

# **Living Happily with Diabetes**

**DR. CELSO FERNANDES  
NAVE MARG FOUNDATION**

## Preface

There would be hardly anyone in the country who doesn't have a family member or friend living with diabetes. At an estimate, over 77 million, or 1 in 11 Indians, are diagnosed with diabetes, making India the capital of this dreaded lifestyle disorder.

Yet this was not true a couple of decades ago! So, what changed over the years?

Well, a drastic change in lifestyle and dietary patterns are the most significant contributors to the rampant increase in diabetes cases in the country. Technology, which is a boon, has also made people lazy and relatively inactive – you are more 'engaged' than 'active' in this digital/e-commerce age. Lack of physical activity restricts adequate insulin generation – which is necessary to counter increased sugar levels in the bloodstream.

Another significant factor in the sudden rise of Type 2 Diabetes in India is a mind-boggling increase in junk food consumption, which is very low in nutrition and very high in calories and unhealthy fats that sore up blood sugar levels. Lured by advertisements and media hype, we unwittingly expose our children to bad eating habits in the name of treats. We also sleep less at night and binge on web series in the name of 'unwinding'. It is proven beyond doubt that inadequate and irregular sleeping habits increase the risk of diabetes.

On the surface, diabetes looks like a benign disease; you are not in constant pain, you don't fall severely ill, and your body functions more or less normally. However, it may be one of the deadliest diseases that weakens immunity, damages vital organs, and delays natural healing over time. According to Medical Science, Type 2 Diabetes – the most common type worldwide – can be kept in control with the help of medicines. Hence, patients are put on a lifelong medication course to keep their blood sugar levels in check.

While the medications help lower blood sugar levels, the body gets dependent on them. It reduces natural insulin secretion, which leads to gradual corrosion and damage of organs such as the kidneys, liver, lungs, feet, and eyes. Diabetes leads to severe comorbidities such as Retinopathy (damage to the blood vessels in the retina, leading to weakening of eyesight and even blindness in extreme cases); Neuropathy (diabetic neuropathy leads to the deterioration of nerves in the legs and feet); and Nephropathy (damage to blood clusters in the kidney that may lead to kidney failure).

As observed during the global Covid-19 Pandemic, a significant number of casualties were among the people suffering from diabetic comorbidities, which had severely weakened their immunity to fight the virus.

With aging, the risk of getting diabetes increases further. Interestingly, it is also observed that the lazy are more prone to getting Type 2 Diabetes. Those who remain fit, work out continuously, and avoid lounging for long hours are more energetic and happier and less likely to become diabetic.

Your doctor may have already asked you to get a sugar test done if you have suddenly lost weight, feel too hungry and parched, tire easily, or complain of blurry vision. It is possible that you or a family member is already on a lifelong course of diabetic medication. In any

case, diabetes seems like an incurable disease that not only adversely impacts your health but also limits your happiness and choices in life.

This book, my dear reader, is essential for you because it amplifies the truths related to managing diabetes and related health concerns, defying the prevailing voice of doom for people living with this condition. This book will tell you how to live happily with diabetes.

For over a decade, I have been advocating and writing books on financial literacy. Although I am a medical professional, penning a book on successfully managing diabetes was not on the cards. However, a few years ago, I decided to dig deeper and find the truth when I came across a little-known but powerful program that claimed to reverse diabetes. Months passed in viewing the agenda closely and interacting with participants at different stages in the program. And it was incredulous to witness how people with a diabetic history of even two or more decades could maintain normal blood sugar levels without taking any medication.

I realised that this simple yet highly impactful technique of treating diabetes must reach as many people as possible. Borne out of the resolution to help people win over diabetes naturally, the first 'Living Happily with Diabetes' club was established at Cavelossim, Goa, in August 2021. Today, we have over 20 active clubs all around the state and counting. All these clubs are fully sponsored by our charitable organisation, Nave Marg Foundation, and anyone is free to join our clubs without any fee or charge.

This book, 'Living Happily with Diabetes,' is a result of the learnings and observations I mustered throughout our journey of bringing wholesome health to people. You will also learn the powerful techniques that will help you control diabetes and live life fully. The book includes real-life stories of people who got together with the mission to manage diabetes and won splendidly. Also, consider this book as a reminder that health is an integral and critical part of your overall wealth.

I sincerely thank the efforts of **Mr. Pawan Sharma** and his team at **Decision Tree Consulting** in compiling and editing this book, making it easier to put across my thoughts, experiences and observations for the benefit of the readers.

Through this book, I wish to convey to you, dear reader, that, like investing, small steps towards adopting good habits pay rich health dividends over time and help you achieve freedom from diabetes.

## Table of Contents

Diabetes – The Sly Killer.....	6
A Life-Long Disease.....	8
Diabetes: Exclusion, Stress and Limitations .....	10
Why Should You be Bothered About Diabetes? .....	11
Serious Complications Triggered by Diabetes.....	12
• Diabetic Ketoacidosis .....	12
• Hypoglycaemia.....	12
• Hyperglycaemic Hyperosmolar State (HSS) .....	12
• Diabetic Coma .....	12
Terrors of Prolonged Diabetes .....	13
• Vision Impairment (Diabetic Retinopathy) .....	13
• Damage to the Kidney (Diabetic Nephropathy).....	13
• Nerve Damage .....	14
• Muscle Damage (Diabetic Amyotrophy) .....	15
• Vascular Diseases .....	16
• Strokes.....	16
• Heart Attack.....	16
• Skin Damage .....	16
• Hearing deterioration.....	17
• Fragile Bones.....	17
• Dementia / Alzheimer’s Disease .....	17
• Diabetic Foot.....	17
Financial Stress: A Major Contributor to Diabetes.....	19
Is Diabetes Really an Untamed Monster? .....	22
The Living Happily with Diabetes Club .....	24
Three-pronged Diabetes Management Mantra.....	27
Diet .....	27
• Dietary habits difference between the Western culture and Indian Tradition .....	27
Exercise .....	29
• 7 Curated Yoga Session for controlling diabetes .....	30

Stress Management.....	37
• Sleep: A powerful medicine in fighting stress & diabetes .....	37
• The 7 deadly sins:.....	38
• Lessons from the Japanese philosophy of Ikigai .....	39
Together, we stand strong.....	41
• Benefits of Joining a Living Happily with Diabetes club .....	41
• The Living Happily with Diabetes Club Mission .....	41

## Diabetes – The Sly Killer

Diabetes is a deadly disease, no question about it. Yet there is so little understanding among the people. Many don't even recognize this serious illness and continue living careless life. It is disheartening to see how so many diabetic people manage (or ignore) their condition with complete misinformation. I have interacted with many people diagnosed with diabetes who think they can control their blood sugar levels only by having sugar-less tea. People are buying supposedly 'sugar-free' products left, right and centre, believing that the next readymade formula will help control their condition. What people do not understand is that there is no magic pill to treat diabetes. It is a lifestyle disease that needs to be tackled only by making positive changes to your daily routine, eating preferences and way of thinking.

I once met a gentleman at an event who, while eating lunch, droned on about food habits he had acquired to manage his diabetes. To my horror, he was grossly misinformed. He stopped eating natural sugar and fruits and shifted to artificial sweeteners. He seemed to have read somewhere that carbohydrates were terrible for diabetes and went to extreme lengths to avoid including carbs in his diet. To him, eating many proteins was ideal for his condition. No wonder I saw him relishing only dal and salad from the sumptuous spread laid out for the participants!

From what I have observed, many people don't know exactly what diabetes is or how it affects the human body over time. Hence, in my humble opinion, let us begin this book with a proper and clear understanding of diabetes in plain, simple words. **Explaining Diabetes**

To best understand diabetes, we need to look at what happens when we eat a meal. We all know that we get energy from the food we eat. But it doesn't happen directly; there is a process to it. What we eat turns into sugar or glucose and flows into our bloodstream. As soon as we eat, our pancreas releases a hormone called insulin. It is insulin's job to transport the glucose from the bloodstream to the cells, thus providing energy. Insulin also helps store glucose as glycogen in the liver or muscles for future energy needs.

Diabetes is a condition when your body doesn't make enough insulin or can't use it well. Such a condition leads to high glucose levels in the bloodstream. High levels of blood glucose, often known as blood sugar, are the underlying cause of the condition known as diabetes.

Health concerns may develop if blood glucose levels remain high for an extended period of time.

### **Types of Diabetes**

#### **Type 1 diabetes**

If you have type 1 diabetes, your body does not make insulin. Your immune system attacks and destroys the cells in your pancreas that make insulin. Type 1 diabetes is most commonly detected in children and young adults, but it can occur at any age. Type 1 diabetics must take insulin on a daily basis to stay alive.

