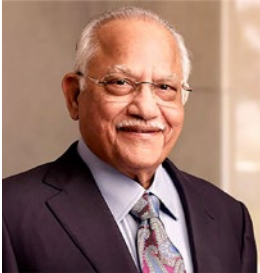


360° Diabetes Care





A message from the chief patrons



Dr. Prathap C Reddy, the Founder Chairman of Apollo Hospitals Group, is aptly credited as the architect of modern Indian healthcare. He is a compassionate humanitarian, who has dedicated his life to bringing world-class healthcare within the economic and geographic reach of millions of patients.

Dr. Prathap C. Reddy, Apollo Group Chairman

We wish to build the largest network of top quality care for diabetes and its related co-morbidities and deliver the best diabetic outcomes via best in class multi-disciplinary care teams.

Ms. Sangita Reddy, Jt. MD, Apollo Hospitals Group



Dear Readers,

On behalf of all of us at Apollo Sugar, Namaste. I am delighted that we are all coming together against diabetes - a movement that aims to pool our resources and energies together in this fight against Diabetes. In our country, everything is happening fast. Even Diabetes. Already, we have a significant Diabetic disease burden. Compound it with lower diagnosis rates, faster onset, faster progression of complications, and generally poor blood glucose control levels. Our awareness challenge is large - a substantial risk of undiagnosed cases, with 30% of pre-diabetics progressing to becoming diabetic. Our quality of care challenge is even starker - we, as Indians, have fragmented care options and highly varied standards of care for our Diabetes: Doc A treats Sugar, Doc B treats the eye, or Doc C treats the foot. Neither one of them has easy access to longitudinal history or a full 360 degree view of the patient. Innovation under such challenges is the need of the hour.

Towards that purpose, we started Apollo Sugar about 2 years ago - as a movement to bring people together, as Apollo and Sanofi's joint endeavor to offer an integrated care approach to help diabetics and pre-diabetics across the country have access to world class clinical expertise at affordable price points in the convenience of their neighborhood. With your support, we have been hard at work across the spectrum of screening, community surveillance, improving clinical outcomes in our standards of care every day, and in the use of technology to keep our patients, our doctors, and our care teams aligned and connected on managing their diabetes. This maiden issue of Together against Diabetes is the next important step in this movement. We aim to provide you important updates on leading edge work being taken to manage diabetes across the world, and right home here in India. We hope you will join us and support us in this movement against Diabetes. One patient at a time. One caregiver at a time. Once citizen at a time. That's how we have served over 250,000 patients over the last 24 months and now successfully operate 50 specialty Diabetes and Endocrine clinics across India to serve our Diabetic patients and their families.

Please join us, and spread the word to come together against Diabetes.

Mr. Gagan Bhalla, CEO, Apollo Sugar Clinics

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Are there any Reno-protective anti-diabetic agents?



Dr. Sanjay Maitra
MD, DM (Nephrology)
Senior Consultant Nephrologist,
Apollo Health City, Hyderabad

Diabetic nephropathy is one of the long term microvascular complications of diabetes and the leading cause of CKD and ESRD in the adult population in most of the countries worldwide. Not only does it cause kidney failure, it increases the chance of Coronary artery disease, multifold.

It is well documented that patients with poorly controlled diabetes and hypertension are at increased risk of developing nephropathy and have a rapid deterioration of their renal functions.

The clinical presentations of diabetic nephropathy is mainly of two types. While the classic presentation states that first microalbuminuria develops which progresses later to macro albuminuria followed by rapid deterioration of renal functions. Now it is being increasingly recognised that a large number of patients, particularly those with type 2 Diabetes may progress to ESRD with minimal or no proteinuria. This latter phenomenon is more commonly seen in the elderly, obese, smokers and those with vascular involvement.

The mainstay of treatment of Diabetic nephropathy till now is strict glycaemic control and proper blood pressure control. RAAS blockade with ACE inhibitors or ARB's have

been the primary focus till date and have been found to be bene-

Now it is being increasingly recognised that a large number of patients, particularly those with type 2 Diabetes may progress to ESRD with minimal or no proteinuria.

ficial. Life style modification, low salt intake, cholesterol control, and smoking cessation are to be strictly enforced. It is obvious that with these measures we have not been able to control the progression of diabetic nephropathy to a great extent, as the number of patients with CKD and ESRD is increasing worldwide.

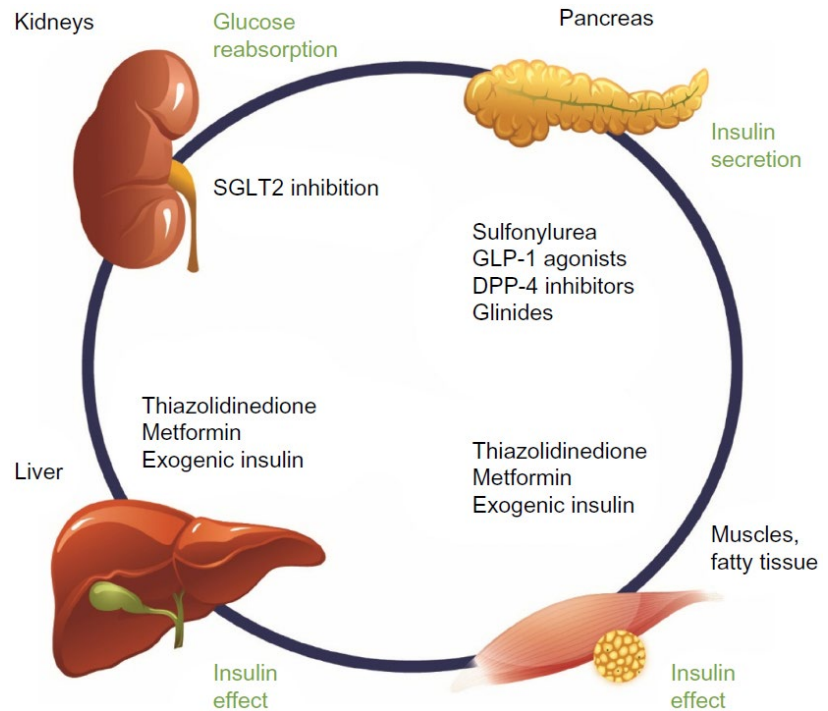
At this juncture it would be wonderful to have anti diabetic agents with Reno protective properties to slow the progression of diabetic CKD. Some of the newer molecules seem to have such characteristics

and could be useful in this context.

