

CAN 'REVERSAL PROGRAMMES' BEAT DIABETES?

Our modern way of life is at odds with the optimal functioning and upkeep of the 'human machine'. Unreasonable demands on the body and mind, coupled with erratic food habits has only added to the overall deterioration of the body-mind equilibrium, leaving us with numerous 'lifestyle' disorders, which could have been avoided with a hard reset of our erring way of life as it stands. Unfortunately, there hasn't been much of an improvement in that department and consequently we are faced with a burgeoning diabetes-affected population. Healthcare providers are in the fray to launch various diabetes reversal programmes, to tackle this calamitous national (and international) healthcare challenge. We shall try and find out just how effective and viable these programmes are.

India has turned into the diabetic capital of the world with an alarming number of Type 2 diabetic patients. As per estimates there are more than 77 million diabetics in the country and by 2045, the number is going to grow to 134 million globally. Known to damage kidneys, eyes and hearts, and amputation, diabetes occurs when there is a lack of insulin being produced by the pancreas.

Doctors have been recommending several measures for diabetic patients. And a special mention can be made about diabetes reversal programmes which healthcare providers and medical professionals have been insisting on. Though the reversal programme doesn't guarantee a diabetic free world, however, certain measures may lead to a decrease in diabetes.

Latest treatment options

A growing economy and rapid urbanisation has led many to adapt to a certain mode of lifestyle that is leading to obesity and other ailments which is ultimately leading to diabetes. It may be noted that senior citizens in urban settings are most prone to the disease.

There are various treatment options to reverse

diabetes like losing weight through diet or exercise or both, usage of continuous glucose monitoring sensors, weight reduction medical procedures like bariatric surgery, usage of supplements, practicing yoga and meditation, undergoing massage, and spa therapies.

Mumbai-based startup Fitterfly Healthtech has joined hands with Roche Diabetes, Lal Path Labs, USV Pharma and leading doctors to launch an initiative. Says Dr Arbinder Singal, Co-founder



DIA

and CEO, Fitterfly, “There is no cure for Type 2 diabetes, but the silver lining is that diabetes reversal is possible, which means one can reign control over the soaring blood sugar levels and keep them in check or within the normal range (less than 140 mg/dL). This will save one from the clutches of diabetes and also cut down on the cost of medicines and tests that need to be done routinely to keep a tab on blood sugars. The new-age diabetes care and management

has taken a paradigm shift - advancements in medical technologies have helped make diabetes treatment more personalised and patient-centric, making diabetes reversal a possibility.”

For patients with Type 2 diabetes in South India, Dr. Mohan’s Diabetes Specialities Centre in Chennai follows the ABCDE philosophy. A

stands for Age and

A1c. Those at younger ages and have less elevated A1c, say an A1c of 7 -10 per cent are the ones who are likely to achieve reversal. B stands for body weight or body mass index (BMI). The higher the body weight, the greater are the chances of going into



Some of the pioneers in having diabetes reversal programme in India

- SHARAN- Auroville, Tamil Nadu
- Fitterfly Healthtech - Mumbai
- Dr Mohan’s Diabetes Specialities Centre - Chennai
- Breathe Well-being - Gurgaon
- Metromedi - Hyderabad
- Twin Health - Silicon Valley, US/ Chennai, India
- Sugar.fit - Bengaluru
- GOQii - Mumbai
- BeatO - New Delhi
- IDEA Clinics – Hyderabad

remission, because there is more weight for them to lose. It is estimated that around 15 kg weight loss may be needed to achieve and maintain remission. C stands for C-peptide. This is a test to measure the amount of insulin produced in the body. The better the C-peptide levels, the greater the chances for remission. D stands for duration of diabetes. Those with shorter duration of diabetes are most likely to revert to normal. E stands for enthusiasm. Unless the person is highly enthusiastic and motivated, reversal of diabetes is either difficult, or if achieved, will not be sustainable.