## **Type 2 diabetes**

Type 2 diabetes is a condition in which the body does not produce or use insulin effectively. Type 2 diabetes can strike at any age, including during childhood. This type of diabetes, however, is more common in middle-aged and older people. Type 2 diabetes is the most common type of diabetes in which the body develops insulin resistance.

## **Gestational diabetes**

Gestational diabetes develops in some women when they are pregnant. Most of the time, this type of diabetes goes away after the baby is born. However, if you've had gestational diabetes, you have a greater chance of developing type 2 diabetes later in life. Sometimes diabetes diagnosed during pregnancy is type 2 diabetes.

## **Other types of diabetes**

Monogenic diabetes, an inherited form of diabetes, and cystic fibrosis-related diabetes are two less common types.

## **Who is at a higher risk of developing Type 2 Diabetes?**

Type 2 diabetes is more common in people 45 years or older, are overweight or have a family history. Lack of exercise, ethnic background, and specific health problems such as high blood pressure increase the risk of developing type 2 diabetes.

People who have prediabetes or had gestational diabetes while pregnant are also more likely to develop type 2 diabetes.

## **How diabetes affects the human system?**

Since Type 2 is the most common form of diabetes in men and women worldwide, let's discuss how it affects the human body. Type 2 diabetes patients have constant high sugar levels in their bloodstream. Over time, high blood glucose leads to several complications. Consider this type of diabetes as an evil chess opponent. It doesn't directly attack and kill the King or Queen but slyly makes its moves, laying a siege and weakening the defence system. It targets the bishops and rooks and limits the chances of a counterattack from your side of fighters.

If not managed or controlled, Type 2 diabetes can lead to any or multiple of the following complications:

- Heart disease
- Stroke
- Kidney disease
- Eye problems
- Dental disease
- Nerve damage
- Foot problems

## A Life-Long Disease

"What do I say? I have got diabetes, and I will never be the same again. It is a lifelong disease, you see," Kamat, an old school friend, said with dismay when I met him at an event after years. This was a few years ago. In his school days, Kamat used to be a good athlete; he was always first in 100-meter races and even won the first prize in the javelin throw.

After college, he took a desk job at the municipal office. With limited physical activity and exposure to a lot of stress, he became dull and aged faster than normal. During an annual health check-up, his blood sugar levels were found to be higher than the safety margin. He also had high blood pressure.

It was heart-breaking for me to look at Kamat lost and dejected. For me, he was always the champion – someone we all looked up to! That day, it seemed to me that my friend had lost the race of life. His very spirit was dead, and he moved around with caution and apprehension.

The head of the Centers for Disease Control and Prevention (CDC) had declared Type 2 diabetes an epidemic as early as 1994. Since then, there has been a rapid increase in diabetic cases worldwide. India is deemed the world's capital of diabetes, with an increasing diabetic population predicted to hit 80 million by 2030.

Doctors have found a way to manage Type 2 diabetes without the intervention of insulin. This is indeed a giant leap in medical science. The world over, diabetic patients are put on daily medication that they must follow for life. Along with the number of pills to be popped up at intervals daily, the patients are strictly advised to stop eating sweets and a number of food items rich in carbohydrates or glucose. To many, this may seem like an ideal situation – to exist longer with diabetes. But is it really the right way to live?

I have been observing several people living on diabetic medication for a long span of time. And one thing I have noticed to be common in all of them. Initially, the dosage of medicines responsible for lowering blood sugar levels is mild. But over time, patients experience high blood sugar levels even after being on regular medication. In such a scenario, the doctors prescribe more powerful medicines to control sugar levels in the bloodstream. Another few years pass, and the patient again reports high sugar levels despite being on daily medication. The doctor may prescribe even stronger medication or put the patient on daily insulin injections. By this stage, diabetes – which seems to be controlled by medication, causes a lot of damage to vital organs. Patients may suffer heart complications, skin diseases, foot ailments such as varicose veins, or kidney malfunction.

I can confidently say that the daily medication and minor abstinence from sugary products alone will not help you win over diabetes; it eventually catches up.

**So, is it true that once you develop Type 2 diabetes, you can never live a healthy, happy life?**

As the event wound up and I said my goodbyes to Kamat, I was deeply entangled in worrying thoughts. Since Kamat was an old friend, I could understand his helplessness and despair. But aren't millions of people around the world experiencing the same feeling of dismay and unhappiness at this precise moment? The thought jolted me to the core.

*'There needs to be a solution for this, somewhere...'* my mind was in turmoil. The mere thought that a large fraction of the world's adults and senior citizens were living a very limited life saddened me.

## Diabetes: Exclusion, Stress and Limitations

It was a pleasant evening, and Antonio's entire family was gathered to celebrate his son's 12th birthday. Oh, what preparations were carried out by Grace, his wife! There were minced meat cutlets, juicy bebinca, Patoleo, Maçapão, steak, and more on the menu. Sitting on his favourite armchair, Antonio looked around at the happy faces of his brothers and cousins and their family members. The little ones were running all about the house, creating a happy ruckus. All around the corner, cousins were chatting and sharing quips from their lives. After all, the family got reunited after months!

But amidst all the fun and merriment, Antonio couldn't help but feel a tinge of sadness. The doctor had declared that Antonio had high sugar and that he must start taking diabetes medication. The doctor had been strict in telling Grace that Antonio should be kept away from sweets and high-carb diets as his body was not creating enough insulin.

In just one day, Antonio's entire life turned upside down. Everyone around him suddenly got alarmed and way too cautious. Grace, the kids, and other family members fussed over what he must eat and drink to keep his sugar levels in check. His father had recently discovered WhatsApp, where his friends sent home remedies to treat anything from a minor bruise to cancer. Antonio was often the subject of his father's experiments. He tried everything from *kala jaamun* to *lauki* juice to bitter gourd chutney within the first month.

Nothing much changed in the past year and a half, except that he was on daily medication for diabetes. Antonio could see the concern in his wife's eyes all the time. People around him never failed to share a new medicine or a successful doctor. Everyone around him reminded him every day that he had diabetes in some way or the other.

On his son's birthday, too, he could sense the furtive glances his guests threw at him, quietly expressing concern over his health issues. They were all polite enough to step away from where Antonio sat as they enjoyed the snacks that were considered 'poison' for him.

Antonio felt angry, helpless and gloomy at the same time. Despite being in a room full of people, he felt all alone. What others savoured as they talked in small groups around the spacious hall were all Antonio's favourite dishes. He was given the consolatory black tea without sugar, which further darkened his mood.

Once the guests had settled, and the children were summoned, it was time to cut the enormous chocolate cake. Well aware of his father's diabetes, Antonio's son broke a tiny morsel of cake and fed it to his dear dada. Everyone else got big slices. Sitting alone on his chair, only one thought assailed Antonio's mind, *'Will I ever be able to participate in family celebrations? Will I ever be able to live freely and enjoy like others?'*

Type 2 diabetes not only opens the gates to many health complications but also robs the patient of the joy of living with freedom. Those who have diabetes would relate to Antonio's situation. Many people who have been living with diabetes for some time or have recently been diagnosed would agree that more than health issues, diabetes carries a social stigma – which doesn't do any good in reducing the patient's stress levels. And since stress is a big contributor to the advancement of diabetes, patients find themselves in a difficult situation.

## Why Should You be Bothered About Diabetes?

Our country has had an exponential increase in diabetes in the past two decades. With more western influence changing our dietary patterns – the shift from fresh, simple home-cooked meals to processed and packed food – and lack of physical activity is a primary reason behind the widespread Type 2 diabetes in India. And things are not looking favourable in the future, too. It is estimated that by 2045 the number of diabetic cases will be over 134 million in India.

Worse still, 1 in 2 diabetic patients in India is unaware of their condition. And out of those who have been on medication, only 24% are able to bring it under control.

Since diabetes is the gateway disease for many severe health issues, including heart complexities, kidney and lung failure, and gangrene, it is very, very important to keep diabetes under control.

Professor D'Souza, who recently retired with a dream of enjoying his retirement in his ancestral home near the pond in the village, is forced to live in Panjim. The reason is his advanced diabetes. His feet swell if he sits for long hours. Walking, too, is a problem, and he needs to consult his doctor regularly. The dream of walking through the coconut groves of his childhood is now in jeopardy as the doctor has told him that any infection to his feet might lead to gangrene, and then amputation would be the only solution to stop it from spreading.