The first molecule to be discussed is the SGLT-2 inhibitor Empagliflozin. It is a SGLT-2 inhibitor which acts on the proximal tubule to prevent the absorption of glucose and sodium ions, thus causing glycosuria and resulting blood sugar control by an insulin independent pathway. Along with this there is natriuresis resulting in modest decrease in blood pressures and body weight. The main mechanisms of action in renoprotection is the beneficial renal hemodynamic profile with these drugs. The first mechanism is by enforcing the afferent arteriolar vasoconstriction to reduce the intraglomerular pressure, secondary to activation of tubulo-glomerular feedback secondary to distal sodium delivery. The second mechanism of action is by counteracting the actions of localised angiotensin 2 mainly in the efferent arterioles. There is some evidence that SGLT-2 inhibitors along with RAAS blockade may be beneficial by activating the non-classical RAAS cascade. To be effective the SGLT-2 inhibitors have to reach the proximal renal tubules and thus cannot be used in patients with poor renal function, i.e. in advanced renal failure.

The EMPA-REG study which was recently published has highlighted that not only does empagliflozin show significant cardiac survival benefits, it also has a very significant renoprotective role.

The side effects with SGLT-2 inhibitors include genital mycotic infections and Urinary tract infections, but are generally manageable in properly selected patients. Recent



studies suggest an increase fracture risk and decrease bone mineralisation with Canagliflozin but this data needs further evaluation

The second group of drugs which could have potential Reno protective actions are the DPP-4 inhibitors. They act by inhibiting the degradation of certain substances including incretins like Glucagon-like peptide-1. These group of medicines as a class seem to have an anti-albuminuric effects as shown in small pre-clinical and clinical trials. Certain drugs like Linagliptin do not need any dose modification in renal failure and could be particularly relevant in advanced CKD. In recent phase-3 studies Linagliptin has been shown to reduce albuminuria significantly, independently from its effects on BP or HbA1c. Moreover many studies have reported the interactions of DPP-4 inhibitors with the advanced glycation and oxidative

stress pathways which could provide reno protection.

The third group of medicines to watch are the GLP-1 agonists, as evidenced by recent LEADER trial in which Liraglutide was shown to reduce the cardiovascular adverse events, more prominently in patients with declining renal functions. Further studies are ongoing to evaluate the effects of this drug on providing reno protection.

So from the era where anti-diabetics only provided good glycaemic control, we are heading to a times when some of these medicines have additional protective effects on the various organs, mainly the heart and the kidneys. Further evaluation will definitely dissect out the exact contribution of these group of medicines to prevent organ damage, providing respite to doctors and most of all the patients who suffer so much.

Diabetes with Severe Hypertriglyceridemia and Acute Pancreatitis.



Dr Anish Behl,
MD, DM(Endocrinology)
Sr. Consultant Endocrinologist
Apollo Sugar Clinics, Mysuru

On Presentation

A 45 year old, female, presented to ER with sudden onset of severe, continuous pain in abdomen, with radiation to back, associated with vomiting since few hours. A known case of Diabetes and Dyslipidemia, had stopped all medications since 3-4days. There was a history of dietary indiscretion in past 1 week.

Vitals were stable and she had mild abdominal distention with diffuse tenderness.

Investigations

RBS - 363 mg/dl Total cholesterol -530 mg/dl Triglyceride – 10420 mg/dl

HDL – 130 mg/dl LDL – 299 mg/dl Serum amylase - normal

WBC counts -increased RFT - Normal except mild hypokalemia.

CT Abdomen - Diffuse fatty infiltration of liver and acute edematous pancreatitis with peripancreatic inflammation and fluid accumulation.

Treatment

The Patient was kept NPO, treated with IV fluids, analgesics and supportive treatment. In view of hypokalemia, IV insulin was deferred. She was treated with Inj Aspart sc 2nd hourly along with Inj NPH sc twice daily to give basal coverage. With this regimen her blood glucose had come down to 120 -140 mg/dl range within 12 hours and was maintained in that range throughout. Subsequently her blood glucose was maintained with only twice daily NPH.

She was also started on Rosuvastatin and Fenofibrate. On D3 LMW heparin was added and when patient started to eat soft diet, Ezetimibe and Omega 3 fatty acid was added.

Date	On Admission	After 12 hrs	D2	D3	D4	D5	D8	D10	D13
Total Cholesterol	530	-	419	298	282	273	172	107	70
Triglycerides	10420	5020	2310	1084	920	776	404	517	274
HDL	130	-	125	80	78	55	31	330	30
LDL	299	-	265	180	169	149	122	65	39

Case Discussion:

- Hypertriglyceridemia (HTG) is a rare cause of pancreatitis. The typical clinical profile of hyperlipidemic pancreatitis (HLP) is a patient with a pre-existing lipid abnormality along with the presence of a secondary factor (e.g., poorly controlled diabetes, alcohol use, or a medication) that can induce HTG.
- Appropriate diet and drug treatment, including Insulin dose titration, of severe HTG is very effective in treating HTG-induced AP.
- During the acute phase of pancreatitis, patient underwent standard treatment. Thereafter, HTG was efficiently controlled with Ezetimibe, drug that lowers plasma cholesterol levels. Ezetimibe is recommended as second line therapy for those intolerant of statins or unable to achieve target LDL cholesterol levels on statins alone by several major medical group practice guidelines.
- Reduction of TG levels to well below 1,000 mg/dL effectively prevents further episodes of pancreatitis. Experiences with plasmapheresis, lipid pheresis, and extracorporeal lipid elimination are limited.