In the north, Gurgaon-based digital therapeutics company, Breathe Well-being addressing diabetic people and assisting them to manage/reverse their conditions, reduce their dependence on medication and lead healthier lives. It has a personalised digital therapeutics programme called Breathe Well-being Diabetes Management Program (BDMP), which has recently received recognition from the American Diabetes Association (ADA). BDMP provides education, lifestyle advisory and health-related content as part of a curriculum customised according to a patient’s health profile and preferences.

Speaking on the programme Aditya Kaicker, Co-founder & Chief Program Officer, Breathe Well-being, said “Digital therapeutics is a scalable and sustainable solution to the growing problem of Type 2 diabetes in India. At-home intensive programmes with high touch-point enables real-time monitoring and guidance for the patients, which is not traditionally available in hospitals and clinics.”

Metromedi, based in Hyderabad, has partnered

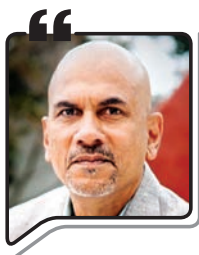




It is mostly in Type 2 diabetes that diabetes remission can be attempted. Therefore, this is an area of personalised medicine.

- DR V MOHAN,

Chairman and Consultant Diabetologist,
Dr Mohan's Diabetes Specialities Centre, Chennai



We expect and we hope that it becomes an area of personalised medicine and that more and more people actively work towards reversing their diabetes instead of just relying on medicine.

- AJOY PRABHU,

Co-Founder & CTO, Circee Health, Mumbai



Diabetes reversal is the new modality of treating diabetes, it may completely or partially control it. We need to understand it requires meticulous efforts by both physician and patient.

- DR GEETA A MAKHIJA,

Consultant Physician and Diabetologist,
Jaslok Hospital & Research Centre, Mumbai

with BMS Fit Club to expand its footprint in the remote care of lifestyle-related chronic illnesses such as diabetes and hypertension.

With the goal of empowering people to reverse and avoid chronic metabolic disorders like diabetes, Twin Health, founded in Silicon Valley, California, and Chennai, India, has invented the Whole Body Digital Twin service. Hundreds of India's finest diabetologists, endocrinologists, and physicians use the Twin service to provide accurate treatment to people with Type 2 diabetes, which is defined as maintaining normal blood glucose levels while discontinuing all diabetic drugs, including insulin. Twin Health also partnered on technology development and health research validation with IIT Madras.

Talking about the Twin technology Prof. Shashank Joshi, Chief Scientist at Twin Health and Consultant Endocrinologist at Lilavati Hospital, Mumbai and President of Indian Academy of Diabetes said, "As a scientist, I am impressed by the ongoing randomised controlled trial (RCT) results and the cutting-edge Whole Body Digital Twin technology. Now, it has been scientifically proven that Type 2 diabetes can be reversed by healing the root cause of chronic metabolic diseases including Type 2 diabetes with highly personalised data-driven recommendations to doctors and patients."

And the number goes on. A lot of players have ventured in this field to provide relief to diabetic patients.

Succour from tech

Artificial intelligence and technological breakthroughs in healthcare have played an essential role in assisting diabetic patients. The scientific approach to disease management is beneficial to both patients and healthcare practitioners. Mobile phones have been an integral part of the healthcare system and everyday there are new technological innovations in the domain. In diabetes reversal programmes, the most commonly used are mobile phones and using a coach or a diabetes educator. A diabetes educator through an app keeps in touch with a diabetic patient and constantly motivates them to achieve weight loss and to stick to their lifestyle modification. An app helps to manage steps that one takes per day, the calories in one's diet with a proper feedback mechanism.

Monitoring has become one of the most significant instruments for assisting in the reversal process, and tools such as self-monitoring blood glucose with a glucometer and gadgets like as continuous glucose monitoring systems make it simple for patients. GOQii has released healthcare

apps that include a tracker for monitoring activity, sleep, and other vital signs.

Sugar.fit, a healthtech firm sponsored by Cure.fit, Endiya Partners, and Tanglin Venture Partners, aims to control and reverse diabetes through a data-driven digital health experience centred on the user. The company has launched its services in Hyderabad, making it the fourth market to foray in India.

