



# DEALING WITH DIABETES (TYPE 2)

(FIND EASY-TO-COOK & TASTY RECIPES)

## INTRODUCTION

India, today, has become the 'diabetic capital' of the world with more than 62 million persons currently diagnosed with the disease. In 2000, India (31.7 million) topped the world with the highest number of people with diabetes mellitus, followed by China (20.8 million). The United States (17.7 million) stood third.

A chronic and metabolic disease, diabetes affects the way your body handles glucose in your blood. There are two types of diabetes: Type 1 & Type 2.

Type 1 diabetes is usually diagnosed in children or young adults. In this type, the body does not produce insulin on its own. Whereas in the case of type 2 diabetes, the body produces insulin but is unable to optimise what is produced. This leads to insulin resistance.

Initially, the pancreas will make extra insulin for the excess blood glucose. But over time, it won't be able to make enough insulin to keep your blood glucose at normal levels. Excess glucose in the blood can lead to serious health problems.

If you have been diagnosed with diabetes, you are not alone. The World Health Organisation (WHO) estimates that about 422 million people suffer from this condition worldwide. If you don't take timely action, diabetes can cause serious complications, including heart disease, blindness, kidney failure, poor circulation to limbs and lower extremity amputations.

Diabetes is more likely to occur after the age of 45, but it is increasingly on the rise among children, adolescents and young adults. According to the WHO, over 8.7% of Indians are affected by diabetes, and type 2 diabetes accounts for about 85% of the cases. A study in The Indian Council of Medical Research–INDIAB reports another 10.3% of the Indian population to have prediabetes or impaired glucose tolerance.

Meanwhile, South Asians have a predisposition to developing diabetes a decade earlier compared to their European counterparts, at a lower weight. Also, those with prediabetes progress to explicit diabetes at a faster rate.

*Dealing with Diabetes (Type 2)* looks at the causes, symptoms, the risk factors, the potential complications and finally some lip-smacking recipes to manage the condition.





## WHAT CAUSES DIABETES?

It is believed that genetics and environmental factors may play an important role in the development of type 2 diabetes. The combined effect of these can lead to insulin resistance.

### Genetics

Type 2 diabetes being hereditary doesn't mean that if either of your parents has type 2 diabetes, you will develop it. Instead, it means that you have a greater chance of developing the disease.



### Lifestyle factors

Your lifestyle choices play an important role in the aetiology of type 2 diabetes. For example, you may be genetically susceptible to type 2 diabetes, but if you take good care of your health, you may not develop it. The reason: certain lifestyle choices greatly influence how well your body uses insulin.

**Sedentary lifestyle:** Physical activity helps to control weight, so, the less active you are, the greater is your risk to gain weight.



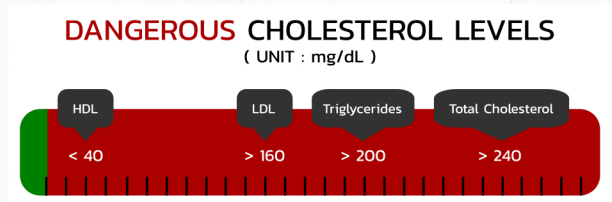
**Unhealthy eating habits:** Eating processed, high-fat and low-fibre foods can increase your likelihood of developing type 2 diabetes.

**Overweight/Obesity:** Lack of exercise and an unhealthy diet can lead to obesity or make it worse. You are more likely to become insulin resistant if you are overweight. Not everyone with type 2 diabetes is overweight, but being overweight is strongly linked to the development of type 2 diabetes.



