



GUIDE FOR DIABETES

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Did you know India is witnessed as The Diabetes Capital of the world?

According to World Health Organisation (WHO), about 422 million people worldwide have diabetes, the majority living in low & middle income countries; moreover, around 1.6 million deaths are directly attributed to diabetes each year. The number of cases as well as the prevalence of diabetes have been steadily increasing over the past few decades. Studies suggest that the estimate of the actual number of diabetic patients in India is around 40 million in a population of 1.38 billion. This means that India actually has the highest number of diabetics in the entire world.

This well known metabolic condition occurs when your body is unable to break down simple sugar (glucose) into the cells and use it as energy. The reasons associated could be many, right from negligence to serious medical conditions. Timely detection and lifestyle changes can go a long way and help lead a normal life.

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TYPES OF DIABETES

Diabetes is a metabolic disease which is caused due to inability of the body to use insulin or failure in formation of insulin (a hormone which helps regulate blood sugar levels). There are different types of diabetes, each with different causes, but they all share a common problem of having too much glucose in the blood stream.

Type 1

Also known as Insulin Dependent Diabetes is an autoimmune disorder where the body attacks and destroys cells which produce insulin in the pancreas due to genetic/environmental factors, hence one is dependant on exogenous insulin. One can also develop Type 1 diabetes mellitus at a very young age, hence it is also known as juvenile diabetes.

Type 2

This condition is the inability of the body to effectively use the insulin produced. This form occurs mainly in adults & the person is usually overweight. Here people are usually put off medication to control diabetes but in severe cases where diabetes is uncontrollable people are also put on insulin units. Proper weight management & lifestyle approach can reverse Type 2 diabetes.



Gestational

Gestational Diabetes occurs during pregnancy in which the placental hormones prevent the body from optimum utilization of insulin. Those who develop gestational diabetes are at a higher risk of developing type 2 diabetes later in life.



GLYCEMIC INDEX

According to the American Diabetic Association (ADA), Glycemic index is an indicator of blood glucose response to the carbohydrate present in the food. It is a value given to foods based on how fast or low food causes an increase in the blood glucose levels. Some carbohydrates like glucose and sucrose break down fast, thus increasing the blood sugar levels, whereas some act very slow. It is categorised into 3 groups: Low glycemic foods, medium glycemic foods, high glycemic foods. A person having Diabetes, Hyperlipidemia, Polycystic Ovarian Syndrome and if overweight or obese should restrict or avoid high glycemic foods.



GLYCEMIC INDEX OF DIFFERENT FOODS

FOOD GROUPS	GLYCEMIC INDEX		
	LOW (BELOW 55)	MEDIUM (BELOW 56-69)	HIGH (ABOVE 70)
Cereal and Millets	Ragi, oats bran cereal, quinoa, amaranth	Whole wheat, brown rice, couscous, bajra, jowar, wheat bran, muesli	White rice, corn flakes, sabudana puffed rice and rice flakes, semolina, multi-grain flour
Pulses and Legumes	Bengal gram, horse gram, lentils, sprouts, gram flour, soya bean		
Vegetables	Drumstick leaves, amaranth leaves, bitter gourd, bottle gourd, fenugreek leaves, tomato, broccoli, lettuce	Carrot, pumpkin, drumstick	Yam, potato, beetroot, colocassia, sweetcorn, lotus steam, sweet potato
Fruits	Orange, papaya, sweet lime, guava, pear, grapefruit, strawberry, raw mango, berries	Mango, apple, banana, muskmelon, pomegranate	Pineapple, custard apple, jackfruit, chikoo, watermelon
Poultry and meat	Eggs, chicken, mutton, lamb, beef, pork, seafood		
Milk and milk products	Curd, skimmed milk, paneer, almond milk	Buttermilk, cashew milk	Lassi, coconut milk