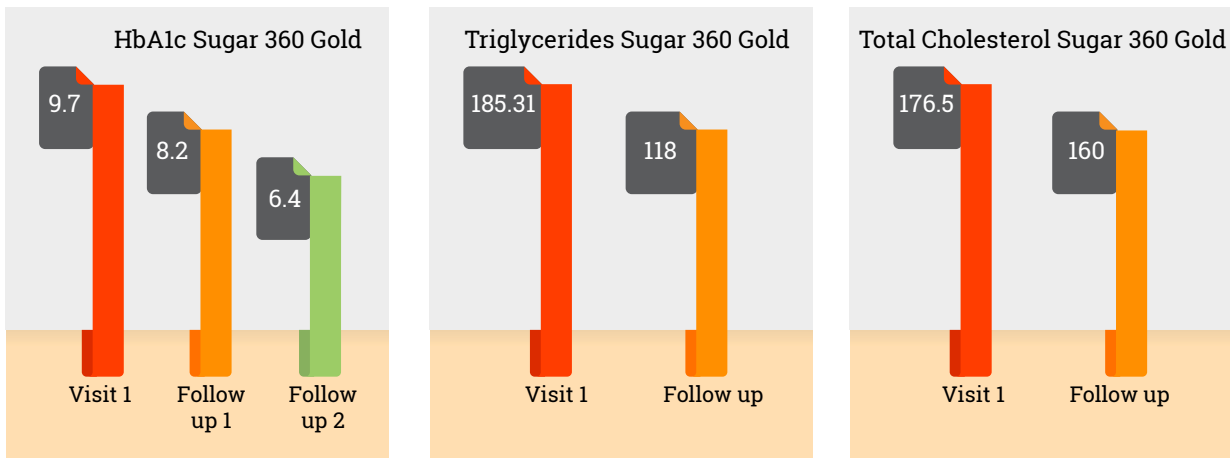
Key takeaway: The mainstay of treatment includes dietary restriction of fat and lipid-lowering medications (mainly fibric acid derivatives).

Sugar Diabetes Management Program(DMP)

Patients enrolled in Sugar Diabetes Management Program achieved:

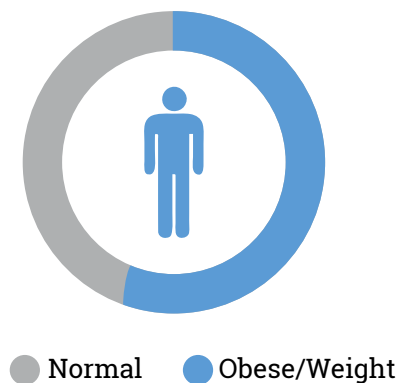
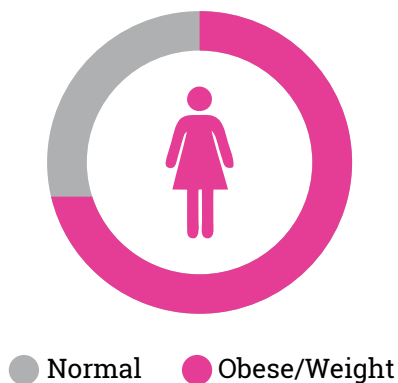
- Superior outcomes in terms of HbA1c reduction
- All the patients enrolled in DMPs were under control and at targets for total Cholesterol per ADA guidelines
- All the female patients enrolled in DMP were at control for Triglycerides and there is a meaningful reduction in triglycerides level in Male patients

Showcases the 360 degree approach provided by Sugar which is not only limited to HbA1C management.



BMI trends

- It was found that around **77%** females and **57%** males walking to Apollo Sugar Clinics were either overweight or obese.



- Greater number of male population (42%) were found to be normal in BMI than female population (21%).

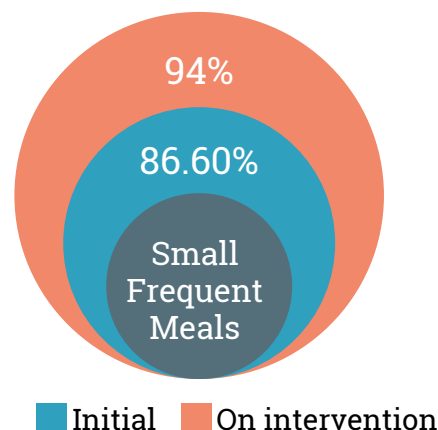
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*Internal data analysis. Yet to be published.

Meal Plan

Small and frequent meal pattern is ideal in controlling blood sugar levels.

