Issue: 5, OCT. 2020

AHMEDABAD FAMILY PHYSICIANS ASSOCIATION

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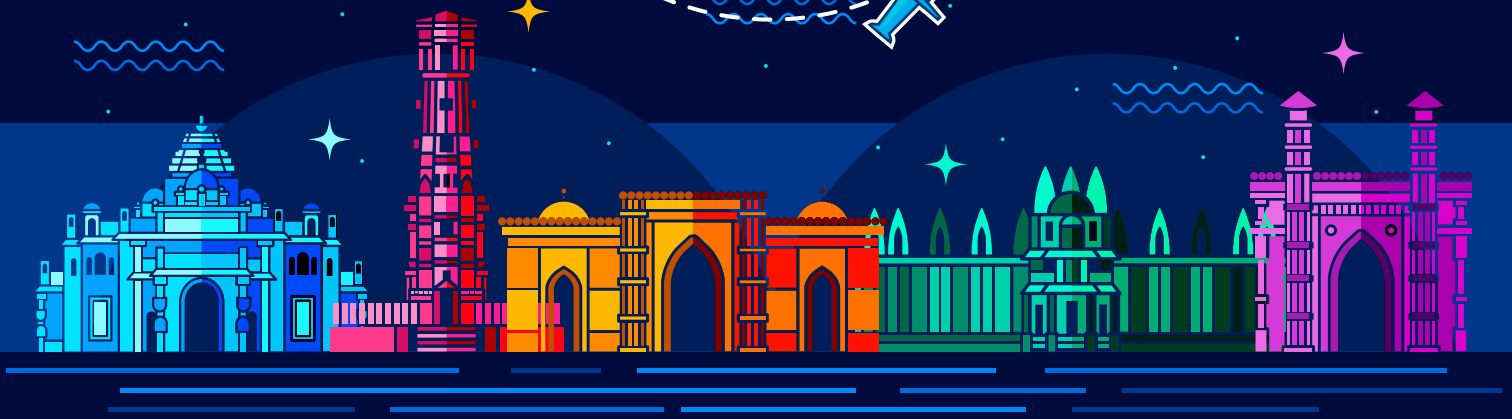

B-503,Premium house, Behind Ahmedabad Medical Association
Opp Gandhigram railway station,Ahmedabad

PRESIDENT & SECRETARY'S ADDRESS

Dear Friends,

Hope all of you are in good health.
Again number of covid 19 cases are increasing in our city.
I request you all to do safe practice and follow rule of SMS.
In this situation physical CME are not possible, so we have started LIVE Facebook Webinar.

In last month we have done 5 live Webinar on different topics. Hope all of you liked it and enjoyed learning from Webinar.

Please attend Webinar in large number and upgrade your knowledge.
We are very much thankful to Dr Ashwinbhai Shah for making our AFPA Drs whatsapp group live,by daily Quiz on different topics.
The Quiz is really interesting and informative.
Heartiest congratulation to Dr . Kirit kumar C. Gadhavi for being installed as President of Ahmedad Medical Association for the year 2020-2021. Dr. Dhiren Mehta will continue as Hon. Secretary of Ahmedabad Medical Association for the year 2020-2021. Also congratulations to Dr. K. R. Sanghavi, Dr. Abhay S. Dikshit, Dr. Sanjay A. Shah and our members who are elected as managing committee members of AMA for 2020-2021.

Follow rule of Social Distancing , Mask , Sanitization and Stay Safe.

JAY AFPA

COMMITTEE MEMBERS

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Acting President

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- Dr. Amit Mistry
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Dr. Pragnesh Vachhrajani
Dr. Mehul Shelat

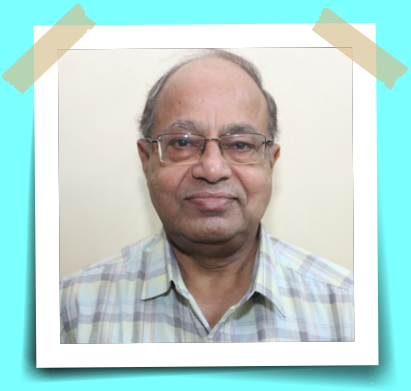
CONGRATULATIONS

Dr. Kirit Kumar C. Gadhvi

Elected as President of prestigious Ahmedabad Medical Association for the year 2020-2021

Dr. K. R. Sanghavi

For being awarded in Annual Day celebration of AMA ,Late Dr. Babalal N. Parikh Life Time Achievement Award for Family Physician category for year 2020.