GLYCEMIC INDEX OF DIFFERENT FOODS

FOOD GROUPS	GLYCEMIC INDEX		
	LOW (BELOW 55)	MEDIUM (BELOW 56-69)	HIGH (ABOVE 70)
Nuts and dried fruits	Cashew, almonds, walnuts, peanuts, flax seeds, sunflower seeds, pumpkin seeds, pista, macadamias chia seeds or falooda seeds	Raisins, dates, prunes, figs	
Sugar	Agave syrup, maple syrup	White sugar, coconut sugar, brown sugar, date sugar, mishri	Glucose powder, honey, jaggery, dates syrup
Other	Fox nuts, roasted grams, peanut butter, sattu drink	Popcorn, dark chocolate, cracker biscuit, chikki	Coconut water alone, fruit platter, caramel popcorn, soft drinks, cold desserts, soda, ketchups and sauces, fruit juices

Guidelines for Diabetics

1. EAT A WELL BALANCED DIET

A well balanced diet of a diabetic should include all the food groups in a combination which shall enhance the ability of the body to accumulate all the nutrients and also not spike the blood glucose levels.

My healthy plate

- ▶ One fourth of the plate should have a portion of whole grains (cereals and millets).
- ▶ One fourth of the plate should have a portion of protein that is of good quality or has a high biological value.
- ▶ Half of the plate should be filled with non-starchy vegetable either sauteed, stir fried / cooked vegetables. Salad can also be included if your body is able to digest raw food.



2. STAY ACTIVE

One of the main cause of insulin insensitivity is low activity level especially post meals. Keeping 10-15 minutes of activity post meal helps in controlling sudden rise in sugar levels postprandial. Added benefits of exercising is that it refreshes the mind and body, accelerates the process of detoxification, helps relieve stress and anxiety, improves any stiffness in the body and also enhances sleep quality. One can engage in activities like brisk walking, swimming, running, cycling, gardening or even dancing.

3. DO NOT GET HYPOGLYCEMIC

Hypoglycemia is a condition where blood sugar levels are lower than normal which further affects the brain and kidney function. Proper dietary measure under the supervision of a professional is important to avoid getting into hypoglycemic state.

4. AVOID UNNECESSARY POPPING OF PILLS & SUGAR FREE FOODS

Yes, it is necessary for one to restrict or have a control on the amount of sugar which goes inside the body. Contrary to popular belief, opting for foods which claim to be "Sugar free" and "Diabetic friendly" may not be so friendly after all and will cause more harm than good. Before ingesting any food or tablet make sure you take advice from your doctor or nutritionist.

5. SLEEP WELL

When you get enough sleep, the body is able to metabolize as well as produce and regulate hormones in much better way. Recommended hours of sleep: 7-8 hours everyday. Maintain similar sleep timing everyday and do not stay awake till late night as it disturbs the entire healing process of the body.

6. LIMIT OR AVOID ALCOHOL

Studies show that alcohol can interact with diabetic medication. It can make complications worse and hinder with liver function. Even a small amount of alcohol can cause a rise in the blood sugar levels.

7. KEEP YOURSELF HYDRATED

Diabetics usually experience polyuria (frequent urination) and polydipsia (unusual thirst due to dehydration). One should consume at least 2-3 litres of water everyday to avoid dehydration of the body.

8. EAT YOUR GRAINS WHOLE

Avoid refined flour, refined foods, bakery products like biscuits, pastries, white bread etc as these foods can cause a spike in blood sugar levels. Include whole grains like wheat, brown rice, ragi, amaranth, buckwheat, oats etc.

9. MAKE SURE TO INCLUDE PROTEIN

Proteins can delay the transit of glucose in the blood. The macro-nutrient also helps in preventing loss of muscle and boosts the process of wound healing. Foods like pulses and legumes, milk and milk products like eggs, lean meat, chia seeds, nuts and seeds should be made a part of the daily diet.

10. INCLUDE MORE OF CHROMIUM, SELENIUM AND ZINC RICH FOODS

Chromium plays an important role in insulin signalling, whereas selenium and zinc helps to control blood sugar level and prevent diabetes. It is advisable to include more of nuts and oil seeds, variety of vegetables, eggs, mushrooms, lean meat, whole grains etc. in the daily diet.



