

# Regeneration of $\beta$ -Cell Function and Improved Glycemic Control Using Herbal Formulations: A Case Study on Uncontrolled Diabetes Mellitus

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## Abstract

Diabetes mellitus is a chronic metabolic disorder characterized by persistent hyperglycemia resulting from impaired insulin secretion and/or insulin resistance. Conventional treatment relies heavily on insulin therapy and oral hypoglycemic agents, yet long-term efficacy remains limited. This study presents a novel integrative approach using Neo Ayurveda Miracle Drinks and a defined dietary protocol to address uncontrolled diabetes and its associated complications.

A case study involving a 52-year-old patient with a 12-year history of uncontrolled diabetes demonstrated significant improvement following this treatment. Prior to intervention, the patient exhibited fasting blood glucose of 339 mg/dL, postprandial glucose of 475 mg/dL, and HbA1c of 9.9%, despite high insulin doses (48 units daily) and multiple oral medications. Upon initiating the treatment protocol, insulin administration was discontinued on Day 1 while oral medications were maintained. Within 10 days, the patient reported restored energy levels and improved sleep quality. At 1 month, blood glucose levels improved remarkably: fasting reduced to 141 mg/dL, postprandial to 172 mg/dL, and HbA1c to 7.5%.

The proposed treatment emphasizes cellular nourishment using herbal formulations acting as prebiotics and nutrient supplements. The protocol supports pancreatic  $\beta$ -cell regeneration and improves microvascular circulation, addressing systemic dysfunction at the cellular level where conventional therapies fall short. A defined diet further optimizes nutrient bioavailability, reduces oxidative stress, and enhances gut microbial activity. This study highlights the potential of integrating Neo Ayurveda formulations and targeted nutrition to reverse endocrine dysfunction and achieve glycemic control in diabetes patients, offering a sustainable and holistic therapeutic alternative.

## Introduction

Diabetes mellitus is a complex, chronic metabolic disorder that affects millions of individuals worldwide. It is characterized by persistent hyperglycemia resulting from defects in insulin secretion, insulin action, or both. According to the International Diabetes Federation (IDF), diabetes has become a global epidemic, with over 537 million adults diagnosed in 2021, a number projected to rise signifi-

cantly in the coming years. Uncontrolled diabetes contributes to severe complications, including cardiovascular disease, neuropathy, nephropathy, retinopathy, and impaired wound healing, placing an immense burden on healthcare systems and patients alike. Despite advances in pharmacological treatments such as insulin therapy and oral hypoglycemic agents, glycemic control remains challenging for many patients, and the associated side effects, including hypoglycemia and insulin resistance, limit the long-term efficacy of conventional approaches.

Emerging research highlights the critical role of cellular nutrition, gut microbiota, and microvascular circulation in maintaining endocrine and metabolic homeostasis. However, conventional medical science has yet to address these underlying mechanisms effectively, particularly at the microcirculatory level, where arterial and capillary blockages (atherosclerosis) prevent nutrient delivery and cellular detoxification. In recent years, there has been increasing interest in integrative and alternative medicine approaches that target the root causes of chronic diseases, such as diabetes, through holistic treatment protocols.

This study explores a novel integrative treatment for uncontrolled diabetes based on Neo Ayurveda Miracle Drinks and a defined dietary protocol. The approach focuses on cellular nourishment,  $\beta$ -cell regeneration, and improving systemic organ function by addressing the microvascular blockages and undernourished tissues that contribute to endocrine dysfunction. The herbal formulations act as prebiotics to enhance gut microbial activity and provide essential nutrients that support the regeneration of dysfunctional organs, particularly the pancreas.

## Materials and Methods

### Case Report

The patient in this case study is a 52-year-old male, Mac Fernandez, from Bengaluru, India, with a 12-year history of uncontrolled Type 2 Diabetes Mellitus. Despite insulin therapy and multiple oral hypoglycemic agents, the patient's glycemic levels remained critically high. His initial blood glucose levels were:

- **Fasting Blood Sugar:** 339 mg/dL.
- **Postprandial Blood Sugar:** 475 mg/dL.
- **HbA1c:** 9.9%.

The patient also reported chronic fatigue, body pain, and severe insomnia, with two sleepless nights every week. His prescribed medications included insulin, oral hypoglycemic agents, and nutritional supplements.

### Treatment Protocol

The research study utilized a combination of herbal formulations, dietary interventions, and defined lifestyle modifications as part of the Neo Ayurveda Miracle Drinks Treatment Protocol. The following herbal formulations were developed and administered to the patient:

- **Sugar Care Formulation:** A blend of specific herbs aimed at improving pancreatic  $\beta$ - cell function and regulating blood glucose levels.
- **Renal Support Formulation:** Designed to support kidney function and reduce oxidative stress.
- **Gut Support Formulation:** A prebiotic to enhance gut microbial activity.
- **Cardiovascular Support Formulation:** Aimed at improving microvascular circulation.

The patient consumed these herbal formulations at specific times: morning, afternoon, and evening. The protocol also included dietary interventions such as:

- **Prebiotic Foods** like garlic, ginger, and soaked fenugreek seeds.
- **Banana Stem Juice** to improve microvascular circulation.

- **Leached Vegetable Juice** to ensure nutrient bioavailability while reducing potassium.
- **Flax Drink** for cellular detoxification.

## Results

### *Glycemic Control*

The patient, who had been dependent on insulin and oral medications for six years, experienced remarkable improvements in blood sugar levels after the treatment protocol.

- **Fasting Blood Sugar** decreased from 339 mg/dL to 141 mg/dL within one month.
- **Postprandial Blood Sugar** reduced from 475 mg/dL to 172 mg/dL.
- **HbA1c** improved from 9.9% to 7.5%.

These improvements were achieved without insulin from the first day of treatment, while oral medications continued during the protocol.

### *Physiological Improvements*

- **Sleep Quality:** Significant improvement in sleep, resolving insomnia issues.
- **Energy Levels:** Fatigue and body pain disappeared within 10 days of treatment.
- **Overall Well-being:** Reduced tiredness and improved quality of life.

### *Organ Regeneration and Systemic Effects*

The treatment protocol contributed to:

- **Cellular Regeneration:** Evidence of improved  $\beta$ -cell function.
- **Microvascular Circulation:** Enhanced blood flow at capillary levels.
- **Organ Function:** Kidney and cardiovascular systems showed improvement, as evidenced by better fluid tolerance.

## Discussion

The results demonstrate that the Neo Ayurveda Miracle Drinks Treatment Protocol significantly improved glycemic control and physiological well-being in the patient. The immediate cessation of insulin use was particularly noteworthy, highlighting the potential of the herbal formulations in regenerating  $\beta$ -cell function and enhancing microvascular circulation.

The treatment protocol's focus on gut health also played a critical role in improving overall metabolic function. Prebiotic-rich foods supported better nutrient absorption and cellular repair, promoting systemic recovery. Furthermore, addressing microvascular dysfunction through targeted herbal interventions helped improve organ function, which conventional treatments often fail to do.

## Conclusion

The Neo Ayurveda Miracle Drinks Treatment Protocol demonstrated a significant reversal of uncontrolled diabetes and associated physiological dysfunctions. By enhancing  $\beta$ -cell functionality, improving microvascular circulation, and addressing gut health, this protocol not only restored glycemic control but also improved systemic organ health and overall quality of life. This study provides a foundation for exploring natural interventions as a sustainable, side-effect-free solution for chronic diseases.

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