36-year-old Amogh loves to travel. He likes to cruise long distances on his bike. However, since he was diagnosed with diabetes, he has given up his passion for road trips. Actually, he came to know that he had diabetes when, after a fall from his motorbike, it took his cuts and bruises way too long to heal. The doctor suspected Amogh might be suffering from Type 2 diabetes, and his suspicions were confirmed when the tests were conducted. With delayed healing, Amogh is wary of hitting the road. Diabetes has set fear in his mind and limited his life. Without biking, Amogh feels incomplete, but he can't risk injuries now that he has diabetes. Whenever he sees other riders going on long trips, his heart yearns to stride his bike and go for a far-off destination.

There are umpteen stories where you'd find how diabetes has affected people's life. Look around; you will find these stories in your home, office and neighbourhood.

COVID-19 was a dreadful pandemic that took many precious lives from our midst. Most people who succumbed to the virus were diabetic patients with low immunity. In a way, diabetes is even worse than any pandemic because it strikes at will, and there is no way to stop it from contracting. In an apt analogy, picture diabetes as a thief lurking around your house, making petty thefts while the household sleeps. But when another thief or a gang of robbers come along looking to strike, diabetes opens the main door for them and guides them to the safe and vaults. It aids these bigger robbers in carrying the heist in no time.

## Serious Complications Triggered by Diabetes

It is absolutely important to diagnose and manage Type 2 diabetes without losing time, as it can be life-threatening. Diabetics face complications arising from high as well as low blood sugar levels.

### Diabetic Ketoacidosis

When a diabetic patient suffers from a long history of low insulin generation and high blood sugar levels, the number of ketones in the bloodstream increases, turning the blood acidic. Patients with diabetic ketoacidosis may complain of a sudden increased thirst, frequent urination, stomach ache, nausea, vomiting, breathlessness, and dizziness. This condition happens when high blood sugar is ignored for a long time or left uncontrolled. Without urgent medical intervention, diabetic ketoacidosis can cause a patient to slip into a diabetic coma or even die.

### Hypoglycaemia

It is a condition where the glucose levels in the bloodstream suddenly drop to dangerous levels. As we know that the extra glucose in the body is stored in the muscles and the liver in the form of glycogen, when the body needs energy, the liver breaks down glycogen to release glucose in the bloodstream. In some diabetics, the liver doesn't respond to the lowering of glucose in the bloodstream, causing an acute dip in blood sugar levels. Also, when a patient is taking medication for diabetes or injecting insulin to lower blood sugar, the lack of glucose in the body can cause hypoglycaemia.

Hypoglycaemia attacks suddenly and is fatal as it can lead to seizures, coma and even death.

Some of the common symptoms of hypoglycaemia include dizziness, hunger, anxiety, confusion, and difficulty in speaking. The good news is that the condition can be reversed by simply eating or drinking something rich in glucose, such as raisins, sugar, any sweet drink, or a snack.

### Hyperglycaemic Hyperosmolar State (HHS)

HHS is caused by very high blood glucose for a prolonged time. In this condition, the water from the cells is drawn out into the bloodstream causing acute dehydration. If not treated urgently, HHS may induce coma. This condition is triggered by infection or even high stress levels.

Signs such as dryness in mouth and tongue, shrivelled skin, chapped lips, lethargy, increased heart rate, and parchedness indicate a probable onset of HHS, and the patient must be given immediate medical care.

### Diabetic Coma

Diabetic coma can occur due to any of the complications discussed above. Very high or very low sugar levels in the bloodstream can cause unconsciousness or even coma. Preparation is the key to fighting the ill effects of diabetes, and it is true in preventing diabetic coma, too.

Know the symptoms of High and Low blood sugar to take timely action:

High blood sugar symptoms (Hyperglycaemia):

- Unquenchable thirst
- Frequent urination
- Nausea & vomiting
- Stomach pain
- Fruity breath
- Breathing struggle
- Increased heartbeat
- Dry mouth & tongue

Low blood sugar (Hypoglycaemia)

- Anxiety & nervousness
- Weakness and dizziness
- Extreme sweating
- Difficulty in speaking
- Confusion
- Hunger

### Terrors of Prolonged Diabetes

Diabetes, if not managed or controlled for a long period, can subject the body to a lot of grim and painful complications causing physical disabilities or even death.

It is important for diabetics to make healthy changes in their lifestyles to avoid the long-term complications resulting from diabetes.

Listed below are the areas where diabetes strikes the most, limiting bodily functions and even causing multiple organ failures.

**Vision Impairment (Diabetic Retinopathy):** Diabetes attacks and damage the retina, which results in the weakening of vision or even blindness in extreme cases. Diabetic retinopathy affects the vision in both eyes, increasing the risk of glaucoma, cataracts and even blindness. Diabetics suffering from retinopathy may complain of the following eye-related complications:

- Blurred vision
- Floating smudges, strings and spots in the vision
- Dark spots in the vision
- Colour blindness
- Loss of vision

### Damage to the Kidney (Diabetic Nephropathy)

Kidneys serve the vital function of filtering the blood in our bodies. A delicate system of purification in the kidneys is carried out by a cluster of blood vessels called glomeruli. Diabetes wreaks havoc on these tiny blood vessels, weakening and narrowing them,

eventually damaging the intricate filtering system and causing the kidneys to perform inefficiently. In severe cases, diabetes can cause kidney failure, forcing patients to go for frequent dialysis and even look for a kidney transplant, which is not only excessively painful and troublesome but also a very costly procedure and can put the entire family under severe emotional and financial crisis.

The common symptoms of kidney damage are swelling in the feet and legs and puffiness under the eyes, besides fatigue, nausea and confusion. Regular urine tests can help diabetics with no symptoms of kidney damage detect nephropathy early. Detection of protein in urine is a tell-tale sign of kidney disease.

### Nerve Damage

The prolonged existence of diabetes can cause very severe nerve damage, leading to various physical complications across the body.

#### - Diabetic Neuropathy

High blood glucose levels cause severe damage to the capillaries – the blood vessels tending to the nerves – which causes a range of nerve dysfunction, including tingling or burning sensations, numbness or pain. Diabetic neuropathy can also cause muscle or organ failure.

#### Symptoms:

- Deteriorating vision
- Abnormal sensations
- Extreme sensitivity to touch
- Weakening of muscles
- Sexual dysfunction
- Poor bladder control
- Speech impairment
- Sharp pains and cramps

#### - Peripheral Neuropathy

In the case of peripheral neuropathy, nerves outside the brain and spinal cord are damaged, leading to abnormal sensations in hands and feet. Patients might feel extreme sensitivity to total numbness to any touch. In extreme cases, peripheral neuropathy causes complete numbness, especially in the foot, where patients don't feel any pain even if they step on sharp objects or get cuts and bruises. If not controlled, the condition can lead to diabetic foot, where cuts and bruises are not healed and develop into gangrene, where leg amputation is the only resort to save the patient's life.

Get serious about your health condition and seek immediate medical care if you feel any of the following symptoms in your hands or feet or both:

- Pins and needles sensations
- Loss of balance or co-ordination

- Stabbing and shooting pain
- Total numbness or no sensation

### - Autonomic Neuropathy

In this condition, the nerves controlling the internal organs are damaged. Autonomic neuropathy attacks the cardiovascular system, affecting heart rate, blood pressure, digestive and urinary systems, and even sexual functioning.

Some of the common symptoms of autonomic neuropathy are:

- Bowel issues (constipation or diarrhoea)
- Fainting when standing up
- Nausea after eating
- Abdominal Swelling
- Swallowing trouble
- Urinary problems
- Sexual difficulties

### - Proximal Neuropathy

Proximal neuropathy is a rare and crippling type of nerve damage that affects your hip, buttock, or thigh. This type of nerve damage usually affects one side of the body and only rarely spreads to the other. Proximal neuropathy affects more men than women and can occur gradually or abruptly. Prolonged high glucose levels in the bloodstream damage the nerves serving the buttocks, thighs and legs and can make movement extremely painful or restricted. The lack of bodily movement triggers other complications in the body, making it difficult for the patients to recover and live a healthy life.

Symptoms of Proximal neuropathy:

- Extreme pain in the buttock, hip, or thigh
- Weak, shrinking thigh muscles
- Having trouble getting up from sitting
- Pain in the chest or abdomen

### Muscle Damage (Diabetic Amyotrophy)

The long-term persistence of diabetes causes the thickening of blood vessels and damage to the nerves attached to muscles. If not timely controlled, this damage results in the wearing off and weakening of muscles, making it difficult for the patient to perform daily functions and necessary bodily movement. Raptures and muscle tears take a long time to heal, and the patient becomes weak and sluggish.

