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# Nutritional Control Improves T2D Diabetic Condition and Reduces Pharmaceuticals

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**Abstract**

This Case Report reviews the journey of a 57-year old 305-pound Caucasian female who finally took control of her nutritional intake and executed a basic exercise regimen which improved a long neglected known diabetic condition that resulted in the reduced need for pharmaceutical intervention. The nutritional adjustments included journaling of all intake and carbohydrate tracking with correlation of blood sugar monitoring prior to each consumption time. The exercise regimen implemented included riding a stationary bike for 20 minutes and a basic stretching regimen along with a 10-12-minute guided meditation, three times a week over seven months. The outcomes resulted in improved HbA1c, decreased weight, and decreased dosing of pharmaceutical interventions.

**Keywords:** Nutrition; Exercise; Diabetic Control; Diabetes; Weight Reduction; Reduced Pharmaceuticals; Blood Sugar

**Abbreviations:** T2D: Type II Diabetes; HbA1c: Glycated Hemoglobin

**Introduction**

Research shows that glucose levels higher than 130mg/dl can damage blood vessels, nerves, organs, and beta cells. Glycated Hemoglobin represented by an A1c percentage (HbA1c) should ideally measure less than 5.7%. Higher reading of either indicate the presence of prediabetes or diabetes given the specifics exceed the perimeters of normal. This case report chronicles the journey of a 57-year-old 305-pound Caucasian female who five years prior was warned by her provider of her prediabetic state. The diabetic state actualized and was confirmed by a fasting glucose of 280mg/dl and a HbA1c of 8.4%. Metformin 1000 mg twice daily and glimepiride 4 mg daily was initiated and added to the pre-existing lipid lowering and antihypertensive therapies already in place, former discussions on exercise and nutritional intervention were revisited and a three-month diabetic follow-up appointment was scheduled. This case study reviews the progress of the self-directed actions taken by the

client to make lifestyle changes and take control of the situation over seven months.

**Discussion**

On the day of the appointment, the reality of the diabetes diagnosis prompted action. The client initially began journaling the journey. Then gradually put into motion the things suggested earlier by the provider; began journaling activity and blood sugar results, began exercising (walking or riding a stationary bike) for 10 minute intervals increasing to the goal of 30 continuous minutes three times a week, started practicing meditation and getting at least seven hours of uninterrupted sleep.

The specific actions taken had a cumulative impact. A retrospective review revealed valuable insight into the gradual lifestyle changes made by the client. In week one, soda and alcoholic

beverages were eliminated from intake, and carbohydrate intake was limited to 100 grams per day. Calculations were facilitated by the use of the journal. If higher carbohydrates were consumed a correlational increase in exercise was implemented. After three additional weeks of this lifestyle change, the weight was reduced to 300 pounds and fingerstick blood sugars ranged between 210-130mg/dl.

Week eight registered similar results as nutritional intake was further adjusted to reduce, but not eliminate caffeine and processed foods. The journal entries reflected average daily caloric intake between 1500-1700 calories per day, three liters of water, and a regular meditation and exercise regimen. Weight was recorded as 297 pounds.

Week eleven prompted follow-up laboratory blood work and in week twelve, the results reflected dramatic improvements in weight (286 pounds), average daily blood sugars ranging 100-130mg/dl, and HbA1c 6.7%. Medication adjustments were made due to a series of hypoglycemic incidents over the course of the visit week. Metformin was lowered to 1000mg once daily with supper and Glimepiride 2mg daily with breakfast. An evening snack of protein and fiber was also added. Not only does weight continue to decrease (280 pounds), the HbA1c registered 6.0% and proves to be imprinted into the new normal for the client. The client self-reported that the lifestyle change has improved other areas of their emotional and social wellbeing. No medication changes were made. And a follow up appointment was made for three months, which

will occur at week 36 of the client's effective lifestyle and controlled T2D condition.

## Conclusion

In summary, maintenance of the current regimen that aligns with the American Diabetic Association Comprehensive T2D 2020 Guidelines [1], was recommended by the provider, is effective (recorded decreases in weight, HbA1c, and stabilized blood sugars) and is easily maintained as verified by the client at the week 24 follow up visit. Adjusting what is taken into our body can influence our health. Prompting lifestyle changes requires discussion by the provider and treatment, but the action of the client makes a huge difference in efficacy of a well-rounded treatment plan that goes further than prescribing pharmaceutical intervention. Helping clients at any stage of diagnosis is beneficial and effective once the client actionizes a lifestyle change. Maintaining regular follow-up appointments is known to further aid in lifestyle change maintenance and continued effective T2D management.

## Acknowledgement

No.

## Conflict of Interest

Author declare no conflict of interest.

## References

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