MYTHS AND FACTS

MYTH

There's too much sugar in the fruit, a diabetic should avoid eating fruits

FACT

Consider three things while eating fruits; The time, quantity and combination. Do not consume fruits post lunch or dinner or during the meals. The best time to consume a fruit is as a mid meal. Too much of fruits will show fluctuations in blood sugar levels as the glycemic index of fruit is high. Combine a fruit with a protein source. E.g. if you are eating a mango, consume few nuts along like almonds or in a milkshake you can add soaked chia seeds.

MYTHS AND FACTS

MYTH

Eliminating sugar completely helps in maintaining blood sugar levels

FACT

What really needs attention is the invisible sugar present in processed foods like rusk, bread, biscuits that claim to be sugarless or sugar free etc. You need to avoid and be aware of the invisible sugar which is entering your body. Once you avoid invisible sugar completely you can consume visible sugar and enjoy chai or coffee.

MYTHS AND FACTS

MYTH

Wheat is a better choice for a diabetic as compared to rice

FACT

Both wheat and rice are a source of carbohydrates and one has to be mindful of the food combination i.e what you have along with wheat or rice and the glycemic index of that food. A qualified nutritionist can help and guide you better in the planning of meals.

MYTHS AND FACTS

MYTH

Bitter foods like fenugreek and bitter gourd (karela) help in preventing diabetes

FACT

Bitter foods have certain functional properties and over indulgence or consuming foods in a wrong combination can result in hypoglycemia (sudden drop in blood sugar levels). Always consult a nutritionist on what to have to avoid aggravating any health concerns.

MYTHS AND FACTS

MYTH

Diabetics should use sugar free or artificial sweeteners and avoid sugar completely

FACT

Say no to artificial sweeteners and sugar free products as they have short term as well as long term side effects. Short term effects like craving for sweets.

Long term effects like weight gain, anxiety and depression. Depending on the type of diabetes, a nutritionist may recommend the amount of sugar to be consumed instead of totally avoiding it.

MYTHS AND FACTS

MYTH

Eliminating carbohydrates and fats help in lowering blood sugar levels

FACT

Every nutrient has a role to play in our body and eliminating any one of them will over burden the other nutrients you consume. For example if you eliminate energy giving foods like fats and carbohydrates, the protein rich food you consume will start providing energy, thereby causing a deviation from the primary work of protein, i.e. healing and repairing.

MYTHS AND FACTS

MYTH

Those who are on medications can eat whatever they want

FACT

Those who are on medication to control blood sugar levels should consider the amount and combination of foods as medication alone will not help in controlling blood sugar levels. Not having a balanced diet can further increase your dosage of medication.

MYTHS AND FACTS

MYTH

For a diabetic person, honey, brown sugar and jaggery are better choices as compared to consuming white sugar

FACT

It's not only the calories but glycemic index of food that needs to be considered and if you compare the glycemic index they either have same or high glycemic index. Be aware and mindful of what you are eating. You might think of it as a healthier alternative but it need not necessarily be.

RECIPES

PROTEIN SALAD



Ingredients:-

- 1 cup kala chana
- 3/4 cup whole green gram
- 1 finely chopped medium onion
- 1 finely chopped medium tomato
- 1/4 cup peanuts roasted and peeled
- Black salt to taste
- 2 tsp roasted cumin powder
- 2-3 green chillies chopped
- 1/4 tsp black pepper powder
- 1/2 tsp chaat masala
- 1 Lemon
- 100 gms cottage cheese- cut into small cubes
- Fresh coriander leaves, chopped raw mango & peanuts for garnishing



Method:-

Soak kala chana overnight and drain. Tie it up in a damp muslin cloth, and keep it for 24 hours so that they can sprout. Sprinkle a little water from time to time so that the muslin cloth does not dry up. Similarly sprout green gram. Take a large bowl, add sprouted kala chana, sprouted green gram, cottage cheese cubes, onion, tomato, coriander leaves, roasted peanuts, raw mango, black salt, roasted cumin powder, green chillies, black pepper powder and chaat masala. Squeeze the juice of lemon into the bowl and mix till well combined. Transfer the salad into serving bowls, garnish with coriander leaves, raw mango and roasted peanuts and serve immediately.