## Vascular Diseases

Diabetes causes the thickening and weakening of the inner lining of the blood vessels over a period of time, causing the narrowing of blood vessels and the formation of blocks. The most common cause of heart attacks is the blocks in the major arteries. Increased blocks can also lead to strokes, which occur due to obstructions in blood vessels in the brain, restricting the flow of oxygen and nourishment to brain cells.

### Strokes

Diabetics are far more at risk for strokes than others because of the enhanced risk of thickening and weakening of blood cells. When thickened and narrowed blood vessels cluster up in the brain, a patient may suffer what is called an ischaemic stroke. On the other hand, if these blood vessels burst and bleed due to a sudden spike in blood pressure, it would cause the patient to suffer a haemorrhagic stroke. People with diabetes are more prone to the risk of Transient Ischaemic strokes that may affect brain function in the long term.

Symptoms of a stroke:

- Weakness or numbness in one side of the face, arm, or leg
- Difficulty in speaking or understanding
- Vision loss or blurring in one or both eyes
- Unexplained dizziness or loss of balance
- A severe headache with no apparent cause

### Heart Attack

Myocardial infarction, commonly known as a heart attack, is a response where the heart muscle cells suffer permanent and significant damage due to a lack of oxygen supply. This condition arises due to the blocks in coronary arteries responsible for supplying blood to the heart. High glucose levels in the bloodstream damage healthy blood vessels by thickening and narrowing them, increasing the risk of blocked arteries that transport the blood to the heart. Since people with diabetes are at constant and increased risk of heart attack, they must exercise regularly and control their diet to minimise the risk of narrowing or blocking the arteries.

**Symptoms:**

- Squeezing, pressure-like pain in the chest lasting more than 10 minutes
- Pain that spreads to the arm, neck, or jaw
- Breathing difficulty
- Vomiting and nausea
- Fainting
- Fatigue
- Sweating

### Skin Damage

Persistent diabetes can leave you with dry and itchy skin, and you may be more susceptible to bacterial and fungal infections that would take quite a long time to heal.

### Hearing deterioration

While natural ageing affects hearing, diabetics are at a very high risk of suffering hearing loss. The reason behind this is the damage to the nerves and blood vessels attached to the auditory (hearing) system.

### Fragile Bones

Diabetes weakens the bones, making patients vulnerable to fractures. It is observed that hip bone fracture is quite common among diabetics. A weakening bone structure advances ageing and puts patients with diabetes at a greater risk.

### Dementia / Alzheimer's Disease

As diabetes attacks the blood vessels, it weakens and kills healthy cells. Damage to the nerve cells in the brain may lead to serious mental complications, including dementia and Alzheimer's disease.

People with a long history of high blood sugar, blood pressure and cholesterol are at a greater risk of vascular dementia, which occurs when a series of smaller strokes damage the brain tissue or impede the flow of oxygen to the brain.

Alzheimer's is a form of dementia caused by damage to the nerve cells in the brain. The frightening thing about this disease is that it advances with time, leaving a patient without any chance of recovering. An Alzheimer's patient gradually recedes into a void, gets delusional, and suffers from long-term memory loss. In extreme cases, patients find it challenging to speak cohesively or even take meals on their own.

#### **Vascular Dementia Symptoms:**

- Difficulty in walking or maintaining balance
- Confusion and disorientation
- Mood change and emotional instability
- Inability to control bladder or bowel movements

#### **Alzheimer's Disease Symptoms:**

- Forgetting recent events or conversations
- Misplacing items
- Repetitive behaviour
- Difficulty in reading or speaking
- Mood swings and irritability

### Diabetic Foot

People with diabetes often have problems with their feet. High blood sugar can damage the nerves and blood vessels in the feet. The nerve damage, which is called diabetic neuropathy, can make your feet feel numb, tingly, hurt, or lose feeling. Someone with a long history of high blood sugar levels may develop a diabetic foot, which means that they have poor blood circulation in the feet, slowing down healing. Diabetic foot is a serious condition and patients must exercise a lot of caution in avoiding any injury to the feet as minor cuts and bruises could

get infectious, leading to the dreaded disease of gangrene where the leg is amputated to stop it spreading to other parts of the body.

**Symptoms of diabetic feet:**

- Tingling or burning sensations in the feet
- Numbness to heat or cold
- Deformation of feet
- Loss of hair on the toes, feet, and lower legs

## Financial Stress: A Major Contributor to Diabetes

We all know that stress of any kind is an open invitation to diabetes. Yet we live in a time and age where courting stress seems inevitable. We live in a time of rampant consumerism, where social media and advertisers continuously beckon and lure people across age groups to buy and buy more things. Today, people want to earn a lot of money in a very short time to get instant gratification for their desires.

The other day, I happened to be at the dry cleaner's when I overheard the young staff discussing the latest smartphone and how cool it was.

'There is a zero per cent EMI on this one. Wow! I will buy it tomorrow,' said one of the boys while checking the online shopping app on his smartphone.

Honestly, I didn't stay to hear the rest of the conversation. And I have no doubt in my mind that the young employee would end up buying the phone that is worth more than a lakh of rupees. I am sure his monthly salary would be a small fraction of the smartphone's price. Yet, he didn't stop to think about how he'd pay the EMIs. He may not have had any financial responsibilities at a young age, but most of us would agree that it was not the best financial decision. The mobile company will launch a newer version in a few months. Won't that excite and inspire this young man to try to buy that one, too? What aches my heart is no one is guiding the youngsters about making sound financial decisions. With the price of a smartphone, the youth could have done a certification or taken up a course to enhance his skills. That would have indeed been an investment in his future. Had he used his resources to build a more financially stable future, he could have fulfilled his desires without getting into financial trouble, which I know is inevitable if he went ahead and bought that expensive phone.

Why that young boy only – adults make the same mistakes every day. We have somehow begun to equate spending on luxuries to the feeling of financial well-being. And how wrong it is!

There is a lot of societal pressure to look rich. I know a couple in their 40s who love to holiday and throw parties. Nothing wrong with that. Unless you discover they have been in chronic debt, most of their earnings go into paying off credit card bills. When people see their social media pages, they think the couple is rolling into money, hence such extravagance. But it is not earned money that they are spending. It is borrowed money that keeps them on a leash. The couple may feel temporarily happy, but they are unwittingly brewing a storm of financial troubles.

And when financial troubles begin, they bring with them unsurmountable stress.

Everywhere you look around, people are troubled by a lack of money. No, this is not only about poor families who find it challenging to make ends meet. The story is true about those households, too, that earn lakhs every month but still cannot handle their money; they spend fast and wild, more than they need to. And these seemingly well-off households are the worst sufferers of financial stress.

As a financial advisor, I have met scores of families over the past years who were distraught and on the verge of a nervous breakdown because of financial stress.

'I don't have any money to invest, Doctor. I can't even meet my household expenses. I have heard that you give good advice. Please help me get out of this financial mess.'

I hear this very common phrase from people who have been grossly unable to manage their money.

To these good people, I simply ask to draw two columns; in one, write all the expenses, and in the other, the income from all sources. When they do this exercise, they see how much of their money is leaking into wasteful expenses.

I advise them to plug these leaks and invest the same amount for a financially secure future.

In most cases, when these people follow the advice, they not only ensure a financially independent future but also free themselves of the financial stress that was gnawing at their minds and silently making them sick. Very sick.

It may seem incredible to many, but stress manifests through physical dysfunctions, such as headaches, upset stomachs, high blood pressure, and even heart disease and diabetes.

Managing stress is a significant step toward managing diabetes.

Since financial stress is omnipresent and affects not only adults but youngsters, too, it is essential for people to build a healthier relationship with money. When you learn to spend, save and invest your earnings in the right proportion on a regular basis, you free yourself from financial stress.

#### **Some tips for lowering your financial stress:**

- **Reduce your expenses:** Differentiate between needs and wants. Know what luxury is and what is necessary. You need a car to commute, not to impress the neighbour. Plan picnics more than splurging on expensive cafes and restaurants.
- **Learn to enjoy life's simple pleasures:** You don't *need* to spend a lot to feel happy. Be close to nature. Tend to plants. Talk to grandparents. Help someone without asking for anything in return. All these simple things will make you happier than material possessions.
- **Invest for financial freedom:** Set aside a small sum each month for investing regularly in a safe and rewarding investment option. Do not fall prey to frivolous schemes. Learn about financial management. Choose a successful person as your financial mentor. Keep learning and keep growing.
- **Your health is the real wealth:** Always remember that financial stress only leads to more serious health issues. Take charge of your financial situation. Take help from someone if needed. But be disciplined. You know there is no problem you cannot solve if you remain persistent.