Fitterfly from Mumbai has been offering an advanced digital therapeutic programme - Diabefly, which uses advanced data tracking from continuous glucose monitoring devices and matches it with foods and exercise creating a personalised glycemic response assessment. Based on this assessment, personalised plans for diet, stress and fitness are provided to the patient. Diabefly Reverse DTx programmes have achieved transformational outcomes with results presented at American and European international conference. Fitterfly raised a \$3.1 million pre-series A funding round in March 2021.

Personalised medicine

The diabetes reversal programme can be another area of personalised medicine. Several digital therapies are resulting in better outcomes and are taking the shape of personalised medicine.

“Diabetes already is an area of personalised medicine. What India lacks, is the use of personalised lifestyle intervention. Most healthcare units that cater to diabetics have personalised medicine but generic diets and generic exercise guidelines. Since diabetes is a metabolic disorder, it needs to be addressed in a holistic manner which begins with a highly personalised diet, exercise, stress management, and medicine. Handling diabetes will become another area of personalised holistic management,” said Dilip C Byra Founder, MetroMedi.com, Hyderabad.

Echoing similar thoughts Dr Akshat Chadha, Consultant, GOQii, Mumbai said, “Any expert who wants to make a difference to a patient’s life must look at personalising the advice customised to that patient.”

Sharing his thoughts, Dr V Mohan, Chairman and Consultant Diabetologist, Dr Mohan’s Diabetes Specialities Centre mentioned, “Yes, indeed, because not everybody with diabetes can attempt to go into a remission stage. For example, those with Type 1 diabetes and many other forms of diabetes, long-term remission is currently not possible. It is mostly in Type 2 diabetes that diabetes remission can be attempted. Therefore, this is an area of personalised medicine.”

“We expect and we hope that it becomes an area of personalised medicine and that more and more



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- DILIP BYRA CHAKRAVARTHY,

Founder & Managing Director, MetroMedi.com, Hyderabad



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- DR ARBINDER SINGAL,

Co-founder and CEO, Fitterfly, Mumbai



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- ADITYA KAICKER,

Co-founder & Chief Program Officer,
Breathe Well-being, Gurgaon

people actively work towards reversing their diabetes instead of just relying on medicine. We are not saying that medicines are not helpful. In fact, they have played a very important role in dealing with the ailment. However, our endeavour should be to continuously improve and aim for better results as we move forward. Therefore, these disease reversal initiatives need to become an important part of our system", said Ajoy Prabhu, Co-Founder & CTO, Circee Health, Mumbai.

Bouncing back

Structured diabetes reversal programme with coaching and optimisation of therapy is the right way to attempt reversal. It requires intense motivation and hard work and having a coach or a programme on this journey helps. Also, it decreases chances of untoward side effects like sudden lowering of blood sugars and other complications. Not everyone is suitable for reversing their diabetes and achieving



a medication-free state. However, there are criteria available that predict the chances of reversing your diabetes.

"Diabetes reversal is the new modality of treating diabetes, it may completely or partially control it. We need to understand it requires meticulous efforts by both physician and patient. Also, the dietary methods have encouraging results but still need more research to attain good long-term outcomes which are missing in present approaches", said Dr Geeta A Makhija, Consultant Physician and Diabetologist, Jaslok Hospital & Research Centre, Mumbai.

The solution for diabetes reversal lies in the patient's understanding about the foods which may increase or decrease the level of diabetes. One should also consider how much of what food is working for the individual's body.

"We don't use the word 'completely cured' because if a person regains the weight the diabetes is almost definitely likely to come back. Sometimes the glucose values can be even much worse than when they started attempting the remission process. Some of my patients however have achieved remission for over five years and are doing well. But in the majority of the studies, we do not have data on remission beyond two years. In my experience, most people, after six months or one year, have what I call as 're-reversal of diabetes', that is, they develop diabetes again and need to take medications again to control their diabetes. Long term sustainability is a huge problem with reversal treatments," Dr Mohan added.

A balanced and moderate lifestyle change with proper sleep and stress management along with multiple dietary options to increase compliance with diet hold the key to success.

On how these reversal programmes can be a gamechanger in aiding diabetes treatment, only time can say. **BS**

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