Dr. Abhay S. Dikshit

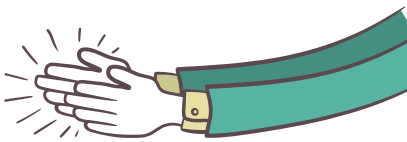
For being awarded in Annual Day Celebration of AMA , Dr. R. K. Nanavaty essay prize for the subject " Balancing Professional and Personal life of a Family Physician ".

. Dr. Sanjay A. Shah

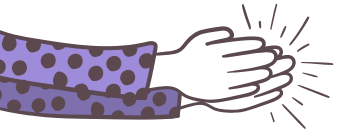
Being awarded at Annual Day Celebration at AMA , Dr. Piyush Shah paper presentation.

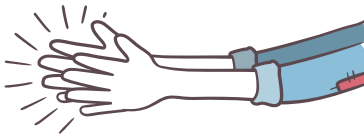
CONGRATULATIONS

Congratulations to following our members , elected as Managing Committee Members of Ahmedabad Medical Association fir the year 2020-2021.

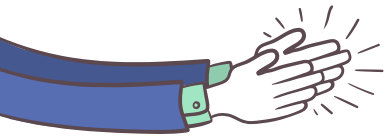


1. Dr. Piyush Bhanshali
2. Dr. Kalpita Dave

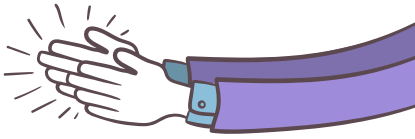




3. Dr. Jagdish J. Mod
4. Dr. Satish Pandya



5. Dr. Ramesh I. Patel
6. Dr. Suresh K. Patel



7. Dr. H. G. Patwari
8. Dr. Shailesh Raval

9. Dr. Jagmohan Shah
10. Dr. Jayesh C. Shah

The name of donor's who have contributed for Benevolent fund for Late Shree Prakash Thoria

- Dr. Bavisker J. V.
- Dr. Bhagat Dinesh R.
- Dr. Bhatt Mukesh M.
- Dr. Bhukhar Rajendra S.
- Dr. Chhatwani Suresh M.
- Dr. Dalal Shripal N.
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- Dr. Thakkar Navin P.
- Dr. Vachharajani Pragnesh M.
- Dr. Vyas Dhananjay

DrDiabeat
DIABETES CARE FOR
EVERYONE EVERYWHERE

DIABETES MANAGEMENT SIMPLIFIED

Diabetes Mellitus is the silent killer of the 21st century. As per IDF there are 425 millions of people are suffering from Diabetes Mellitus all over the world and it is estimated that it will reach up to 629 millions in 2045. China and India contribute approximately 44.08% of the diabetes population in the world. The situation is more grievous in south-east asia particularly in India. As per IDF estimate India will be no 1 in diabetes population in 2045 with 84.22% rise. Every 6 second a person is dying and every 30 second a lower limb is amputated due to diabetes somewhere in the world. Still one in two adults with diabetes remains undiagnosed. Even after diagnosis only 50% start treatment for that, after starting treatment only 50% are able to achieve glycemic targets and inspite of achieving normoglycemia only 50% are able to live a complication free lifestyle. So if we take 100 people with diabetes only 5-7 are able to live a complication free good quality of life with diabetes. This is the biggest tragedy of this disease.