### Improve your financial acumen with the following lessons:

- **Active Vs Passive Income:** Most of us depend upon an active income, which means slogging hard to pay bills. Passive income is money earned without having to work. When you buy an asset that earns you interest or returns, you have passive income. Try to add at least one source of passive income to your total earnings.
- **Saving v/s Investing v/s Trading:** These three words are often used as synonyms but are completely different in meaning. Saving is what you put aside from your earned income – the balance after paying all your expenses. Typically, people put their savings in the bank in fixed deposits and other traditional saving instruments. Your savings earn you less than the inflation, which means that the effective value of your money in savings decreases over time as the prices increase. Investing, on the other hand, is putting your money in long-term investments, such as stocks, mutual funds, or real estate (not a viable option for many because of the high capital investment). Your money grows gradually at a much better rate of return than savings. The volatility in the market helps your investment grow handsomely over a long span of time. Trading is short-term investing, typically in stocks and bonds. The high volatility in intraday trading (buying and selling of stocks) makes it extremely risky and akin to gambling. A trader can earn a huge return in a day or lose all the capital in minutes. Out of the three, investing in good mutual funds or stocks with a long-term horizon is the best way to generate wealth through passive income.
- **Systematic Withdrawal Plan:** People who wish to receive a regular passive income from their mutual fund portfolio can opt for a Systematic Withdrawal Plan. A very good option for those who have been investing for a long time and have created a massive portfolio, the Systematic Withdrawal Plan allows them to enjoy the fruits of their investment.
- **Financial Freedom v/s Financial Stress:** Financial freedom is a stage where you don't have to work to earn money, and your passive income is enough to pay your bills. While most of us wish to be financially free, the truth is that a majority of people around the world are suffering from financial stress. The gap between the two is financial literacy. When you understand the true nature of money and learn to manage it well, you begin to lower your financial stress. And when you take determined steps towards creating wealth through passive income, you march towards financial freedom. Contrary to popular belief, becoming wealthy is easy if you are persistent and disciplined.

Learn to understand how money works and how small investments over a long period can lead to financial independence. The better you manage your money, the lower would be the financial stress, which is a major contributor to diabetes.

## Is Diabetes Really an Untamed Monster?

We know that diabetes is bad for everyone. And medical science will try to convince you that nothing can be done once you have got it. You'd be put on expensive medications and have eating restrictions for life. In short, diabetes will rule every aspect of your life.

For someone who has seen the full impact of advanced-stage diabetes tormenting a loved one, I have always dreaded this harmless-looking killer disease. Until a few years ago, I, too, believed that medication, and later insulin, were the only resort for a diabetic patient to control blood sugar levels. However, at the same time, I was also coming across people who had been on medication for diabetes for a decade, dangerously nearing organ failure and reporting cardiovascular diseases. The medication has reduced the natural process of insulin generation and absorption, slowly leading to the degeneration of organs. Still, the biggest side effect of continuing medication to bring down blood sugar levels is low blood sugar. While most diabetic patients are only concerned about lowering the high sugar levels in their bloodstream, they often forget the deadly implications of low blood sugar levels – a condition called Hypoglycaemia in medical terms. A severe case of Hypoglycaemia can cause coma or even death if blood sugar levels drop below 70 mg/dL.

But is diabetes really the monster that you can never defeat?

Don't throw your arms in despair yet! There is still hope.

You can still manage your diabetes by making positive lifestyle changes. Yes, it is true and amply proven in recent times.

Try to understand that managing diabetes is a game of making the insulin in your body work properly. When you eat, your body must release adequate insulin, and the cells must absorb it optimally.

The good news is that many people with diabetes can actually train their bodies to release potent insulin with the proper diet, exercise and stress management.

It was by chance that I came across a program to reverse the effects of diabetes curated by a reputed doctor. I was intrigued and studied the program closely. What amazed me was that there were people who had been on diabetes medication for over a decade, but in less than a year of joining the program, they were able to control their blood sugar levels even after discontinuing any sort of medication.

More research into the subject yielded a hopeful discovery.

I found out that regular physical exercise, especially Yoga, eating at the right intervals and being in a state of continual joy tremendously helps in the secretion of insulin, better absorption of glucose in the cells, and hence, maintaining the blood sugar levels within the prescribed limits.

It may sound incredulous to many that adopting such simple practices can easily win over diabetes and live with more freedom, energy, and vigour. But it is true. And well proven, too!

'I am 58 years old and have been popping pills to control my diabetes for more than five years. Not anymore. I geared up to make positive changes in my daily routine, and see, I am off medications now. My blood sugar is well within the safety margin. I eat well, work hard and live more each day.' This is how Mr Shinde had introduced himself at a Yoga camp that I was attending. I felt not only inspired by that gentleman's enthusiasm, but I also felt tremendously happy to see a person who was previously sick, but with a bit of discipline and focus, he reconquered good health.

I have brought some positive changes to my life. I wake up early in the morning, do Yoga, meditate, and eat the food that is right for my metabolism. These simple changes in my daily routine have awarded me exponentially. I feel stronger despite aging, my mind is in a state of continuous bliss, and the test reports tell me that my body vitals are in good shape.

But if managing diabetes is so easy through exercise, diet and destressing, why don't people simply adopt a better lifestyle and beat diabetes?

This question perturbed me to no end.

Until I realized one crucial thing, people aren't always self-motivated to bring a healthy change in their lives. Sometimes they need a bit of encouragement, some inspiration, and even hand-holding.

This realization set off something inside me, and I became committed to helping people beat diabetes. I have always felt that it is my destiny to help people – whether to become financially independent or free from diabetes.

And this is how the idea of 'Living Happily with Diabetes' was conceived.

## The Living Happily with Diabetes Club

The Living Happily with Diabetes Club is a product of goodwill and the resolution of many people working at the Nave Marg Foundation, a charitable organization I have been running for many years. The foundation usually works towards the betterment of the young generation and undertakes social projects ranging from improving the school infrastructure for students to running scholarship programs to donating new and modern medical equipment to government-aided hospitals.

Motivated by the idea of helping as many people win over diabetes as possible, I took my idea for the club to the Nave Marg Foundation team, where we brainstormed the best ways to inspire people to adopt a healthy lifestyle and control their raging blood sugar to normal levels. After much deliberation, we came up with the following outline for our diabetes management program:

- **Bringing people together:** Right from the beginning, we were convinced that people are more motivated and committed to developing any habit or lifestyle change when they do the activities together. So, our first objective was to reach out to people who were either diabetic or in the pre-diabetes stage and invite them to gather at a designated time to address the program details. However, there would be no restriction on participation. Anyone, even non-diabetic people, could be a part of the program.
- **Getting experts on board:** The program centres heavily on exercise, diet and destressing, hence, we needed experts in Yoga, nutrition, meditation, and general well-being. This we promptly did for our launch target area.
- **Identifying geographies:** Since the planned program was supposed to take place in the physical world, we needed a place for everyone to gather and perform activities.
- **Medical aid:** The success of the program depended upon real, measurable milestones. To achieve this, we planned to conduct free diabetes tests for all the people joining the club and record their sugar levels in comprehensive reports. These tests were to be reported after one month, three months and six months after joining the program. Regular diabetes (HbA1c) tests would clearly indicate an improvement in every member's blood sugar levels.
- **Community Building:** With our diabetes management program, we wanted to build a community of people who were earlier battling with the disorder alone in silos. Most people hide their diabetic condition, fearing a social stigma. Many others feel demotivated to make a positive change in their lifestyles due to excessive, and often misinformed, advice from people around them. The idea was to bring people together where they could heal in a non-judgmental and collaborative environment.
- **Free of Charge:** To be completely inclusive, the program had to run without any restrictions of age or social class. We unanimously agreed that the clubs would not have any sort of participation charges or membership fees. It would be absolutely free for everyone and anyone who wished to benefit from the program.

With our core agenda in place, we set to find a location to launch the first-ever Living Happily with Diabetes club. Simultaneously, we began looking for reputable Yoga experts, nutritionists and motivators in the region.

We launched our first Living Happily with Diabetes club at Cavellossim, in August 2021.

Several of the initial members of the club were the Covid Warriors, who had been associated with us through our financial literacy and wealth creation initiatives. These people generously spread awareness about the program in their neighbourhoods, bringing in more and more people every day.

Right from the launch, the program took off smoothly. We did scores of blood sugar tests for the members and allocated resources to continually monitor and note the improvement in individual patients. We also assessed and evaluated the progress of individual members. Taking the help of professional nutritionists, we offered customized diet suggestions for people from diverse backgrounds having unique culinary preferences.