## RISK FACTORS ASSOCIATED WITH TYPE 2 DIABETES

- **Weight:** The more fat cells you have, the more resistant your cells become to insulin.
- A waist size larger than 90 cm for men and 80 cm for women.
- **Family history:** Your risk increases if a parent has/had type 2 diabetes.
- **Age:** Your risk increases as you age. This may be because you tend to exercise less, lose muscle mass and gain weight. But type 2 diabetes is on rise among children, adolescents and youngsters.
- **Gestational diabetes:** If you developed gestational diabetes during your pregnancy, there is a greater risk of developing type 2 diabetes later in life.
- **Hypertension:** Having high blood pressure (more than 140/90 mmHg) is linked to an increased risk of type 2 diabetes.
- **Abnormal lipid profile:** If you have low levels of high-density lipoprotein (HDL) (the good cholesterol), high levels of triglycerides and low-density lipoprotein (the bad cholesterol), you have high chances of developing type 2 diabetes.
- **Prediabetes:** A person with fasting blood glucose levels in the range of 100-125 mg/dl is considered prediabetic. This means that their blood sugar levels are higher than normal, but not high enough to have diabetes. So, timely action at this stage can prevent the development of diabetes.



Considering the above risk factors, early diagnosis and prevention of diabetes is undoubtedly the way forward. People displaying more than two risk factors, combined with prediabetes and family history, must get screened every six months to one year.

## SIGNS AND SYMPTOMS

The signs and symptoms of type 2 diabetes often develop slowly, so you may have it for years but may not know about it. Since your body can't get enough glucose as an energy source into your cells, a common symptom of type 2 diabetes is feeling very tired. Other symptoms may include:

- Frequent urination
- Feeling extremely thirsty and hungry
- Slow wound healing – cuts and grazes healing slowly
- Getting infections easily – skin / gums / vaginal infections

Some people may not observe these symptoms, or they may ignore. But, over a period of time, high blood sugar levels can seriously damage your heart, eyes, feet and kidneys.



## THE DIET AND DIABETES CONNECTION

Type 2 diabetes is precipitated by an indulgent, urban lifestyle, little or no exercise, eating refined foods, poor stress management and excessive drinking.

Eating excess of highly processed starches and restaurant foods 3-4 times a week, hampers your insulin utilising capacity. This makes you insulin resistant and prediabetic.

At this juncture, you can develop high blood pressure, arteriosclerosis, obesity, high cholesterol, high triglyceride and type 2 diabetes. A high triglyceride reading coupled with a low HDL reading implies prediabetic conditions known as insulin resistance. This condition leads to premature aging. It affects your heart, arteries, liver, eyes and extremities, appearance, moods and emotional state.

### Diet for Diabetes Management

Controlling diabetes through food is simple if you follow the basic guidelines. Remember that diabetes is a nutritionally manageable disorder. So, controlling your diet can prove to be your best bet. Follow these tips in consultation with your doctor, to create a plan that best suits your lifestyle and health status.

- Have a diet consisting of complex carbohydrates, pulses, fruits and vegetables.
- Choose jowar, bajra, oats and barley instead of rice, as they have low GI (glycemic index).
- Include moderate protein in the diet – like dal, milk and curd in each meal.
- Consume plenty of high fibre foods such as whole grains, whole pulses, nuts, seeds, raw vegetables and fruits. High fibre content helps to lower blood sugar levels owing to their low GI.
- Avoid fruits with high GI like mango and chickoo – both are high in sugar. Similarly, avoid starchy vegetables such as potatoes and ams, as they can increase blood sugar levels rapidly.



- Eat at least one bowl of sprouts every day. They are rich in protein, calcium and nutrients that help increase immunity and balance blood sugar.
- Avoid refined and processed food items, baked products and savoury farsans, as they have a high GI.



s  
y

- Instead of having shallow or deep-fried foods, go for baked, steamed and sauté food items.
- Minerals like zinc, chromium, selenium and magnesium help to control blood sugar imbalances.
- Distribute your meals: Opt for 4-5 mini meals instead of three large meals, at frequent intervals. Skipping meals can cause fluctuations in blood sugar, which can lead to complications pertaining to low and high blood sugar levels.
- Consume a variety of fresh fruits and green vegetables as in-between meal options to maintain steady blood sugar levels.