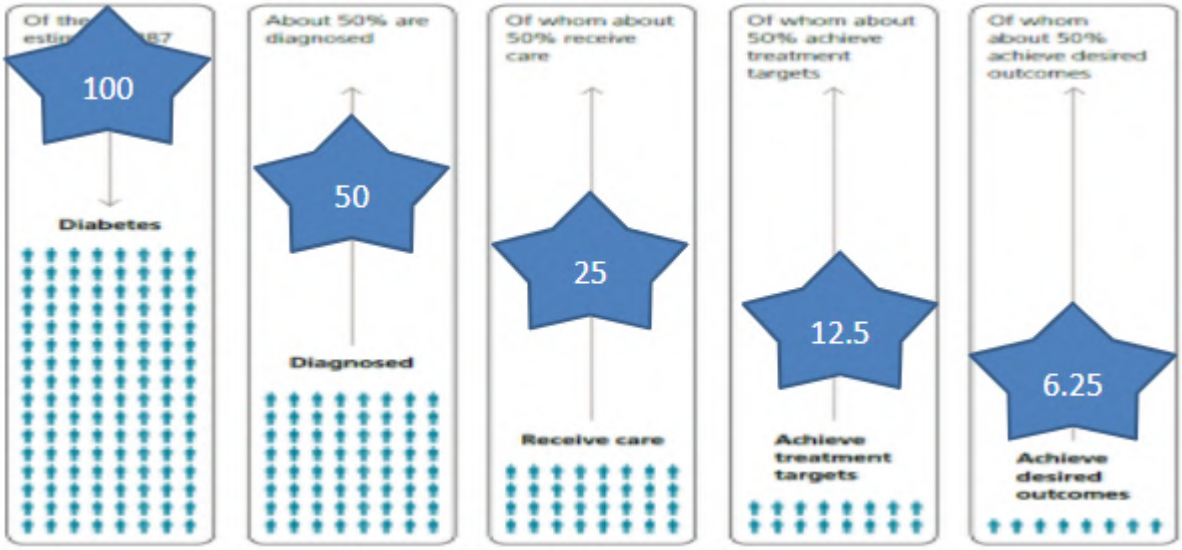

Figure 1. The rule of half

It is known that Diet, Physical activity, Medicine and Monitoring are the four pillars of diabetes management and balance of these parameters is essential for good diabetes management. When it comes to medicine in diabetes management, it's always a confusion for healthcare professionals as there are wide availability of options and not a single guideline suggests the approach which is easy to follow for all Healthcare professionals. So it's the need of an hour to have simplified Diabetes Management Protocol.

The Sugar Story

First let's understand the basics of Diabetes.