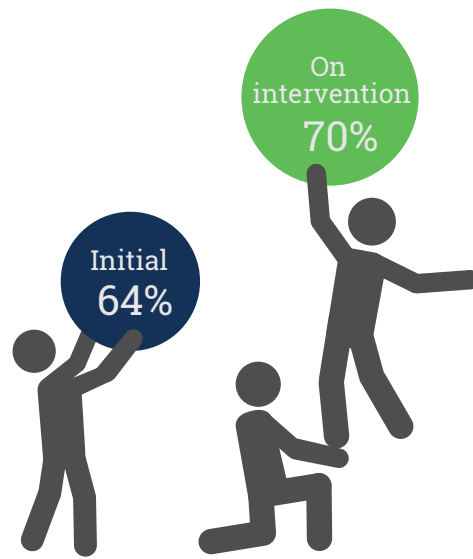
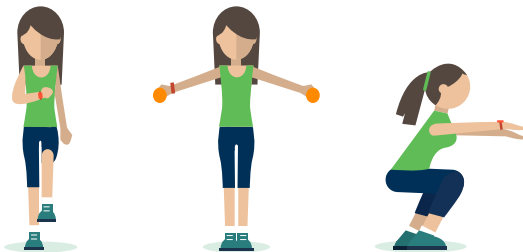
- Intervention by Disease management counselling led to improvement in diet adherence (**94%** adopted Small frequent Meals pattern)



Exercise

The American diabetes association suggests a 30 min/day or 150 min/week exercise.

- A significant improvement in exercise pattern was observed among patients after Disease management counselling.

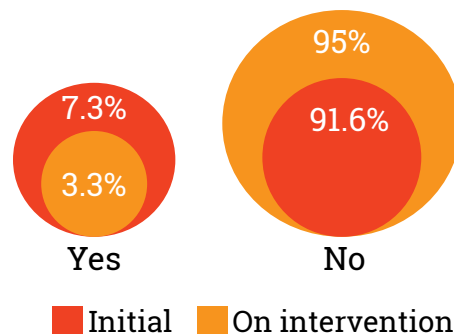


30 mins. exercise per day and above

Hypoglycemic Episodes

- Recurrent hypoglycemic episodes can be controlled with education and awareness on hypoglycemia
- Insulin training and Smart guided handholding led to control in hypoglycemic episodes to patients on DMP

Hypoglycemic Episodes incidence



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*Internal data analysis. Yet to be published.

ROLE OF TECHNOLOGY IN DIABETES MANAGEMENT

India is home to over 69.2 million people living with diabetes, and this number is expected to rise, which creates a challenge for health care planners/providers. To prevent long term diabetes complications including heart attack, stroke, blindness, amputation and kidney failure; intensive management is required for a very long period, which is difficult in a conven-

Medication	Timing	Daily	B	L	D	N
Before Food		1	-	1	-	
DAILY						
CARLOC - 6.25mg tablets						
After Food		1	-	-	-	
DAILY						
ANGISPAN TR - 2.5mg tablets						
After Food		1	-	-	-	
DAILY						
SHELICAL - 500mg tablets						
After Food		-	-	1	-	
DAILY						
ECOSPRIN AV - 75/10mg tablets						

tional care model, and hence the need for innovative management strategies using telecommunication and information technology.

Tele- Medicine Strategies

Meta-analysis has shown that telemedicine strategies combined with the usual care was associated with improved glycemic control (prevention of diabetes in another study), through closer monitoring of diabetes and educational plus therapeutic interventions. Another

review of 16 randomized controlled trials with 3,578 participants, showed benefits on glycemic control using computer-based diabetes self-management interventions delivered via clinics, the Internet, and mobile phones. Previous research in India has shown **SMS programs** for people with pre-diabetes can help improve dietary habits and prevent development of diabetes.

Mobile Phones

Mobile Phones can be used as a vehicle for continuing medical education; a decision support system for evidence-based management; and a tool for drug compliance, patient education and self-management. The penetration of smartphone use in India offers mobile technology solution through use of applications (“apps”) to assist technologically savvy patients.

Myriad mobile apps have various features for diabetes management like self monitored blood glucose charts and graphs, blood pressure, weight and HbA1c records, lipid and renal function results, and physician connect. Use of apps is associated with improved self-reported medication adherence and BG testing from baseline as well as treatment satisfaction index due to continuous engagement of patient in diabetes management. Apollo Sugar has come up with one of its kind Mobile App, helping the patient in tackling Diabetes and its complications.



Day	Breakfast	Lunch	Dinner	N			
S		71	131	85	142	11	
S	78	123	85	132	74	107	12
13 Jun - 19 Jun						13	
S	98	127	68	150	79	138	13
T	86	111	66	143	83	118	14
W	109	117	73	143	84	123	15
T	81	118	89	122	86	125	16
F	88	126	67	153			17
S	89	116					18
S		82	91				19
20 Jun - 26 Jun							



Dr Sanjiv Shah, MD

Senior Consultant Endocrinologist
Apollo Sugar Clinics, Mumbai



Diabetes in Older People A Disease You Can Manage

Dr Jayashree Gopal

Diplomate of the American Board of Endocrinology, Diabetes and Metabolism
Senior Consultant Endocrinologist, Apollo Sugar Clinics, Chennai

Diabetes has become the most commonly occurring disease in the elderly. It is high-time we notify the difficulties faced by elderly diabetics.

Symptoms in newly detected elderly patients:

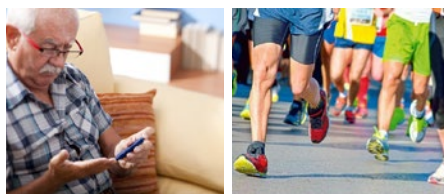
Urinary incontinence and signs of confusion are the typical symptoms in elderly patients newly diagnosed with diabetes.

More than one quarter of the population aged 65 and above has diabetes and at least half of the older adults have prediabetes. Age related decline in insulin release due to reduced pancreatic islet function (the part that makes insulin) increases the risk of developing the disease. Because of these age-related changes, elder patients may not present with classic symptoms of high blood sugar. Thus, excess thirst and urination may be absent. Common presenting complaints are dehydration, dry eyes, dry mouth, confusion, incontinence, and diabetes complications, such as neuropathy or nephropathy.

Hypertension and dyslipidemia frequently coexist with diabetes, but in elder diabetes patients so do dementia, depression, and functional decline.