- Herbs available in pharmacies help control diabetes. 'Karneem' made of karela is one such herb. A syrup made of "jamun" known as "jambukasav" is another such herb. If you consume these regularly, you will be able to gradually reduce your dosage of medication.

- Reduce or preferably eliminate alcohol intake, as it can cause the blood sugar to rise. If you choose to drink alcohol, opt for a glass of red wine. It has blood thinning properties and helps raise good cholesterol. Red wine is rich in the antioxidant resveratrol, which helps prevent plaque build-up in the artery.



- Stress leads to depressed immunity by producing a hormone called cortisol, which can slow down your immune system. Stress also triggers free radical damage, can upset blood sugar and make you age faster. Control stress by using relaxation techniques such as meditation, pranayama, yoga or by listening to music or taking a short holiday.

So, if you have been diagnosed with diabetes, get on to some discipline. Plan out your meals and get regular exercise. This can help your body maintain healthy blood sugar levels. If you're overweight, losing weight can play a major role in managing diabetes. It will help your body use insulin better. The best way to lose weight is to exercise and follow a specific food plan.

Even if you don't appear to be at risk, knowing diabetes symptoms and causes may help you or a loved one make the necessary lifestyle changes. The best defence against complications is taking care of your health. Keeping your blood sugar levels near the normal range will make you feel better and it will help you stay healthy in the future.



We have listed some recipes that will easily fit into your schedule and help you improve blood glucose, blood pressure and cholesterol numbers. What's more, you can keep your weight on track.

Starting from breakfast to snacks to smoothie and soup, these diabetes-friendly recipes will surely change the misconception that diabetes and tasty food do not go together!

## CAULIFLOWER SOUP

Preparation time: 25 minutes

Cooking time: 20 minutes

Servings: 2 persons

### Ingredients

- 250 gms cauliflower (chopped into bite-size florets)
- 2 leaves of cauliflower greens
- 1 tsp garlic (crushed)
- 1 mushroom (chopped)
- 1 medium onion (chopped)
- Salt to taste
- 1/4 tsp pepper
- Water as required



### Method:

1. In a vessel, boil cauliflower and cauliflower greens to prepare vegetable stock. Discard the greens and keep the boiled cauliflower florets aside.
2. Heat 1 tsp oil in a soup pot. Add garlic, mushroom and onion; sauté till the onions turn light brown.
3. Now, add the boiled cauliflower florets and stir fry for 2 minutes. Add the vegetable stock to the soup pot and let it simmer for 10 minutes.
4. Once it cools down, strain the stock and transfer the mixture into a blender. Grind all the ingredients until smooth.
5. Transfer the blended cauliflower mixture back to the soup pot. Add the stock. Add salt & pepper as per taste. Once the soup is warm, remove from heat.
6. Pour it into serving bowls and consume hot.



## MATKI MISAL

Preparation time: 20 minutes

Cooking time: 20 minutes

Servings: 2

### Ingredients

- 1 cup matki (Moth beans), sprouted
- 1 small onion (finely chopped)
- 2 small tomatoes (finely chopped)
- 1/2 tsp amchur powder
- 1/2 tsp red chilli powder
- 1 tsp misal masala
- 1/4 tsp turmeric powder
- 1 tsp oil
- Salt as per taste
- A pinch of hing

For garnish:

- A few coriander leaves
- 2 tsp lemon juice

### Method:

1. Wash, soak and sprout the matki. Wash it once more after sprouting in fresh water and drain it.
2. Heat oil in a pan, add a pinch of hing and onions. Sauté the onions until it turns soft. Then add tomatoes and let it cook for 2-3 minutes.
3. Add red chilli powder and turmeric powder to it, followed by misal masala & salt. Stir and let it cook for 5 minutes.
4. Now add sprouted matki, let it cook for 3-4 minutes. Now add 2 cups of water. Let it simmer for 10 minutes. Once cooked, add lemon juice and coriander leaves to garnish. Serve hot.