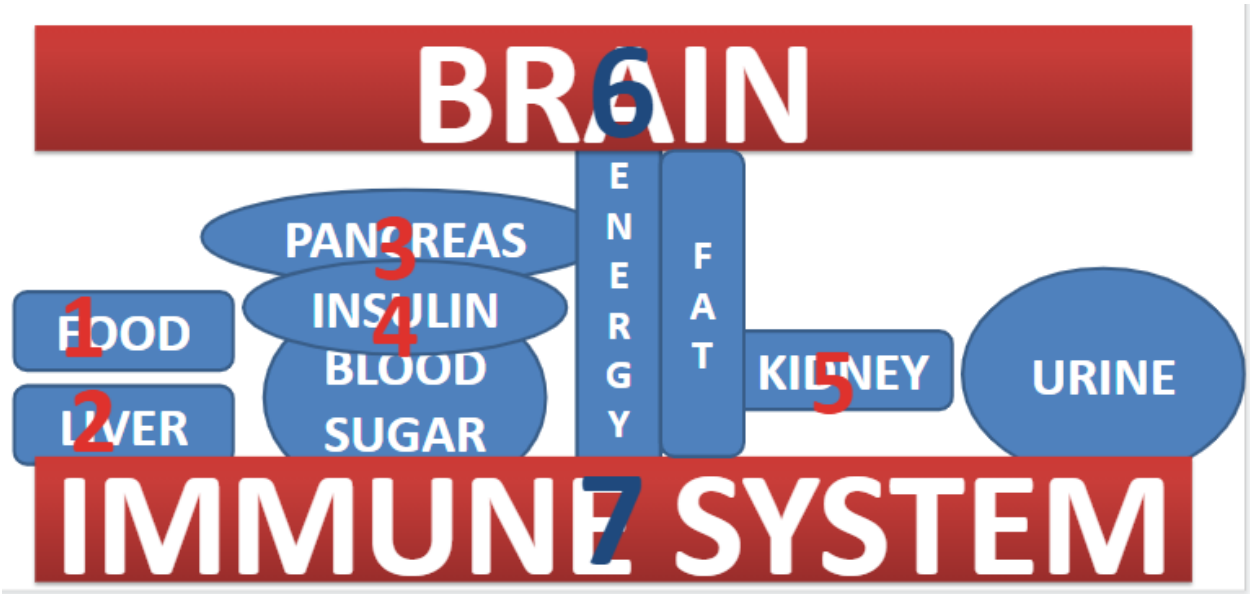

Figure 2. The Sugar Story

We all know that we require energy to survive which is produced in our cells primarily from glucose. We get glucose through food. But when we fast (we fast daily for around 6-8 hours when we are sleeping) still all our cells get glucose, which is produced mainly in the liver. Glucose production of the liver is governed by our central nervous system and insulin. Now whatever glucose comes into blood through food or liver, it is sensed by our brain and it commands our pancreas to produce insulin from beta cells. Also when food enters our gut, there is production of hormones known as Incretin (GLP1 and GIP) which stimulates glucose dependent insulin production. Insulin helps glucose to get entered into the cells for energy production. After utilisation of glucose for energy production, it gets converted into glycogen and even if more glucose remains it is stored as fat in the body. In spite of that if there is excess glucose remaining in blood, it gets excreted out in urine through our kidney governed by our brain. This whole process is also governed by one's immune system. If any person develops high blood sugar there must some fault at one or more level which may be

1. Increased intake from food
2. Increased liver glucose production
3. Decreased pancreatic insulin production
4. Decrease insulin action
5. Abnormal signalling into brain
6. Decreased kidney glucose excretion
7. Abnormal immune system

Out of all these the hallmark of type 2 diabetes is at least some reduction in pancreatic insulin production.

Functional Classification of Diabetes Medication

The available treatment works on one or more aspects of these malfunctions, based on which we can classify diabetes treatment into five groups:

1. **Insulin Provider (IP)**: it includes insulin itself or medicine which increases insulin production irrespective of glucose level. (sulfonylurea and glinides)

2. **Incretin Enhancer (IE)**: It includes medicines which help to increase Incretin hormone action. (DPP4 inhibitors and GLP1 receptor agonists)
3. **Glucose Excretor (GE)**: It helps to excrete out excess glucose into urine.
4. **Insulin Sensitizer (IS)**: It improves insulin action and reduces insulin demand in the body.
5. **Glucose Restrictor (GR)**: it stops glucose absorption through the intestine. It acts in the gut.

Dr Diabeat: Simplified Diabetes Management Protocol

STEP 1: Know your patient.

Height, Weight, BMI, Heart Rate, Blood Pressure

STEP 2 Diet Recall

Total Calories (K Cal):…….

% Calories From Carbohydrate: ……..

% Cho In Each Meal: Breakfast …… Lunch …… Dinner ……

Meal Pattern: Major …. Minor ….. Largest Meal ……..

Fasting Pattern …….

STEP 3: Define HbA1c Target and Hypoglycemia Risk

Table 1. HbA1c risk calculator

HbA1c	<6.5	6.5-7.0	7.0-7.5	7.5-8.0	8.0-8.5
Age	<35	35-65	>65		
DURATION	< 5 YEAR	5-10 YEAR	10-15 YEAR	> 15 YEAR	
CKD (e GFR)	>45	30-45		30-15	<15 or On RRT
NFS	<-1.455	-1.45 – 0.676		>0.676, Compensated	>0.676, Non Compansated

LVD (EF%)	**>50**	**35-50**	**35-15**	**<15**
ASCVD	**Absent or Present, NYHA 1**	**Present, NYHA 2-3**	**Present, NYHA 2-3**	**Present, NYHA 4**
Hypo Risk	**Low**	**Intermediate**	**High**	**High**
Cognitive impairment	**No**		**Mild to Moderate**	**Severe**
Patient efforts	**Good**	**Intermediate**	**Poor**	**Poor**
Resource	**Enough**	**Intermediate**	**Poor**	**Poor**

Table 2. Hypoglycemia Risk Calculator

	LOW	**MILD**	**HIGH**
h/o hypo in last 12 month	**0**	**1-2**	**3 or more**
h/o hypo in last 3 month	**0**	**1-2**	**3 or more**
Insulin	**No**	**Basal only**	**Basal – Bolus or premix**
SU	**No**	**Yes**	**Yes**
e GFR	**>60**	**45-60**	**<45**
DURATION	**< 5 YEAR**	**5-10 YEAR**	**> 10 YEAR**
Age	**18-35**	**35-70**	**>70**

STEP 4. Check C-Peptide, S.Creatinine and eGFR and Define Regimen.

