

Intermittent fasting or Time restricted eating (TRE) plan for Type 2 diabetes

Although there are many methods of fasting, a safe program for Type 2 diabetes is a more conservative TRE program. This plan allows a slow increase in the fasting duration as tolerated through several weeks. An essential requirement of TRE program is a total commitment to eating a “Holistic low glycemic food with healthy fats.” The healthy fat amount should be 40-50 milliliters or 8-10 teaspoonfuls of healthy vegetable oils and ghee per day. Low glycemic predominately plant-based diet, rich in fiber and healthy fats minimize the hunger feelings and the appetite.

Fasting lowers the blood glucose and insulin levels. Patients on medications and insulin injections have to be monitored closely when on TRE fasting program. The blood glucose should be monitored 2-4 times daily, based on the severity of the disease. Recently fasting programs have been used to reverse even advanced Type 2 diabetes. Fasting plans indeed minimize diabetes medication need, including the insulin dose. Reduction of diabetes medications including insulin dose helps in preventing severe complications of diabetes. Type 2 diabetes patients who wish to follow the TRE program have to be committed entirely to close medical supervision and frequent monitoring of blood glucose levels.

Finally, it is critical for the patient to stay committed to holistic, primarily plant-based low glycemic and healthy fat foods.

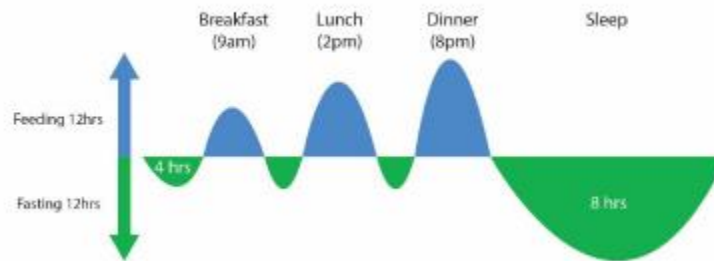
Intermittent fasting or TRE program

- Build up the fasting program slowly to get the body acclimatized. The easy way to initiate the TRE program is to start with 12:12 schedule of fasting and feeding periods in a 24 hour day. Slowly build up on fasting time by one hour at a time every 1-2 weeks, until fasting period of 18 hours in a day gets achieved. If this gets tolerated, one can proceed to 24 hours, one meal a day fasting schedule. The patients should be familiar with identifying hypoglycemia symptoms and manage this as needed. The key is not to overeat sugar supplements during these episodes. Patients who are only taking metformin for Type 2 diabetes, have a lower risk of hypoglycemia. Patients on multiple medications and insulin injections have to be closely supervised by blood glucose levels. They can be managed at home if they have a committed and knowledgeable family support system.

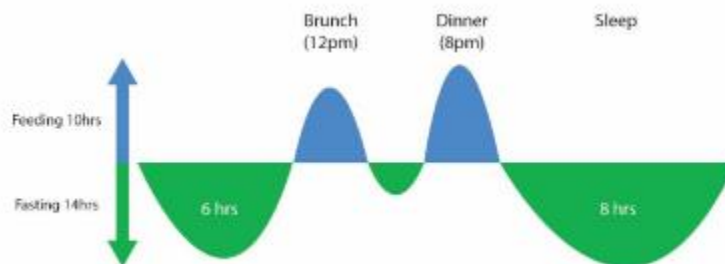
- Drink calorie-free fluids generously throughout the day (See recipes at the back of the book).

- Start with TRE 12:12 program- Fasting period of 12 hours and a feeding period of 12 hours, with a three meal schedule of breakfast, lunch, and dinner, with no snacks in between. The fasting period of 12 hours, begins 44 with dinner the previous evening between 7-8 PM. It ends at 7-8 AM, with the breakfast, the following morning. There should be 5-6 hours time gap

between breakfast and lunch, and 6-7 hours time gap, between lunch and dinner. The breakfast should be a small holistic meal per above suggestions outlined in holistic meal section.