## CHANNA CHAAT

Preparation time: 30-40 minutes

Cooking time: 20-25 minutes

Servings: 2

### Ingredients

- 1/4 cup green channa (boiled)
- 1/4 cup black channa (boiled)
- 1/2 cup onions (chopped)
- 1/4 cup tomatoes (chopped)
- 1/4 cup cucumber (chopped)
- 1 tsp green chilli paste
- 1/2 tsp red chili powder
- 1 tsp chaat masala
- Salt to taste
- Lemon juice (as per taste)
- 1 tbsp coriander (finely chopped)
- 1 tsp mint leaves



### Method:

1. Wash and soak both green and black channa overnight in 4-5 cups of water.
2. Drain the water the next day. Add 2-3 cups of fresh water to the soaked channa, some salt and pressure cook for 20 minutes. Channa should be soft and tender.
3. Drain the water and keep the channa aside.
4. Take a mixing bowl and add all the ingredients, including the channa. Mix well.
5. Garnish with chopped coriander and mint leaves.
6. Serve it as an evening snack!



## MOONG DAL & CHANA DAL STUFFED PARATHA

Preparation time: 30-35 minutes

Cooking time: 20-25 minutes

Servings: 2

### Ingredients

- 1 cup whole-wheat flour dough
- 2 tbsp gram flour (channa atta)
- 1/2 tsp each of coriander, red chilli, turmeric, cumin powders
- 1/2 cup soaked split yellow gram (chana dal)
- 1/2 cup soaked split green gram (moong dal)
- 1/2 cup water
- 2 tbsp spring onion (finely chopped)
- Salt to taste
- 1 tsp oil/ oil spray



### Method:

1. Wash and soak the chana and moong dal overnight. The next day prepare the wheat dough and set it aside.
2. Add the soaked dals in a pressure cooker with 2 cups of water. Pressure cook for 10 minutes. Drain the dals in a strainer.
3. For stuffing, dry roast the gram flour with the red chilli, coriander, turmeric and cumin powders.
4. Add the boiled dals, spring onions and salt to the above mixture and mix well. Set aside the mixture to cool, your stuffing is ready.
5. Place 1 portion of stuffing in the centre of the dough and roll out as parathas.
6. Oil spray the pan and heat, cook the paratha on both the sides.
7. Serve the paratha hot with coriander chutney or curd.



## JAMUN SMOOTHIE

Preparation time: 15-20 minutes

Servings: 1

### Ingredients

- 1/2 cup deseeded and finely chopped black jamun
- 1 cup low-fat curd (dahi)
- 1 sachet sugar substitute / Stevia powder
- 2 tbsp crushed ice



### Method:

1. Add chopped black jamun and sugar substitute in a blender. Blend them to form a smooth paste.
2. Add low-fat curd and ice into it and blend again so that all the ingredients are mixed well until smooth.
3. Pour the prepared smoothie in a glass and serve immediately.

## FREQUENTLY ASKED QUESTIONS

Most people are unaware that their eating habits are incorrect. They eat what they like and do not pay heed to any advice for healthy eating. Below are a few frequently asked questions regarding type 2 diabetes.

**Q. Diabetes runs in my family. My father is a type 2 diabetic. Is there something I can follow to prevent getting diabetes?**

**A.** You may be genetically predisposed to diabetes, but you can postpone it depending upon your food and lifestyle choices.