	R1 INSULIN	**R2 INSULIN+OHA**	**R3 OHA**
C peptide	< 0.6	0.6-1.0	>1.0
eGFR	<30	>30	>30
HbA1c		>9	<9

Step 5 Final Regimen based on Baseline HbA1c and HOMA IR

HbA1c	HOMA IR	
	1-2	>2
6.5-7	**IS + GR**	**IS + GR**
7-8	**+ IE**	**+ IS + GE**
8-9	**+ IP ± IS + GE**	**+ IE ± IP**
>9	**+ I**	**+ I**

Dose of Insulin

HbA1c	<9	9-12	>12
Insulin Dose	0.1 U/Kg	0.2 U/Kg	0.3 U/Kg

Basal Insulin

Detemir, Glargine U100, Glargine U300, Degludeg

Give once a day, titrate as per Fasting Blood Sugar

Bolus Insulin

Regular Insulin, Aspart, Lispro, Glulisine, Fast aspart

Divide the dose into three part and give before breakfast, before lunch and before dinner

Dose of OHA

Glucose Restrictor (GR):

Acarbose and Voglibose

Use just after meal

Use if % of carbohydrate in a meal is > 60%, or post meal sugar is >50mg higher than pre meal sugar.

Insulin Sensitizer (IS):

Metformin:

The first drug of choice in diabetes management.
Dosage need to be modified as per eGFR

eGFR	ACTION
>60	*No renal contraindication*
45-60	*Continue same dose* *Needs renal function monitoring every 3 months*
30-45	*Do not initiate* *Reduce dose of metformin by half if ongoing*
<30	*Stop Metformin*

Pioglitazone:

Age <65

No osteoporosis

No retinopathy

EF>45%

No hematuria

No p/h/o bladder cancer

No f/h/o bladder cancer

Insulin Provider (IP): sulfonylurea, glinides

Sulfonylurea and glinides are used as per their duration of action & meal pattern of the patient.

3 meal patterns (breakfast, lunch and dinner): use short acting insulin providers drugs before every meal (glipizide & glinide).

2 meal patterns

Breakfast & dinner use long acting sulfonylurea (glimepiride or modified release Gliclazide)

Lunch & dinner use intermediate acting sulfonylurea (gliclazide).

Incretin Enhancer (IE): DPP4 inhibitors & GLP1 receptor agonist

DPP4 inhibitors avoid in case of

LV dysfunction (EF < 35 %) or

Acute pancreatitis.

GLP1 receptor agonist avoid in case of

acute pancreatitis,
symptomatic or proliferative retinopathy,
p/h/o medullary thyroid carcinoma or
MEN (multiple endocrine neoplasia) &
f/h/o medullary thyroid carcinoma.

Glucose Excretor (GE): SGLT 2 inhibitors avoid in case of
catabolic state,
recurrent gut infection even after taking all precautions & preventive measures.

Dr Diabeat: Digital Diabetes Care Clinic

Dr Diabeat algorithm is now available digitally for healthcare professionals which can help you to decide the best diabetes management plan for your patients. Dr Diabeat Digital Platform will provide you defined target for you patients, Diabetes health Score and Future Risk of complications (The Blue Index), calculated diet recall and suggested treatment plan along with individualised Diet and Physical activity management as well as e-consultation with our expert diabetologist, diet and nutrition experts, Physical activity trainers, Life coaches and Super Specialists when required.

It's time to join hands together and go digital for better diabetes care for our patients.

Dr Dharmendra Panchal MD

Founder and Chairman: Dr Diabeat
Consultant Physician
Diabetes Obesity Metabolism & Endocrine

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