Moreover, elder diabetes patients have higher rates of premature death. They have greater physical and mobility limitations compared with those without diabetes even when controlled for hypertension, cerebrovascular disease, chronic obstructive pulmonary dis-



ease, cancer, dementia, and osteoarthritis.

Barriers to Care

In addition to their many physical challenges, elder diabetes patients often are socially isolated and have financial problems that negatively affect their care. They may forget to eat, be unable to afford medications or quality food, or skip medication doses to extend a prescription. They also may experience changes in taste and a lack of interest and ability to shop for food and prepare meals at home.

Dental status is also an important issue, since it limits many food choices. Furthermore, limited dexterity and poor eyesight may affect this age group's ability to monitor their blood glucose levels and inject insulin.

Glycemic Targets

According to the American Diabetes Association (ADA), older adults who are functional, cognitively intact, and have a significant life expectancy should have the same blood glucose targets as younger adults with diabetes.

Medical Nutrition therapy

To stabilize diabetes complications, administering medical nutrition therapy (MNT) is imperative. The goals of MNT include the management of blood glucose, lipids, and blood pressure while optimizing overall well-being and quality

of life. According to the ADA, elders with diabetes may experience less morbidity and mortality from the control of these other cardiovascular risk factors than from tight glycemic (blood sugar) control.

The diabetes care team and dieticians should encourage these patients to wear medical ID bracelets or necklaces and always carry appropriate treatment for hypoglycemia, such as glucose tablets, glucose gel, and juice boxes.

Exercise

Older people, including those with frailty, have been shown to benefit from light resistance and balance training. Exercise to build limb strength and flexibility for those who are housebound and confined to a bed or chair can be taught by a physiotherapist. Remember to check with your doctor before starting any new exercise.

It is easy to assume that symptoms are simply due to the ageing process or because you have diabetes. However, it is important to seek advice for any new symptoms and to ask for support where self-care and monitoring has become difficult for you.



Next issue:
Care taker's influence on Type 1 Diabetics



A NATURAL DIET KEEPS THOSE NUMBERS IN CHECK

6 super foods that help combat high blood pressure

Dr Raja Selvarajan, MD
Consultant Diabetologist
Apollo Sugar Clinics, Bangalore



Ms Prameela Rani Duppatla,
Dietician, Apollo Sugar Clinics, Bangalore



Ms Kodai Priya, Dietician
Apollo Sugar Clinics, Chennai

Hypertension or high blood pressure is a health condition that can result in irreversible complications and sometimes even death if left unchecked. A condition that commonly occurs in smokers, older people, overweight or inactive people, alcoholics or people with fatty diets, hypertension is influenced by poor lifestyle and diet choices. Salt is one of the biggest enemies when it comes to blood pressure, followed by excessive stress and other factors such as chronic kidney disease or thyroid issues. It is possible to effectively control the blood pressure by eating mindfully, and doing so will spare the heart from overworking itself to the point of no return.

Dr. Raja Selvarajan shares the following list of super foods that help keep blood pressure in check-



BANANAS

The high potassium content found in Bananas help counter the ill effects of sodium, one of the most common causes of high blood pressure. Similarly, other foods rich in potassium contribute towards good heart health and reduce the risk developing heart disease. One to two bananas per day give the body the potassium it requires.



SPINACH

This green leafy superfood is rich in folate, contains potassium and magnesium, and is full of antioxidants, all of which contribute towards maintaining blood pressure levels. Spinach can easily be enjoyed in salads or sandwiches or in the form of the much loved dishes like palak paneer.



GARLIC

A staple in the Indian kitchen, garlic is a hero when it comes to reducing high blood pressure. Rich in sulfur, with anti-inflammatory properties, garlic helps the arteries relax while also fighting the fat deposits in the heart, thereby lowering blood pressure.



TOMATOES

Tomatoes contain an antioxidant called Lycopene that helps combat high blood pressure. It also has carotenoids that lower the risk of developing heart disease. Tomatoes can easily be enjoyed be consumed as part of a salad, as soup or as juice.



ALMONDS

Contrary to popular belief, nuts such as almond are good for controlling blood pressure. Almond contains 'good fat' and protein, which helps reduce cholesterol and hypertension. Monounsaturated fat in almonds help ease inflamed arteries. These nuts can be munched on as an evening snack.



OLIVE OIL

Olive oil is rich in antioxidants called polyphenols and oleic acids that help control blood pressure. Olive oil can be drizzled over salads and pastas in order to reap its benefits. Olive oil is generally in two forms- Virgin and extra virgin. One has to be extra careful in choosing the oil.

People with Chronic kidney disease (CKD) or associated diseases should be careful in the consumption of high potassium food. Stringent dietician/ Doctor Supervision is a must for such patients.

High blood pressure does not present with obvious symptoms and can go by undetected until it is too late. It is important to visit the doctor for regular health checkups, and even better to begin controlling one's diet at a younger age so that such complications do not develop. The foods mentioned above not only help control blood pressure, but also help strengthen the immune system and clear the body of its toxins. With enough care and precaution, hypertension can easily be avoided.

(Please Note: In case of comorbidities, consult your physician or expert dietician for further advice.)



Benefits of physical activity in Blood Glucose Control.

Dr Menaka Ramprasad, MD
Consultant Diabetologist
Apollo Sugar Clinics, Hyderabad

Moderate physical activity is beneficial in controlling the blood glucose levels. This has been proven in various studies conducted in the past. In its 2016 Standards of Medical Care in Diabetes, the American Diabetes Association recommends adults get 150 minutes of moderate to vigorous exercise per week. Staying fit and active has long term benefits helping to keep the blood sugar levels under control and also keeping a check on the weight.

