

Book-1



ADD 15 YEARS TO OUR LIFE
CAN WE? OF COURSE, WE CAN!!

Add 15 Years |

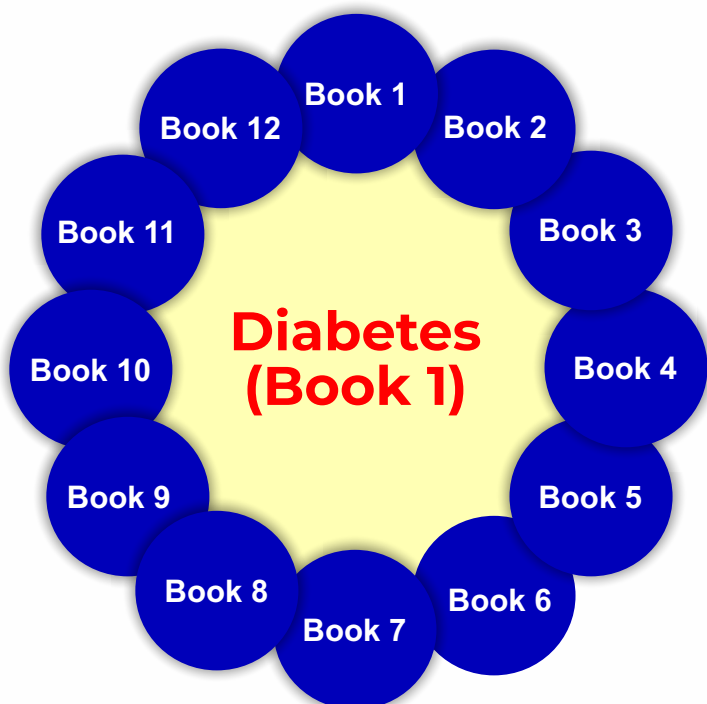
Diabetes - Book 1

HIGH BLOOD SUGAR

IN 2021: No reason for kidneys to fail!!

Before 1921: Yes, You would have died.
(year of Nobel Prize for Insulin)

USA/India Edition 2021 | ENGLISH



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PREFACE

Think About It!

Let me give an example which all of us can identify with

Say, If we have to study for the complete year, all our subjects in the school and suppose we never really opened our books and missed so many classes, never paid attention in class.

Then surely we cannot be in the top 25% of the class, chances are, we will fail that class.

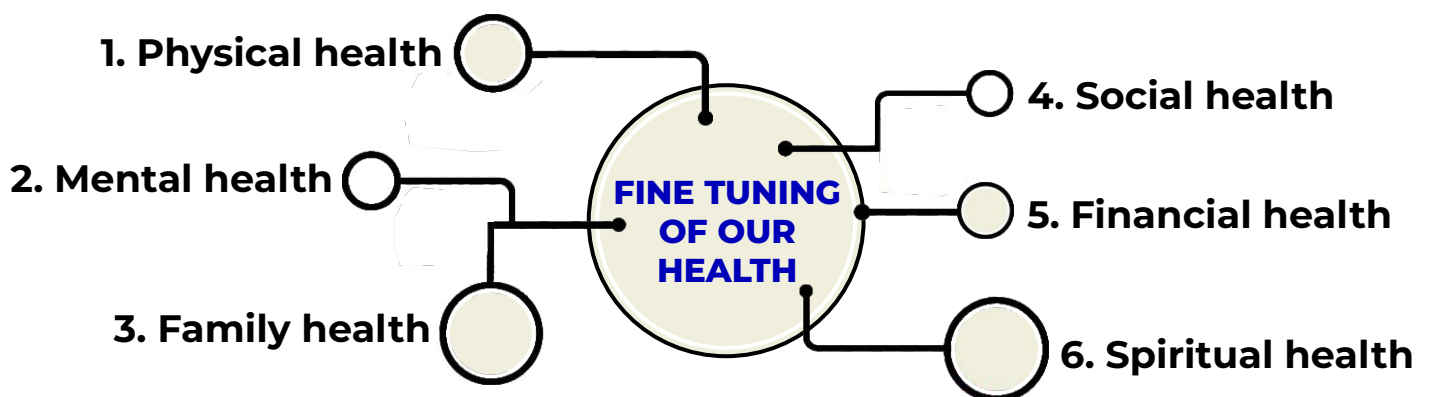
Miracles do not happen in real life.