- Avoid maida, sugar, fruit juices, white rice, pasta, noodles and chocolates.
- Switch to brown rice, whole wheat bread, chappatis made of jowar and bajra and whole wheat instead.
- Eat whole fruits and drink vegetable juices. Switch to soya milk or drink low-fat cow's milk or curd.
- Increase your intake of both raw and cooked vegetables. Non-vegetarians can eat eggs, fish and chicken.
- Incorporate an exercise routine like a brisk walk 4-5 times a week for 30-40 minutes. Keep yourself at an ideal weight. Gaining weight would increase your risk of precipitating diabetes.
- Above all, keep stress under control. Stress is perceived in the mind, but it can severely affect your physical health. Prolonged stress can raise cholesterol, lead to high blood pressure and diabetes. After all, it is not just how you metabolise foods and burn calories that affect your weight and health. It is how you metabolise feelings, worries, decisions and emotions that make a difference to your future health.





**Q. Do I have to become a vegetarian for better blood sugar control?**

Not necessarily, as vegetarians tend to consume a lot more carbohydrates than non-vegetarians. Their diet consists of bread, pasta, chappatis, rice and dals, which increase the need for insulin. However, a vegetarian diet can be of tremendous benefit to a diabetic if modified with higher fibre, protein and increased vegetable intake. Vegetables provide antioxidants that reduce free radical activity, which is highly pronounced in a diabetic. Raw and partially



cooked vegetables contain enzymes that are must for digestion, absorption and almost every chemical activity in the body. They are rich in phytonutrients, which are biologically active and extremely beneficial in preventing diabetic complications (neuropathy, nephropathy). Additionally, they help prevent cancer, lower cholesterol, relieve arthritis and reduce acidity. Whether you are a vegetarian or a non-vegetarian, you can always increase intake of both cooked and raw vegetables and derive benefit. However, if you have high cholesterol along with diabetes, then it would be better for you to turn vegetarian.

**Q. A lot of my diabetic friends take methi seeds. How can methi help me to control blood glucose?**



Methi has been used since ancient times for managing diabetes and cholesterol. It is rich in fibre and clinical tests (on animals) show that it can bring down blood glucose and cholesterol. Methi also helps to improve digestion and reduces phlegm. One teaspoon of methi seed powder taken twice a day before meals for a month may help reduce blood glucose levels in some diabetics. If you are on diabetic medication, you may be able to reduce drug dosage in about a

month after checking with your physician. We have been able to control blood sugar at our centres successfully by using methi seed powder in combination with other herbs and diet modification, as diabetes is a nutritionally treatable condition.



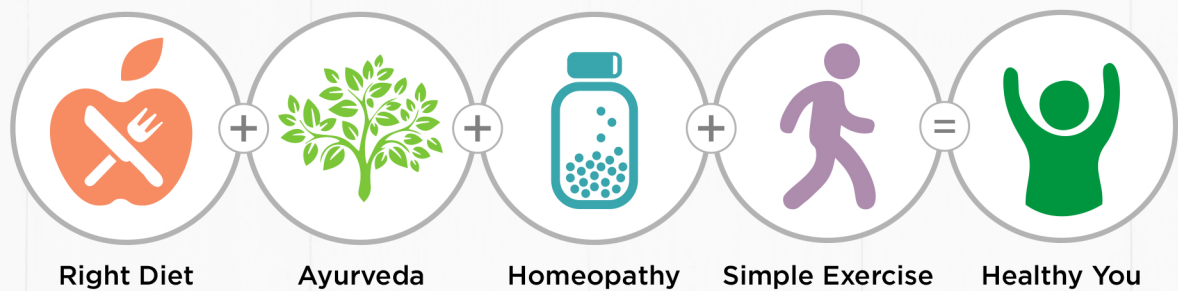
**Q. I am 66 years old. I have been a diabetic for 18 years with high blood pressure and cholesterol. Besides taking regular medication for my problems, I walk every evening and do pranayama and light exercises. My breakfast consists of fruits like oranges, apples and guava while my main meals include 2 or 3 chapati, vegetables and dal. I have recently started taking a peg or two of whiskey at night to soothe the tensions of the day often caused by domestic conflicts. Is this bad for me? Should I switch to something lighter like beer? Please give any other dietary advice that will help me cope with my condition.**

Avoid alcohol if your blood glucose is out of control. If your diabetes is in control you may have moderate amount of dry white wine or light beer once a week. But in order to sooth the tension of the day you don't have to drink alcohol. A cup of chamomile tea or the ayurvedic herb Brahmi would help serve the same purpose.