It has been observed that most of the people with Diabetes are apprehensive on what kind of exercise to do. Experts suggests that there are three kinds of exercise – aerobic, strength training and flexibility work. A good balance between all these three should be maintained.



At least 30 minutes of aerobic exercise most days of the week is mandatory.

During exercise, the body releases chemicals called "endorphins". These endorphins interact with the receptors in

the brain that reduce the perception of pain. For example, the feeling that follows a run or workout is often described as "euphoric." That feeling, known as a "runner's high," can be accompanied by a positive and energizing outlook on life.

Stick with it - Make a commitment to

exercise; make it a priority. Long-term health depends on it, so as tough as it may be to find time or to find the motivation to exercise, keep at it. It will help in losing weight (if you need to do that), and it will make the body more efficient at using its insulin and glucose.

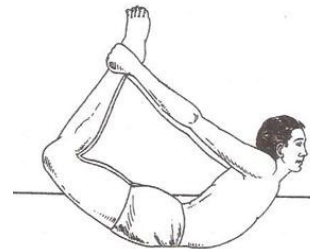
The practice of yoga is effective as a preventive measure and also to keep Type 2 diabetes under control, where the causes are attributed to life style and stress.

Research has shown that a few yogasanas are particularly effective in helping to maintain the blood sugars under control. They include the **Ardha Matsyendrasana (half-twist pose)**



combined with **Dhanurasana (bow pose)**, **Vakrasana (twisted pose)**, **Matsyendrasana (half-spinal twist)**, **Halasana (plough pose)**.

However before anyone starts on a practice of yogasanas it is mandatory that they take training under a qualified instructor and also take the advice of their doctor.



Physical activity is beneficial for everyone: It improves the stamina level, builds immunity, helps in controlling the blood sugars, blood pressure and cholesterol, keeps the weight under control and is a mood elevator. Let us beat Diabetes and lead a healthy life by being ACTIVE.



Introducing 360° Diabetes Care

Now fight Diabetes armed with our plans
starting at a special price of Rs. 1999



For more information and
appointments, call **1800 103 1010**
www.apollosugar.com





OUR 360° DIABETES CARE PROGRAMS OFFER THE BEST VALUE FOR MONEY

SUGAR 360 PLATINUM

Sugar 360 Platinum is a 360-days advanced program meant for diabetics aged > 50 years, with complications, who are on both insulin and oral medication, with uncontrolled sugar levels, and want to achieve and sustain control on their diabetes.

SUGAR 360 GOLD

Sugar 360 Gold is a 360-days comprehensive program meant for diabetics aged < 50 years, having diabetes since < 5 years, and want to achieve and sustain control on their diabetes. This program is recommended to patients who are on oral medication with HbA1c < 9, without any complications.

SUGAR 360 SILVER

Sugar 360 Silver is a 360-days basic program meant for diabetics aged < 50 years, having diabetes since < 5 years, and want to achieve and sustain control on their diabetes. This program is recommended to patients who are on oral medication, without any complications.

SUGAR 90 FLEXI

Sugar 90 Flexi is meant for newly-detected diabetics aged < 50 years, who are on oral medication, without any complications, and want to achieve control on their diabetes. The duration of the programs is up to 90/180 days.

Book our limited period Sugar Experiential package at a special price of Rs. 1999.

Also available at an easy payment plan.

Connect with Apollo Sugar on Social Media





**What our PATIENTS
are saying!**

Mr. M Thubbe Gowda, 44 yrs, Male, Bangalore

After joining Apollo Sugar's Sugar 360 program, I lost weight, reduced my medications, improved my cholesterol and lowered HbA1C. I feel more confident and I am able to manage my condition efficiently.

Mr. Gopal P Joshi, 72 yrs, Male, Hyderabad:

My dad had diabetes since the past 36 years. He has been using insulin since 15-20 years. After consulting at Apollo Sugar Clinics, he has shown astounding results. His sugar levels are well under control His creatinine has fallen from 2.8 to 1.9. He is very happy with the treatment.

Mr Shashi Bhusha Swain, Hyderabad

My father has frequent hypoglycemic episodes. After consulting Apollo Sugar Clinics, a whole body checkup was done. A step wise approach was given in a very nice way. The staff were like family. I have not seen such service anywhere. My father feels completely healthy and happy with the treatment.

Mrs. Sarayu Doshi, 54 yrs, Female, Mumbai

I had diabetes since the past 14 years. I have been on insulin since the past 7 years. I was a diet defaulter and was irregular in exercise as well as follow up in the clinic. At Apollo Sugar, 6 months in package helped in improvement in diet much more than exercise. I could very well keep up sugar levels under control and lost weight. Strict diet and exercise adherence coordinated by the staff helped me out in controlling my blood sugars.

**Mrs Annapoorna,
42 yrs, Female, Bangalore:**

I was diagnosed with diabetes 5 years ago. I never knew about following strict diet. Apollo Sugar clinics has educated me in terms of diet and exercise. I have been following strictly. I am now actively able to do all my work.

Diabetes Dialogues



2:22 PM

← Dr. Balaji Jaganmohan

INFO CHAT BG Rx

Patient

Are Sugar free sweetener advisable?

Dr. Balaji Jaganmohan, Bangalore

You can take in limited amounts but yes excess needs to be avoided, they are contraindicated in pregnancy and for kids.

Patient

What should the FBS range for pre-diabetes?

Dr. Balaji Jaganmohan, Bangalore

It is between 101-125 mg/dL

Your message ➔

2:22 PM

← Dr. Sambit Das

INFO CHAT BG Rx

Patient

I drink sometimes....what are my chances of getting diabetes

Dr. Sambit Das, Bhuvaneswar

Drinking increases your caloric intake and thereby poses a burden on your pancreas to secrete more insulin. Hence drinking increases your risk for metabolic diseases especially obesity and cholesterol.

