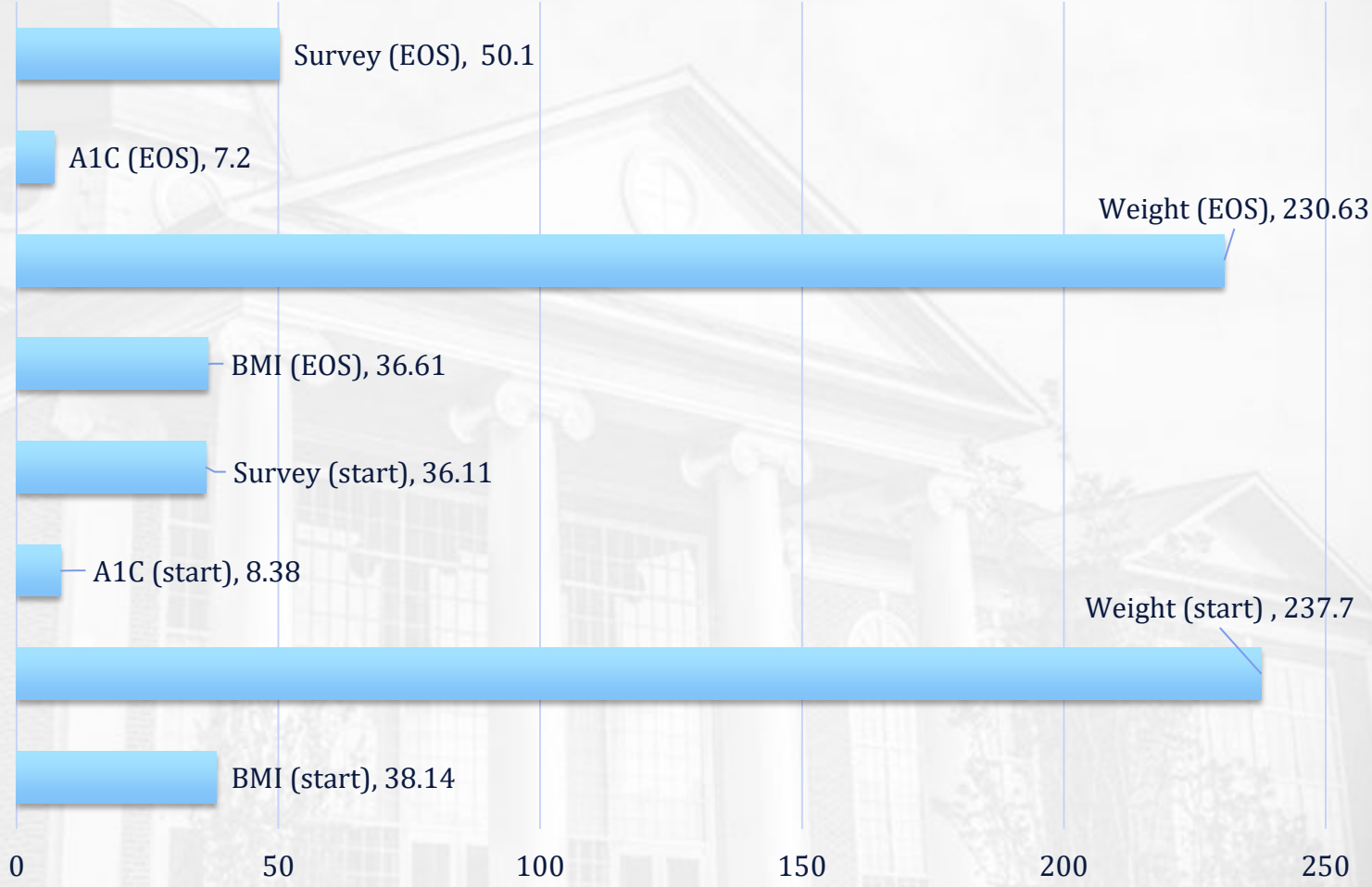
Post Study Findings

- 19 participants completed the study
  - 12 males, and 7 females
  - End of Study data reveals an average:
    - BMI : 36.61
    - Weight in Lbs. : 230.63
    - A1C ; 7.1
    - SCI-R :