## THE HEALTH TOTAL WEIGHT LOSS PROGRAM

The Health Total integrated approach is a holistic one that combines the benefits of eating natural, nutritious foods along with Ayurvedic treatment, homeopathy, nourishing food plan, exercise and certain lifestyle changes. We believe good nutrition has a powerful impact on a person's health and is the number one holistic medicine tool.

The Health Total approach is based on a unique, scientific 4-step process that helps to improve disease outcome—





## It's Easy

Your nutrition plays a vital role in all Health Total programs. The Health Total Weight Management Plan is completely personalised and formulated to cater to your unique health objectives.

This is how lakhs of people continue to benefit from our programs:

- Easy-to-follow tailor-made diet plans
- Tasty & healthy recipes
- Support and motivation at every step
- One-on-one consultation with health experts
- Steady & natural body-fat reduction
- Clinically proven results
- Added skin & beauty benefits

This book presents the ability of food to influence your state of health. And that is the real power of nutrition. Achieving good health is a journey, not a destination. It's about a process, not an outcome. It's about being 'alive' not just living. Looking after your health is the only way you can celebrate life better.

## DISCLAIMER

The purpose of this book is to provide researched information on Type 2 Diabetes and is not intended to treat or cure the condition. Diet is but one factor in the genesis of disease. Genetic susceptibility, environmental exposure to pathogens and pollutants, poor stress management also play a critical role. Hence, one cannot rely on diet alone to cure or prevent Diabetes.

It is important to understand that no book can be a substitute for sound medical advice. As each one of us has different biochemistry, the complications accompanied by a disease may vary from person to person.

So, it is advisable to consult at any of the Health Total centres, mentioned below or write to us at [www.health-total.com](http://www.health-total.com). You can also consult your physician or healthcare practitioner for your health problems.

## References:

1. <https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes>
2. <https://www.nhs.uk/conditions/type-2-diabetes/symptoms/>
3. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4166864/>
4. <https://www.niddk.nih.gov/health-information/diabetes/overview/risk-factors-type-2-diabetes>
5. <https://www.diabetes.co.uk/natural-therapies/bitter-melon.html>
6. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3609276/>
7. <https://medcraveonline.com/IJCAM/IJCAM-11-00374>
8. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3444029/>
9. <https://www.who.int/health-topics/diabetes>
10. [http://www.searo.who.int/india/topics/diabetes\\_mellitus/en/](http://www.searo.who.int/india/topics/diabetes_mellitus/en/)
11. <https://innovareacademics.in/journals/index.php/ajpcr/article/view/24585>
12. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3920109/pdf/AMJ-07-40.pdf>
13. <https://www.hindustantimes.com/health/world-diabetes-day-number-of-indians-with-diabetes-likely-to-double-in-next-decade/story-N8cLIYBXvh5FiK1nJD2wUN.html>
14. <https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes/type-2-diabetes>
15. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3920109/pdf/AMJ-07-40.pdf>
16. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3821052/>





Simple - Real - Scientific

For a personalised Diabetes Management Plan,  
get in touch with Health Total experts.

Call toll-free **1-800-843-0206**  
to book an appointment or  
visit [www.health-total.com](http://www.health-total.com)  
to know more

**Follow us on:**



@health\_total



@anjalimukerjee



@pcostohealth



HealthTotalbyAnjaliMukerjee



AnjaliMukerjeeOfficial



health-total



anjalimukerjee



HealthTotalbyAnjaliMukerjee



anjalimukerjee



Buy healthy and yummy snacks from our online shop