I still fondly remember the excitement of the first few months since the launching of the club. There was a lot of zeal, camaraderie and a positive drive among the members – perhaps for the first time, people with diabetes came together in such numbers to support, guide and cheer each other. The energy levels were high, and the feedback from the club members was highly encouraging.

“I sincerely thank Nave Marg Foundation for starting this unique concept of ‘Living Happily with Diabetes’ that gave me an opportunity to work with other members and trainers in a loving and caring environment. I feel not only fit and more energetic but also very happy and satisfied. I now look forward to every session as a healing family reunion,” expresses Ms Coutinho, who successfully managed to control her rising blood sugar in just over three months’ time.

Fifty-six-year-old Mr Desai also had good words about the program.

“God bless the team of Nave Marg Foundation and Dr Celso Fernandes for gifting us the Living Happily with Diabetes club. The program is very focused and result-oriented. Our instructor helps us perform very effective Yoga postures and we are told about ideal dietary patterns. There is also a spiritual side to the program, and we learn to calm our minds. For me, this program is a saviour, and I am committed to reversing my diabetes through this beneficial program.”

Watching people take charge of their health has been a very satisfying experience for me. Many people from the first Living Happily with Diabetes club were successful in controlling their blood sugar without the help of medication. This was a real win, and I was ecstatic.

But there were yet many more people who could benefit from the program. We couldn’t sit and enjoy the success of the first club and busied ourselves with opening new clubs – one location at a time.

After the launch of the first club in August 2021, we opened new clubs in Nuvem, Majorda, Navelim, Vasco, Chodan, Ribandar, Carmona, Varca, Orlim, Panjim, Saligao, Candolim, Ponda Main, Ponda St. Anne's, Rivona, Loutolim, Sinquelim, and Borda. With increased awareness among the people of Goa, we have received requests from various other locations for setting up the Living Happily with Diabetes club.

In a span of one-and-a-half years, we have opened 20 Living Happily with Diabetes clubs, conducted 2000 Random Blood Sugar tests and 800 HbA1c tests, enrolled 600+ members, and helped more than 200 people in controlling diabetes.

It is a humbling experience watching more and more people getting benefitted from our clubs, and it fills me with gratitude. Recently, the Research Society for the Study of Diabetes in India (RSSDI), has collaborated with the Living Happily with Diabetes program to gather and analyse statistics pertaining to diabetes.

As I write, there are plans to open new Living Happily with Diabetes clubs around Goa. And the mere thought of extending the benefits of the program to hundreds of new people puts a smile on my face. I feel truly blessed and grateful to be able to help people beat diabetes when there is no other resort for them. It is my heartfelt desire that philanthropists, healthcare reformers, corporates, or even communities take up the Living Happily with Diabetes model and help people around the nation in living healthy, happy lives.

In the next chapter, we share our three-pronged approach towards reversing diabetes.

## Three-pronged Diabetes Management Mantra

At our Living Happily with Diabetes clubs, we follow a tested and highly-effective three-pronged wellness approach to help people with diabetes utilize insulin to control blood sugar levels in a natural and organic way.

The three core areas of diabetes management that we follow involve a curated exercise regimen focusing on reducing fat and activating the pancreas; fasting and nutrition for the best possible absorption of glucose in the bloodstream; and managing stress through meditation, spiritual awakening, peer-to-peer engagement and fun activities.

### Diet

Diet management is essential in controlling diabetes at our Living Happily with Diabetes clubs. Most people today are eating unhealthy food, often without even realising it. The food we consume regularly has undergone a sea change with changing lifestyles. We are eating more junk food now than ever, thanks to the processed and oily food items available in plenty around us. And technology has made eating unhealthy food even more convenient! When you feel hungry, you order a pizza or make a run to the burger place. Packaged snacks like chips, nachos, and other savouries dominate the grocery stores, promising a quick relief from hunger – but at what cost?

With the increased influence of media, social drinking and consumption of alcohol at home has also gained popularity. The concept of the weekend borrowed from the West now means a ticket to eating junk food and drinking copious amounts of fizzy drinks and liquor. Advertisements and app notifications constantly remind us to eat more often. We seek momentary pleasure from eating unhealthy food high in salt, fats and sweeteners.

We must know where our dietary preferences are heading!

### Dietary habits difference between the Western culture and Indian Tradition

Traditionally, Indians ate much better. We ate more green vegetables, cooked in healthy oils and ghee, knew the right balance of spices to be put in a particular dish, and always had clean, home-cooked meals. Traditional Indian food items are largely sourced from local vegetation and spices, which match the climatic conditions and are easy on the digestive system.

We Indians have a history of thousands of years of practising culinary science in our homes! So, what went wrong?

With colonization came the influence of Western food in India. As the colonizers exerted their culture and religion over the indigenous population, food became a weapon for separating the Western lifestyle from the local one.

By the beginning of the 20th century, processed foods from abroad found their place on Indian dining tables. From marmalades and jams to tinned sardines and cheese, Indians from privileged backgrounds began relishing these foreign foods. Many English and Portuguese dishes became a part of Indian cuisine in the previous century. The culture of eating baked

foods, too, came with the Europeans and stayed here. But the maximum damage has been done in the last three decades, during which fast-food chains swamped Indian cities and towns.

The western eating habits that are finding favour with Indians at an increasing rate are mostly unhealthy. Breads, cakes, pizzas and pasta are popular among young Indians, even when we know that these food items trigger diabetes.

Points to note:

- Western influence through colonization introduced frequent consumption of meat and alcohol, while traditional Indian households limited the consumption of these tamsik foods and drinks. For instance, many Hindu families do not eat non-vegetarian food on Tuesdays and Thursdays, as it has been a part of their culture.
- The Europeans introduced us to cakes, muffins, and breads; all made with maida or refined wheat flour and sugar, which are the food items to be avoided to keep diabetes at bay.
- Most developed nations in the West do not believe in home cooking. They rely primarily on frozen and processed foods that are very harmful. Indian households have always emphasized having freshly cooked meals. It is no surprise that the children who get to eat more home-cooked meals are healthier than those who eat processed and oily foods. Unfortunately, to save time in the morning, an increasing number of parents pack slices of bread and cakes and confectionary items in their children's tiffin, which is a growing factor in rising obesity among children in India.
- As per the ancient Indian tradition, fasting has always been a significant part of everyone's lifestyle. Even today, there are various occasions where men and women observe fasting. Frequent fasting helps detox the body and allows excess sugar in the bloodstream to be utilized.
- Ancient Indian culture dictated the times to eat. For instance, people following the Jain teachings have dinner before sunset, allowing the body time to properly digest the food before bed. Also, the concept of snacking between meals didn't exist in olden times. Marketers have invented and propagated meal times to sell their products.

### **Intermittent Fasting**

Besides eating healthy food, it is also important to eat at the right intervals. At our Living Happily with Diabetes club, we share the benefits and methods of intermittent fasting with our members, who find it to be very useful in controlling their diabetes.

Intermittent fasting is all about when to eat rather than what to eat. People observing intermittent fasting choose a schedule for eating and fasting. Results have shown that intermittent fasting – eating at a specific hour of the day, having just one or two meals a day for a couple of days in a week – can bring down blood sugar levels to normal, burns fat and keeps the heart healthy.

## Hot vs Cold

We gulp down chilled water and cold drinks to quench our thirst. However, cold water wreaks havoc on our system as it thickens the mucus, causing respiratory problems, slows down digestion and leads to weight gain, and even causes headaches and sinus problems. Whereas drinking hot beverages and warm water aids better digestion, helps weight loss and curbs appetite. At our clubs, we encourage drinking hot beverages or warm water because it burns belly fat, which is a major resistance for insulin to do its work.

## Key diet protocols to follow for managing diabetes:

- Early dinner
- Eating limited portions
- Avoiding binge eating and irregular snacking
- Intermittent fasting
- Replacing processed foods with seasonal fruits and vegetables
- Limiting the consumption of meat and oily snacks

## Exercise

Physical activity is another area of emphasis at our Living Happily with Diabetes clubs. With a more convenient lifestyle, we are getting fewer opportunities for doing physical activities. We know that it is difficult for people to find the motivation to go out for workouts regularly, that is why we formed physical clubs where people could come together and exercise in a group.

### Group Exercise Vs. Working out alone

- Lone workout sessions lack motivation and require a lot of commitment, while working in a group turns into a social activity that one enjoys and looks forward to
- Working out alone becomes tardy, and often people lose the drive to take out time to exercise. On the other hand, in a group, people encourage each other to finish their reps or sets. They call up to enquire when a member doesn't attend a session, thus ensuring that the person doesn't give up exercising altogether.
- It is always special to be a part of a mission or drive. People who work out in a group feel happy to bond over a common objective. They share their pains and success with others and improve their health in a positive, assertive environment. All this is missing when a person works out alone.