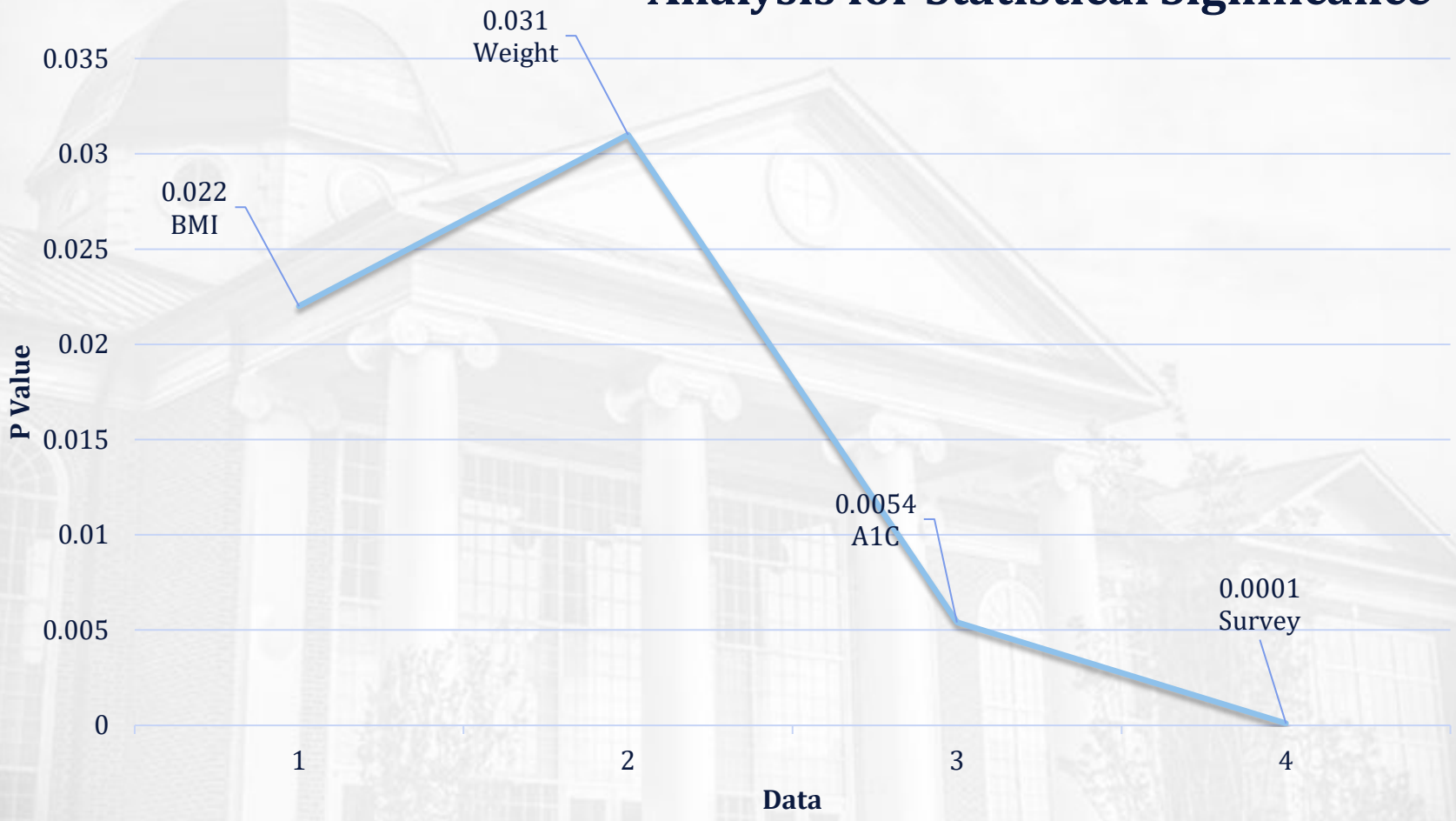
Results

- Improvement in BMI by1.57 or 2.73% in 12 weeks.
- Improvement in Weight in Lbs 6.74 lbs on average or 2.84% in 12 weeks.
- Improvement in A1C by 1.18 or 14% over the 12 weeks.
- Improvement in diabetic comprehension based on results from the SCI-R

DIABETIC MANAGEMENT WITH GLP1-RA OZEMPIC AND DIABETIC EDUCATION



Analysis for Statistical Significance



Implications for Practice/Future

- Implications for practice
- Sustainability
- Dissemination plan

Timeline

- 14-15 weeks total
  - 1-week prior working with IT to set up and attain beginning of study information
  - 12 weeks of patient receiving education
    - One email every week
  - 1-2 weeks after to analyze the data

Timeline

Step 1: Review Scholarly Project Process, Sequence, and Timelines	**05/2023**
Step 2: Complete CITI Training	05/18/2023
Step 3: Develop the first draft of the proposal and submit it to chair for review	06/2023
Step 4: Complete the final draft of the proposal	07/2023
Step 5: Defend Scholarly Project Proposal	07/2023
Step 6: IRB approval for the proposed project	08/01/2023
Step 7: Initiate scholarly project	08/02/2023
Step 8: Complete literature review/level of evidence/summary matrix	06/2023
Step 9: Complete the thematic data analysis matrix	06/2023
Step 10: Complete the initial draft (without discussion and conclusions)	08/2023
Step 11: Update and reconfirm timeline	09/2023
Step 12: Submit the completed first draft with discussion and conclusions	09/24/23
Step 13: Submit to Editor (one-week turnaround)	11/2023
Step 14: Request final defense appointment	12/2023
Step 15: Submit the final PowerPoint for the defense	12/2023
Step 16: Final Defense	01/2023
Step 17: Submit to Scholar's Crossing	01/2023

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