Atleast in India (Not very common in U.S.) we seek care & M.D./ Physicians provide care and their focus is on so called “alarming symptoms” (we call it “crisis medicine”)

Personally in 2020 and in coming years, those “alarming symptoms” (called “Crisis Medicine”) should be RARE before we get into 75 to 85 years of age group.

PROVIDED

We keep **fine tuning our health** (medical definition) and gain insight about fundamental medical knowledge, we actively plan and pay attention to our:



TRUST ME ALL THE 6 TYPES OF HEALTH ARE IMPORTANT

Results will be dramatic.

DISCLAIMER

All the books that I am writing as physician . M.D. with a life time of experience (along with my team) –

mention most common medical facts which each one of us need to know in our day to day life.

Ignorance is **DEFINITELY NOT** a blessing in 2020.

I highly recommend that anybody entering middle school (8th grade i.e, a 13 year-old) should start reading these books and try to read as many as he or she can read **so that they can get an insight into the most common medical facts.**

These books are written in simple English and in several languages.

If we get an insight into medical facts before we get into chain smoking and excessive alcohol use etc, we can have a very healthy and a long life.

All my research and commonsense says that - starting at age 13 years, (that is when you enter your teenager years, our personality, our habits, **our likings and our dislikings -- all are pretty much shaped by the time we get to 26 years old or older.**

Both India and USA are very dear to me,

In one country I was born, I have my parents.

In the other country, I have my wife and my children.

One thing became obvious to me as I live in USA, that the population is taking advantage of the latest medical advances.

Our Indian community, all our friends and families, when we have medical issues, are really putting themselves at the mercies of Government and private hospitals and doctors (with “zero” trust).

In India, people have to spend their own money. Realizing this, I have provided all the medical information which is available to us doctors, so that one can make wise choices and confidently take their health in their own hands.

But still I request sincerely that you will not take any medications without the supervision of your own family doctors.



The facts I have provided in my books, is available in every medical book, but I write them in simple English or in your language *because how are you going to make right choices in relation to your health, if you do know what the answer is.*

Our horoscope/stars are not enough, and consulting a pandit, priest or mullah is not enough. Blind faith is not enough.

Prayers help, yes! When we do not know the answer to a situation. If our car ran out of petrol, our car will not move (how much so ever we may pray, it is not going to happen).

If you anticipate and choose wisely, you will not have a crisis. So our disclaimer is we give you that insight but Please always consult your physicians before starting on any prescription medications.





ADD 15 YEARS TO OUR LIFE
CAN WE? OF COURSE, WE CAN!!

These
Medical Books
can really help
in Adding
15 Healthier Years
to our
lifespan



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Chapter 1

Introduction



Frederick Grant Banting

John James R. Macleod

- The Nobel Prize in Physiology or Medicine 1923 was awarded jointly to Frederick Grant Banting and John James Rickard Macleod "for the discovery of **insulin**" in 1916.

Chap1Fig1

Insulin was discovered in 1921 leading to a nobel prize. In 2021 we have 12 groups of medicines for medicine diabetes.

Think About It!

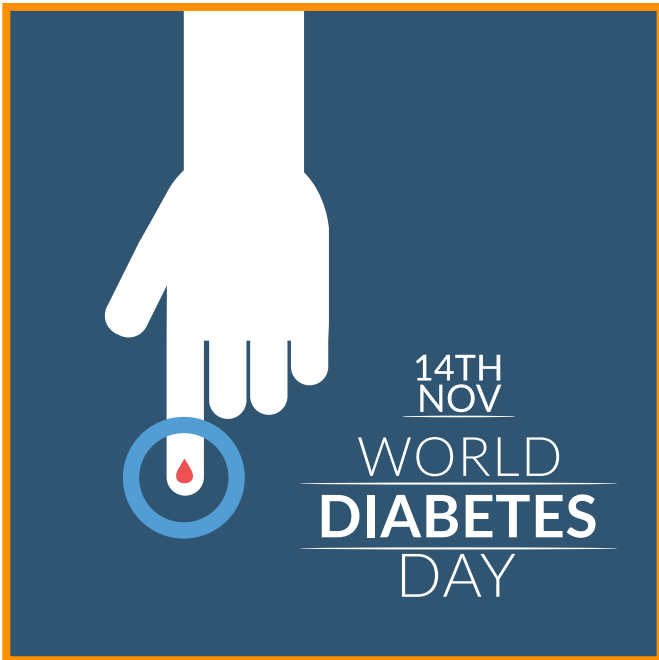
Before 1921

Every child who was born with Type 1 diabetes or lack of insulin would eventually die.