There are a lot of suggestions around when it comes to physical activities that focus on reducing diabetes. While walking is unanimously considered to be the best form of physical activity to generate insulin, unfortunately, not everyone can commit to rigorous walking each day. People with weak knees and obesity, or those in advanced age, find it difficult to walk long distances. The Living Happily with Diabetes program recognises this fact, and therefore our focus is more on Yoga and breathing exercises. In our program, we have curated a set of simple yet very effective Yoga asanas that anyone can perform to control diabetes.



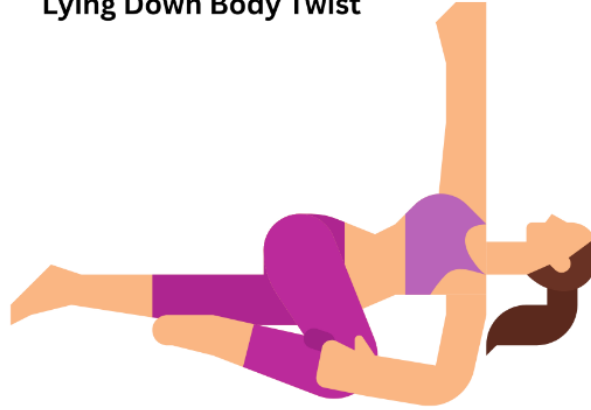
### 1. Surya Namaskar

Sun salutations are very good for people with diabetes. It is a great way to increase your heart rate and stretch your entire body. Sun salutations are also an excellent way to warm up before performing an asana.

1. Straighten your back, draw in your abs, and join your palms. Inhale and stretch your hands behind you. Exhale, lean forward, and slowly lower yourself. Relax your neck
2. Inhale and bring your right knee to the floor. Make sure your left knee is 90°, and your palms are flat. Head up! Hold your breath and bring your left leg back to plank position
3. Straighten out. Exhale, and lower your knees, chest, and chin. Slowly squat. Inhale, lift your upper body, and look up. After lifting, exhale. Try to stretch your spine with your heels and palms on the floor
4. Inhale while extending your right leg. Exhale and bring your left leg forward. Stretch while bending over and touching your toes. Inhale, raise your hands, stretch your back, and exhale
5. Repeat with your left knee down

# NATRAJASANA

Lying Down Body Twist



## 2. Natrajasana

When it comes to yoga for diabetes, the lying down body twist is the second most popular. It focuses primarily on massaging the internal organs and aids digestion. Despite the strain on the abdominal organs, this pose can help lower blood sugar levels.

1. Lay flat on your back, palms down
2. Bend your left leg over your right side to chest level - knees should be hip-level
3. Repeat on the other side



# KAPALBHATI

Forceful Exhalations

## 3. Kapalbhathi

Kapalbhathi is best known for improving liver and kidney function, and it corrects blood circulation across the body. A very good exercise for diabetics, Kapalbhathi helps in strengthening vital organs by facilitating adequate blood flow, lowers stress and reduces the risks of developing clots.

Kapalbhathi pranayama also helps to energise your nerves, gain control over your mental strength, promote hair growth, and detoxify your system. Furthermore, the Kapalbhathi breathing benefits include sinus and asthma relief.

1. Sit in a yoga pose you feel comfortable in - sukhasana, padmasana, or vajrasana
2. Put your hands on your knees with the palms facing up
3. Make sure your back is straight, your shoulders are down, and your neck isn't tense
4. Avoid taking backrest
5. Take a deep breath and feel the air going down into your stomach
6. Exhale forcefully using your abdominal muscles
7. As you breathe out, pull your belly button as close to your spine as possible. You should hear a hissing sound
8. You will feel your stomach muscles tighten and loosen
9. Follow up the exhalation with automatic and immediate inhalation.
10. Begin with 15-20 repetitions and gradually increase the number over time

**\*Note:** People with high blood pressure must restrict to 15-20 repetitions at a slow pace. Avoid doing Kapalbhathi on a full stomach.

# PASCHIMOTTANASANA

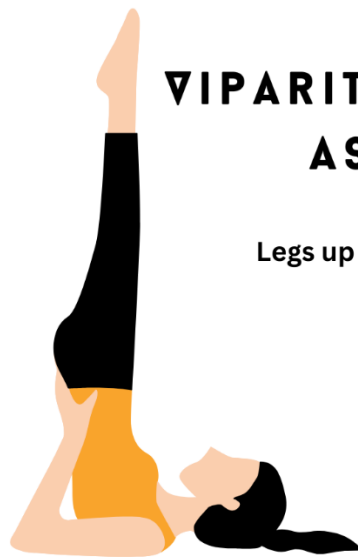
Seated-forward Bend



## 4. Paschimottanasana

Here's a therapeutic yoga asana for diabetes. Diabetics should try seated forward bend. It regulates diabetes, blood pressure, and insulin levels. This position helps people lose weight. Stress, weariness, headaches, and anxiety are also relieved.

1. Sit down and straighten your legs
2. Inhale, then raise your hands
3. Bring your hands to the ground and attempt to touch your toes without bending your knees
4. Place your chin against your chest
5. Maintain the posture for 60 seconds while breathing normally



## VIPARITA KARANI ASANA

Legs up the wall pose

### 5. Viparita Karni Asana

Legs up the wall pose significantly impact diabetes by stimulating your pancreas and bringing your internal organs together. It lowers blood sugar levels, reduces blood pressure, and relieves stress. It is also an excellent rejuvenation pose because it increases circulation and energy levels.

1. Fold a towel in half and sit on it next to the wall
2. Lay on your back, lift your legs up, and touch the wall while making a 90° angle
3. Your head, neck, throat, and chin should all be relaxed
4. Spread your arms out and turn your palms up
5. Hold this position for 5 to 10 minutes
6. After that, slowly slide down your legs

## BHUJANGASANA



### 6. Bhujangasana

The Bhujangasana stretches and strengthens your muscles and is very effective in reducing blood pressure and blood sugar levels in your body. This Yoga pose also aids in posture improvement and is found to be mildly helpful in treating asthma.

1. Lie on your stomach with your legs straight
2. Place your arm on the floor beside the lower ribs, keeping your forearms at 90 to the floor
3. Lift your body by pressing your arms together
4. Put pressure on your feet and tighten your hips
5. Hold the position for 30-40 seconds while breathing normally

# SHAVASANA

## Corpse Pose



### 7. Shavasana

The Corpse pose concludes diabetes yoga. Start with any yoga asana, but end with the corpse pose. It lowers blood sugar, balances blood pressure, and calms the body and mind. It puts your body in a meditative state where stress disappears. It's a classic technique to end any set of yoga asanas.

1. Lay down straight, spread your feet out a bit, and keep your arms in a resting position
2. Set your torso in a straight line to make a Y shape with your body
3. Inhale slowly and deeply and feel your breath travelling to every part of your body
4. Loosen your body and get into a relaxed frame of mind
5. Practice the pose for 10 to 15 minutes to completely destress your body

## Stress Management

Mental stress is becoming one of the major factors leading to diabetes. As our lives are getting faster, it is also getting more complex. Today, every single person is going through some stress – whether it is the pressure of studying or proving yourself at the workplace or the stress of maintaining relationships. No wonder mental health has become a primary concern the world over.

But there is a light at the end of the tunnel. We can lower stress through positive thinking, meditation, praying, and even by sleeping!

### Sleep: A powerful medicine in fighting stress & diabetes

Our body restores itself when we are asleep. Irregular, disturbed or inadequate sleep affects our mood and productivity and leads to mental and physical stress. Under the Living Happily with Diabetes program, we motivate our members to adopt healthy sleeping practices.

### Five Sleep Tips to Keep Your Blood Sugar Under Control

1. Try to adhere to a daily bedtime routine. 10 p.m. is an appropriate time to go to bed. Once you keep this time consistently, your body and mind become accustomed to it and begin to work properly.
2. Dinner should be finished at least two hours before bedtime. So, if you plan to sleep at 10 at night, eat your dinner before 8 p.m. This allows our digestive functions to finish 90% of its task. Avoid heavy dinners because your digestive system works for only two hours at a stretch.
3. Avoid loud music or bright lights an hour before your sleep time.
4. Switch off all screens – including TV and mobile phones at least 30 minutes before sleep time. At our clubs, we call it digital detoxification for 30 mins before sleep.
5. Finally, the most important 30-minute exercise before sleep is Prayer & Meditation. This exercise will definitely put you in a deep slumber, provided you do it properly. Express your gratitude towards all the people who are kind to you and love you. Thank the almighty, and feel joyous for having what you have. This is a simple yet very effective exercise of gratitude.