Patient

Does having diabetes mean that I am at a higher risk for other medical problems?

Dr. Sambit Das, Bhuvaneswar

Yes. It increases your risk for other serious problems like retinopathy, neuropathy and nephropathy and also complications of heart and stroke. With correct treatment and lifestyle changes, you can avoid or delay the onset of complications.

Your message ➔

2:22 PM

← Dr. Tanvi Chopda

INFO CHAT BG Rx

Patient

Are there any food such as candy that my child with type 1 diabetes should not eat?

Dr. Tanvi Chopda, Mumbai

As of now, there is no food that a child with diabetes cannot eat, as long as it is scheduled in the meal plan. Do not go overboard with meal restrictions and do not be overtly liberal with indulgence.

Patient

I have aerated drinks regularly. Does this lead to diabetes in the long run?

Dr. Tanvi Chopda, Mumbai

Consuming aerated drinks has several implications for your health.

1. The calories you are consuming daily
2. The daily sugar load.

Consuming more sodas has been shown to be associated with DM because of these 2 factors.

Your message ➔

2:22 PM

← Dr. Usha Ayyagari

INFO CHAT BG Rx

Patient

Please give an advice on fruits that diabetic people can have and also homemade food to be avoided by a diabetic patient?

Dr. Usha Ayyagari, Chennai

You can have red apple, orange, musambi, a slice of papaya, raw guava, a slice of watermelon and also strawberry. Honey should be avoided by diabetics. Jaggery should not to be taken.

Patient

I heard that diabetes is hereditary. Is it true?

Dr. Usha Ayyagari, Chennai

It is true that Diabetes is hereditary. Best you can do about your Diabetes is controlling it to prevent any early Complications.

Your message ➔



Dr S. Sethu K. Reddy, MD, MBA, FRCPC, FACP, MACE, Chief Adult Diabetes - Joslin Diabetes Center recipient of **Dr Prathap C Reddy Gold Medal for Diabetes Excellence** for the year 2016.

INTERNATIONAL DIABETES UPDATE 2016

The International Diabetes Update 2016 was conducted by Apollo Sugar Clinics and Together against Diabetes Trust on 6- 8 May, 2016 at Novotel, Hyderabad. It was our pleasure to host key opinion leaders from across the globe. On this occasion,

Dr S. Sethu K. Reddy, was honored with **Dr Prathap C Reddy Gold Medal for Diabetes Excellence for the year 2016**. He graced us with his words:

Sir William Osler, perhaps the greatest physician of the last century, stated that the secret to his success was doing his expected medical obligations on a daily basis. Somerset Maugham said that being extraordinary is not in doing extra-ordinary things but in doing the ordinary things extra-

ordinarily well. So, with diabetes, we are part of an army, working daily, improving the lives of our patients and each of us is playing a critical role – often appearing mundane but critical nevertheless.

I would like to commend Apollo Sugar's vision: "To provide the highest quality of service, assured pan-Indian diabetes care and to create a visible, healthy difference in one's life---focusing on care for the individual, the diabetic, rather than on the condition, diabetes."

We often hear, think GLOBAL and act LOCAL. Also, for the care of our patients, while population health is critical, caring for the individual will be equally important.





A rare endocrine malignancy case report published in the journal of clinical endocrinology & metabolism

Dr N K Narayanan, MRCP(Gen Med, UK), SCE(Endo), MRCP(Endocrinology), CCT (Endo), Consultant Endocrinologist - Apollo Sugar Clinics, Chennai

Familial Adrenocortical Carcinoma in Association with Lynch Syndrome

Benjamin G. Challis,* Narayanan Kandasamy,* Andrew S. Powlson, Olympia Koulouri, Anand Kumar Annamalai, Lisa Happerfield, Alison J. Marker, Mark J. Arends, Serena Nik-Zainal, and Mark Gurnell

Context:

Adrenocortical carcinoma (ACC) is a rare endocrine malignancy with a poor prognosis. Although the majority of childhood ACC arises in the context of inherited cancer susceptibility syndromes, it remains less clear whether a hereditary tumor predisposition exists for the development of ACC in adults. Here, we report the first occurrence of familial ACC in a kindred with Lynch syndrome resulting from a pathogenic germline MSH2 mutation.

Case:

A 54-year-old female with a history of ovarian and colorectal malignancy was found to have an ACC. A detailed family history revealed her mother had died of ACC and her sister had previously been diagnosed with endometrial and colorectal cancers. A unifying diagnosis of Lynch syndrome was considered, and immunohistochemical analyses demonstrated loss of MSH2 and MSH6 expression in both AACs (proband and her mother) and in the endometrial carcinoma of her sister. Subsequent genetic screening confirmed the presence of a germline MSH2 mutation (resulting in deletions of exons 1–3) in the proband and her sister.

Conclusion:

Our findings provide strong support for the recent proposal that ACC should be considered a Lynch syndrome-associated tumor and included in the Amsterdam II clinical diagnostic criteria. We also suggest that screening for ACC should be considered in cancer surveillance strategies directed at individuals with germline mutations in DNA mismatch repair genes.

RECENT PUBLICATIONS

Thyroid and Diabetes the co-existing twins: Apollo Sugar Electronic Medical Records Analysis



Kolukula Vamsi K, Ayyagari Usha, Behl Anish, D Shantharam, Goapl Jayashree, NK Narayanan, Dwarkanath CS, S Venkataraman, TS Boochandran, Joshi Shashank, Apollo Sugar Clinics

Published link: <http://journals.aace.com/doi/pdf/10.4158/1530-891X-22.s2.325>;

Abstract Number: 1319; Endo. Pract. 2016

“Diabetes doesn’t change what you can do” Theresa May proves Type 1 diabetes is no barrier to achievement.