The discovery of insulin or should we say the discovery of insulin as a medicine has changed the history of diabetes and its treatment.

In 2021

We can now have a healthy life with functioning kidneys till very end!!

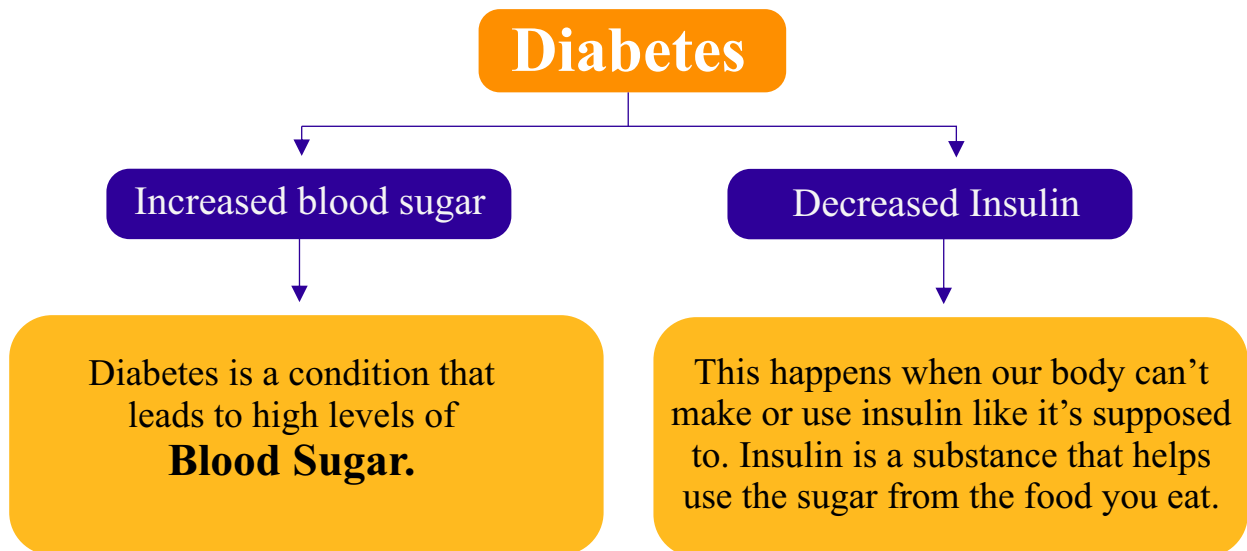


But yes, we have 12 to 13 different groups of medicines for high blood sugar.

The golden principle of the medicinal treatment of diabetes is that we start with one medication early in the course of treatment of diabetes.

We keep adding medicines as needed to control our blood sugar (along with diet & exercise)

Chap1Fig1



Chapter 2

The Golden Principle in Management of high blood sugar (Diabetes)

The golden principle of the medical treatment of diabetes is that Once we have high blood sugar (Diabetes) – exercise and diet management are needed life-long.

Together diet, exercise and medications – all will help!!

Risk of taking medications are minimal as compared to the benefits that we receive from these medicines!

1. We start with **one medication** early in the course of treatment of diabetes

Start with one medication

2. **Targets** for blood sugar control is decided by physician.

Decide Targets

3. Usual target is **HbA1c < 7**

HbA1c < 7

4. **As youngish we are more, we want to keep blood sugar is close to 100mg**

Blood sugar close to 100mg

Continued

The golden principle of the medical treatment of diabetes is that Once we have high blood sugar (Diabetes) – exercise and diet management are needed life-long.