**Top Tip:** Sleeping undisturbed for 7 – 8 hours each night will do wonders for your overall health. You may take an afternoon nap if your work permits – however, never sleep immediately after having a meal. Wait at least 30 minutes for the food to digest.

A lot of stress that we experience comes from negative thoughts. If your mind is constantly assailed by angry, sad, gloomy, hateful thoughts, perhaps it is time to introspect and find if any of the seven cardinal sins may be influencing your thought process.

The 7 deadly sins:

1. **Lust or desire:** Unbridled desire for a person, money, or power is considered a sin that can consume you, putting you into a state of constant preoccupation and malice.
2. **Gluttony:** Overindulgence or compulsive consumption is gluttony – it can be for food or drink. Gluttony reduces a person's purpose in life merely to eating and drinking.
3. **Greed:** Greed, as we all know, leads us to all the wrong paths. It is a form of desire that leads to hoarding, stealing, betrayal and corruption.
4. **Sloth:** In plain words, it is a sin of laziness. This sin kills all aspirations and motivations for self-improvement and even fulfilling one's responsibilities.
5. **Wrath:** The feeling of uncontrolled rage, anger, or hatred. Anger does us no good, as we all know so well. Unjustified anger and impotent fury over things that are out of our control is a big reason for stress nowadays.
6. **Envy:** It is a feeling of jealousy for others. We often feel envy when we see friends and colleagues on social media spending exotic holidays or buying expensive cars. When we envy others, we unknowingly create a lot of stress and set unrealistic expectations in life.
7. **Pride:** Pride or arrogance is a feeling where one places the self over everyone else. It is the opposite of humility. Our ego hurts a lot of people and creates unnecessary friction in relationships, which eventually turns into anxiety or stress.

The good thing is that there are simple ways to cleanse your mind and soul by practising the following counter techniques to win over the seven cardinal sins:

1. Chastity
2. Humility
3. Charity
4. Gratitude
5. Temperance
6. Patience
7. Diligence

Living happily with diabetes gets easier when you master calmness by keeping stress away, exercising regularly with like-minded people and eating healthy food at the right time of the day.

The ancient Japanese culture and the philosophy of Ikigai encompass all the three aspects we discussed in our three-pronged diabetes control program. There is a lot to learn from the way of Japanese life, whether it is eating small portions, finding a profession that gives one joy or being a part of a community.

### Lessons from the Japanese philosophy of Ikigai

- Sense of Purpose
- Sense of Involvement
- The power of prayer & Meditation
- The art of positive thinking
- Celebrating abundance and practising gratitude
- Appreciating what one has and the efforts of others
- Praying

The overall focus of the Living Happily with Diabetes program is to inspire and handhold members in adopting healthy lifestyle changes. Since diabetes is primarily a lifestyle disorder, our approach is to help people make healthy inclusions to their daily routine, which go a long way in managing and reversing diabetes.

Through the following real-life examples, I will share how Living Happily with Diabetes program has been helping club members control their diabetes without medical intervention by making positive changes in their lifestyle.

Vishal didn't know he had diabetes until he took a diabetes test at one of our camps. At 36, he admittedly had a sedentary lifestyle burdened by the stress of a demanding job. He had been gaining weight constantly for the past few years and couldn't commit to any physical exercise. It was his wife who had brought him to the club. The test reports revealed slightly higher sugar levels, which alarmed the couple. Although he was reluctant to join the club initially, Vishal committed to the periodic sessions once he discovered how light he felt in his mind and body after a therapeutic session at his local Living Happily with Diabetes club. The couple also made friends with other members. Vishal followed the intermittent fasting suggested by the nutritionist and cut down on fried snacks and alcohol. The results were phenomenal and very promising. Within two months, Vishal's blood sugar levels came to normal, and this progress was sustainable.

Gabrielle, a school teacher nearing retirement, had been on medication to control diabetes for over seven years when she enrolled in the Living Happily with Diabetes club in her locality. A working woman who also took care of the household chores and had an extensive social circle, Gabrielle found it hard to find any time for walks, which was recommended by her doctor. She even tried going out for evening walks, but her knees would ache, demotivating her from walking. She struggled hard not to eat sweets, which were her favourites. Now, looking at retirement, Gabrielle didn't feel any excitement. She was scared that after retirement, her physical movement would reduce further, and it may shoot up her diabetes.

Luckily, the trainer at the club told her something that made her beam. He suggested that for those with weak knees, there were certain Yoga postures that were easy to perform and were

far more effective. The nutritionist told the group that instead of avoiding eating sugary food and eventually succumbing to the urge, it is better to eat all the food of your choice at planned intervals. Gabrielle, who liked to make new friends, was delighted to find like-minded people at the club, whom she started to meet regularly. 'Spending time with friends makes me feel young and healthy,' she'd often say happily to her club friends. Over the last year since her joining the Living Happily with Diabetes club, Gabrielle has been much more active and happier. Her blood sugar levels are within the safety margin, and she has lost the unwanted fat and has a toned look. Unsurprisingly, she is one of the biggest ambassadors of the Living Happily with Diabetes clubs and generously helps other club members like a true maternal figure for the budding community.

## Together, we stand strong

The entire Nave Marg Foundation team has witnessed the wonders of a community-based approach to eradicating diabetes. We have observed that when people support and motivate each other, miracles do happen. We have seen people with years of undisciplined lifestyle correcting course influenced by others who have faced similar situations and fought back to adopt a healthy lifestyle. There are everyday instances where fellow club members cheer for their comrades when they manage to control their diabetes, and at the same time, we have seen them consoling and asserting those who are finding the road difficult. It is a precious feeling to watch a fellow diabetes fighter with advanced diabetes being able to manage it without the help of medicines. We, humans, are always in need of inspiration. With the right company, we can move mountains!

### Benefits of Joining a Living Happily with Diabetes club:

- Focused approach towards diabetes management through simple changes in daily routine
- Weekly Yoga sessions under a trained instructor
- Validated advice on nutrition and diet
- Group meditation and club activities to destress
- Being a part of a loving community determined to live happily with diabetes

### The Living Happily with Diabetes Club Mission

Managing any sort of organisation is fraught with continuous struggle and challenges. And it is the same with running our unique Living Happily with Diabetes clubs. Sometimes there are instances where volunteers from the foundation and clubs try desperately to encourage members who have been missing the sessions or are irregular. But together, we put our best foot forward and never let the spirit of the program run low. We continually check on the members, try to find solutions if they are finding it difficult to attend the sessions, and ensure that they are motivated enough not to abandon the unique chance of living happily with their condition.

Our mission is to reach out to more and more people with diabetes and inspire them to fight this battle with us in a loving and all-embracing culture we have created at our clubs. We also aim to open more clubs to give easy access to thousands more waiting for a chance that the club promises to give all diabetic patients.

On a personal front, it is my deepest desire that many more people around the country should get access to such a beneficial program and that too, without any charge. Today, India is among the top countries with the maximum number of diabetes patients. Our fellow countrymen run severe health risks because of this lifestyle disease, which can be easily controlled only if we make minor adjustments to how we do things on a daily basis. India has a great culture and heritage of spiritual and physical well-being. All we need is to go back to our roots and follow good practices that our ancestors used for ages. The Living Happily with

Diabetes program shows great promise and opportunity for people to form active, informed and happy communities across cities, towns and villages and adopted healthier lifestyles enriched by physical and mental harmony, peace and everlasting joy.

### **Start a 'Living Happily with Diabetes Club' in your locality**

Dear reader, if this book has inspired you to take action against the rampant spread of diabetes in our country, which, unbeknownst to most of our population, is going to create widespread medical complications, thus making our strong nation weak, I urge you to do so.

You don't need to fund or organize a big movement. All you need to do is to share the ideas presented in the book with others in your circle. Pass on the message, hand over or recommend the book to others, and discuss the possibility of forming a small club to benefit people with diabetes.

Nave Marg Foundation would be glad to extend any support in this regard, including sending branding and training material. We would be happy to share our club members' curated exercise and diet plans. Our objective is to make a healthier and happier India of tomorrow, and we will be glad to share the tenets and practices of the Living Happily with Diabetes club to help the initiative in your town/city.

Let's be vigilant, alert and on our guard against the menacing advance of diabetes in our homes. Let's make a difference by fighting and helping others in their fight against this silent killer by taking small but sure steps.

People who try never lose.