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AMARANTH PARATHA

Ingredients:-

- 1/2 cup amaranth flour
- 1/2 cup wheat flour
- 1 cup methi or spinach chopped
- 1 medium sized onion chopped
- 1/2 tsp crushed carom seeds
- 1/2 tsp crushed jeera
- 1/2 tsp crushed coriander seeds
- 1 tsp chopped green chilly
- 1 tsp chopped ginger
- Salt
- 1/2 tsp ghee while kneading
- 1/4 tsp turmeric
- 1/2 tsp chilli powder
- 1/2 tsp ghee to serve the parantha



Method:-

- Firstly, in a large bowl take all the ingredients and knead to a smooth and soft dough.
- Pinch a ball sized dough and flatten slightly.
- Dust with wheat flour and roll gently.
- Now on a hot tawa place the rolled roti and cook for a minute.
- When the base is partly cooked, flip the parantha.
- Flip again once or twice till both the sides are cooked properly.
- Serve hot with curd or mint dip

QUINOA PULAO

Ingredients:-

1 cup cooked quinoa

2 teaspoons oil

1 small onion chopped

Garlic and ginger crushed

1 green chilli crushed

1 medium tomato chopped

50 grams cup paneer cubes

1/4 cup cauliflower florets small

1/4 cup french beans

1/4 cup carrot

Salt to taste

Lime juice

Coriander leaves /mint to garnish

Whole spices- 1 bay leaf, 2 green cardamoms, 2 cloves, 3-4 black peppercorns and 1 cinnamon stick



Method:-

Heat oil in pan on medium flame. Once the oil is hot, add bay leaf, green cardamom, peppercorns, cinnamon stick and cloves. Saute for 30 sec till fragrant. Add chopped onion and saute for 2 minutes. Then add the crushed ginger-garlic-green chili and cook for a minute or so till the raw smell goes away. Add chopped tomato and cook for 2 minutes or so. Then add all the veggies- paneer, cauliflower, carrot and french beans. Also add salt. Cover and cook on medium heat for 5-7 minutes or till veggies are cooked. Once the veggies are cooked, add the cooked quinoa. Mix everything till well combined. Check salt at this point and adjust to taste. Squeeze in some fresh lemon juice and mix. Garnish with vegetable quinoa pulao with coriander leaves or mint and serve with a side of plain yogurt.

KEY POINTS

- 1) Maintaining an ideal body weight is important, as one of the core reasons for diabetes is being overweight and obesity.**
- 2) Maintain food discipline by following same meal timing, maintain a straight posture, use all your senses while eating and avoid using any gadgets or reading books during meal time.**
- 3) Having small and frequent meals is a good practice to keep. Also make sure to chew your food well and take small bites as this will aid in faster digestion.**
- 4) Avoid highly processed foods that are rich in sugar, salt and fat like bakery products, sausages, salami, pickles, jams, papads, mithais, churdas, ketchup, sauces and also foods which have margarine or vanaspati.**
- 5) Avoid aerated and fizzy drinks, fruit juices and limit your alcohol intake. Also stay away from cold desserts like ice-cream and thandais.**
- 6) Aerobic exercise of 20-30 minutes at least 3-4 times a week is recommended. Activities post meals will ensure less spike in blood sugar levels.**

KEY POINTS

- 7) Vitamin D deficiency can be a causative factor for diabetes. Exposure to sunlight for 15-20 minutes on a daily basis is essential to take care of vitamin D levels and also adds up to other benefits.
- 8) A good quality sleep will ensure enhanced production and regulation of the hormones. Make sure to get good quality sleep of 7-8 hours.
- 9) Manage your stress, enjoy good music, meditate and have a positive attitude towards life. Make lifestyle and behavioural changes for better health.
- 10) Keep a regular check on your blood sugar levels and educate yourself on various aspects of diabetes.



SUMMARY

As the popular saying goes- prevention is better than cure. This guide will help in preventing the risk of diabetes and the complications associated with it. Our mantra towards a better life in a nutshell is emphasizing on improving our lifestyle. Maintaining a healthier lifestyle will not only cut the risk of diabetes but other serious health issues as well. Eat right, eat healthy, keep moving, engage in stress busting activities, get good quality sleep and most importantly stay positive and happy.



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