Today Theresa May becomes the second woman to serve as prime minister of the United Kingdom, but she'll be the first major world leader living with type 1 diabetes.

"It was a real shock and, yes, it took me a while to come to terms with it," but "the diabetes doesn't affect how I do the job or what I do. It's just part of life...so it's a case of head down and getting on with it." She says.

Whether she'll continue that advocacy as prime minister and how she'll manage her own condition going forward remain to be seen. Most news reports have said that she takes four insulin injections a day, and there has been

no mention of her using an insulin pump or a continuous glucose monitor (CGM).

Unfortunately, like Mrs May, many adults with new-onset autoimmune diabetes are initially misdiagnosed with type 2 diabetes by primary-care clinicians, who simply write a metformin prescription when they see high blood sugar without appreciating other clues such as excessive weight loss without trying, extreme thirst, frequent urination, and a family history of not only type 1 diabetes but other autoimmune conditions including celiac and thyroid disease - both Graves' and Hashimoto's - and vitiligo.

For such patients - or those

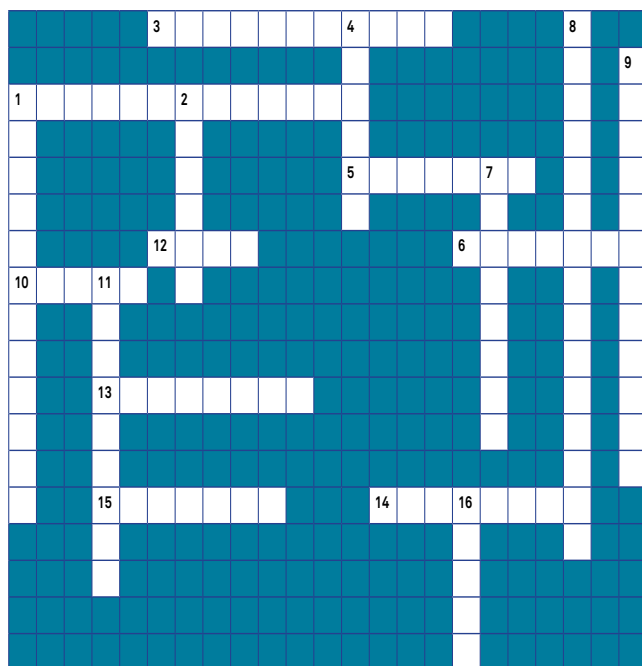
who aren't heavy to begin with, although obesity doesn't rule out type 1 – ordering an anti-glutamic acid decarboxylase (GAD) or multiantibody panel will help in making the correct diagnosis, both experts said.

All in all, she has set a great inspiration for people with Diabetes- type 1 or type 2.



Theresa May
Prime Minister of the United Kingdom

Diabetes Crossword



ANSWERS
 Across: 1. Hyperglycemia, 3. Gestational, 5. Glucose, 6. Fasting, 10. Lipid, 12. Feet, 13. Exercise, 14. Pancreas, 15. Insulin
 Down: 1. Hypoglycemia, 2. Lancel, 4. Orange, 7. Starches, 8. Endocrinologist, 9. Blood Glucose, 11. Injection, 16. Carbs

DOWN

1. Low blood sugar
2. A spring-loaded device used to prick the skin with a small needle to obtain a drop of blood
4. Type of juice commonly used to treat low blood sugar
7. Carbohydrates are made up of sugars and _____
8. Doctor who is a diabetes specialist
9. (2wds) A _____ meter is used to test blood sugar
11. Inserting liquid medication into the body with a syringe
16. People with diabetes often count these at meal times

ACROSS

1. High blood sugar
2. A type of diabetes that only develops during pregnancy
3. A kind of diabetes in pregnant woman
5. One of the simplest forms of sugar
6. A blood glucose check if a person has not eaten for 8-12 hours (usually overnight)
10. A term for fat in the body
12. Take your shoes and socks off and have your doctor examine these at each visit
13. Regular activity to develop and maintain physical fitness
14. An organ of the body that produces insulin
15. Injectable medication used to treat diabetes

Diabetes Quiz

1. **A fasting blood glucose test level of _____ indicates diabetes.**
 A) 50 mg/dl to 69 mg/dl B) 70 mg/dl to 99 mg/dl C) 100 mg/dl to 125 mg/dl D) 126 mg/dl or higher on two separate tests
2. **Hypoglycemia means low blood glucose**
 A. More than 70 mg/dl B) Less than 70 mg/dl C) More than 140 mg/dl D) Less than 100 mg/dl
3. **Insulin is a:**
 A) Protein B) Fat C) Mineral D) Carbohydrate
4. **Who is at risk to develop Diabetes complications?**
 A) Are overweight B) Are older than 40 C) Smokers D) All the above
5. **Pain in legs and calves is symptomology attributed to**
 A) Autonomic neuropathy B) Myopathy C) Nephropathy D) Peripheral vascular disease
6. **Untreated diabetes may result in all of the following except:**
 A) Blindness B) cardiovascular disease C) Kidney disease D) Tinnitus
7. **The risk factors for type 1 diabetes include all of the following except:**
 A) Diet B) Genetic C) Autoimmune D) Environmental
8. **Untreated hyperglycemia may lead to all of the following complications except:**
 A) Hyperosmolar syndrome B) Vitiligo C) Diabetic ketoacidosis D) Coma
9. **Prediabetes is associated with all of the following except:**
 A) Increased risk of developing type 2 diabetes B) Impaired glucose tolerance C) Increased risk of heart disease and stroke
 D) Increased risk of developing type 1 diabetes
10. **The most serious complication of therapy for DM is;**
 A) weight gain B) delayed wound healing C) hypoglycemia D) kidney failure



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in diabetes care.

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