- TRE 14:10 program – Fasting period of 14 hours and feeding period of 10 hours with two meal a day schedule of brunch (breakfast+ Lunch as one meal) and dinner. The fasting period begins with dinner the previous evening between 7-8 PM. It ends with brunch the following morning between 9-10 AM. If hungry in the afternoon between brunch and dinner, one can eat a healthy sugar-free snack (Boiled moong, chana as a savory chaat, a fruit, and few nuts)



- TRE 16:8 program – Fasting period of 16 hours and feeding period of 8 hours with a two meal schedule of brunch and dinner. The fasting period of 16 hours begins with dinner the previous evening at 7-8 PM. It ends with brunch the next morning between 11 AM and noon. Preferably no snack between the two meals.

- TRE 18:6 program – Fasting period of 18 hours and feeding period of 6 hours with two meal schedule of the lunch and dinner. The fasting period begins with dinner the previous evening between 7-8 PM. It ends with lunch the following day between 1-2 PM. No snack between lunch and dinner.

As outlined above the fasting period can be increased slowly in 1-2 hour increments as tolerated, every one to 2-week intervals. TRE program leads to slow and sustained weight loss with a gradual reduction in the need for diabetes medications including insulin. Regular blood glucose monitoring is critical to the success of the fasting program. The main focus in TRE fasting/ feeding program is to prevent overeating by cutting down on the number of eating

opportunities in the 24-hour day cycle. There is no restriction on the amount of holistic food consumed at each meal time. The food is natural, holistic, low glycemic and includes 7-10 teaspoons of healthy plant-based fat. In this respect, the TRE fasting plan is more straightforward than the low-calorie diet plan, as there is no need for calorie counting or altering food composition. Additionally, it is superior to the low-calorie diet plans because there is no slowing down of metabolism from chronic starvation. The food is holistic, so there is no risk of muscle loss or nutrient deficiency.

How to minimize Food cravings during TRE fasting/feeding program

“The key is to consume 40 – 50 gm (8 – 10 teaspoons) of the healthy fat/day.”

Hunger and food cravings are a problem only in the first 2-3 weeks of starting the program. To prevent these:

- Initiate the program at a slow pace, starting with a 12-hour fasting cycle and build up one additional hour at 1-2 week intervals as tolerated. The hunger cravings usually disappear within 2-3 weeks when the insulin levels become low.
- Stay busy, so there is no time to think of food. TRE fasting/feeding program has the advantage that most of the fasting period gets covered during the nighttime sleep hours. Additionally, the appetite for the food is minimal during the morning.
- Keep well hydrated by a variety of calorie-free drinks (recipes provided at the end of this book). Exercise and TRE fasting/feeding program The common misconception is that one cannot exercise without eating. The best time to exercise is in the morning, on an empty stomach. Morning exercise on an empty stomach ensures that glycogen and fat reserves in the body get used up. Exercising in the evening takes away from this advantage because glucose from the food consumed in the day provides the needed energy. In TRE fasting/feeding program, there is no restriction on the food amount. The emphasis is on the food quality and minimization of eating opportunities to reduce the insulin demand. Since the caloric intake in a day remains near normal, the capacity to exercise stays normal. Regular exercise and holistic meals, ensure that there is no muscle mass loss with TRE program. The low-calorie diet plans do not have this advantage.

TRE fasting/ feeding plan and constipation

Constipation can be a problem with low-calorie diet plans. It is not a problem with TRE fasting/feeding program, because there is no restriction on the overall amount of food consumed in a day. However, it is essential to eat holistic, fiber-rich plant-based diet and keep well hydrated for the entire day.

Mobility, active lifestyle and exercise

Mobility and exercise are an essential requirement for the diabetic patient. It increases glucose utilization, reduces the need for drugs, and minimizes complications of diabetes. The simple routine which comes at no cost is:

- i. Walking 7 – 10,000 steps a day (the equivalent of 3 – 4 miles). A brisk walk at 3.5 – 4.0 miles/hour is equivalent to moderate aerobic exercise.
- ii. Climbing stairs – If you live in a high rise building take 2 – 3 flights of stairs as often as you can. Climbing stairs are anaerobic exercise.
- iii. Yoga for 30 minutes a day to build muscles.
- iv. Stand more than sitting to burn more glucose calories.