5. **Today in 2021** are several groups of excellent medicines are available:

a) which can **bring down our blood sugar by different mechanisms of action.**

b) As a golden rule, what we should start with **one medicine** if our blood sugar is not extremely high.

c) And as time goes on,
We can add a second medicine.

Start with one medicine, if blood sugar is not very high

Start with one medicine, Add a second medicine, if needed And add a third medicine, if necessary

d) Or **we can even add a third medicine which works by a different mechanism.**

Chapter 3

Diet and exercise are an integral part of high blood sugar management!

[Diet and exercise are an integral part of high blood sugar management!]

Purpose of medical management and medicines for diabetes is:

- To manage our blood sugar
- As close to 100mg as possible
- And HbA1c < 7



Chap3Fig1

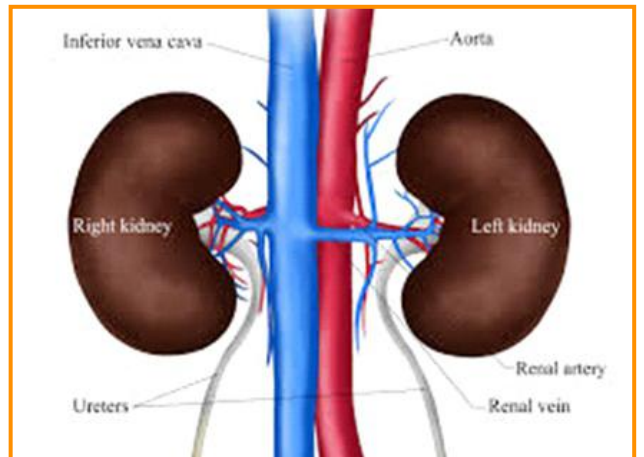


Chap3Fig2

HbA1c

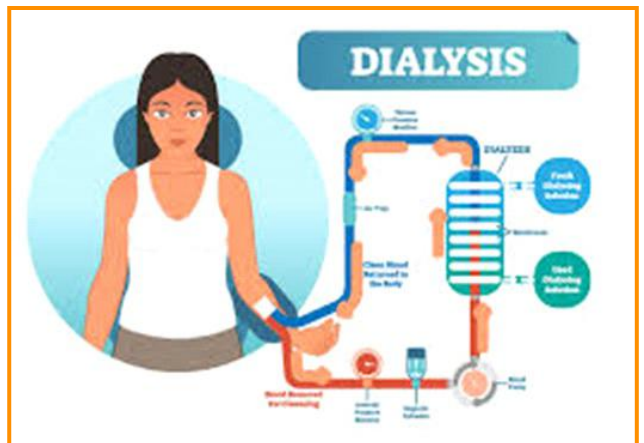
Chap3Fig3

- **To prevent kidney failure**

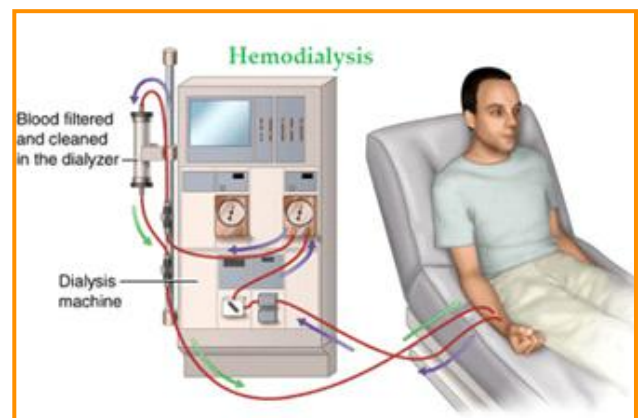


Chap3Fig4

- **And no dialysis**



Chap3Fig5



Chap3Fig6

- **No heart attack (Diabetes is literally one of the reasons)**



Chap3Fig7

- **No blindness (Diabetes is one of the reasons)**



Chap3Fig8

- **No amputation of leg (Diabetes is one of the reasons)**



Chap3Fig9

Chapter 4

Yes, Diabetes management can really reduce complications

If we manage diabetes from day one or even before we have actual diabetes (called prediabetes),
Complication are dramatically delayed by



Is it true?

✓ Really Yes! it is True

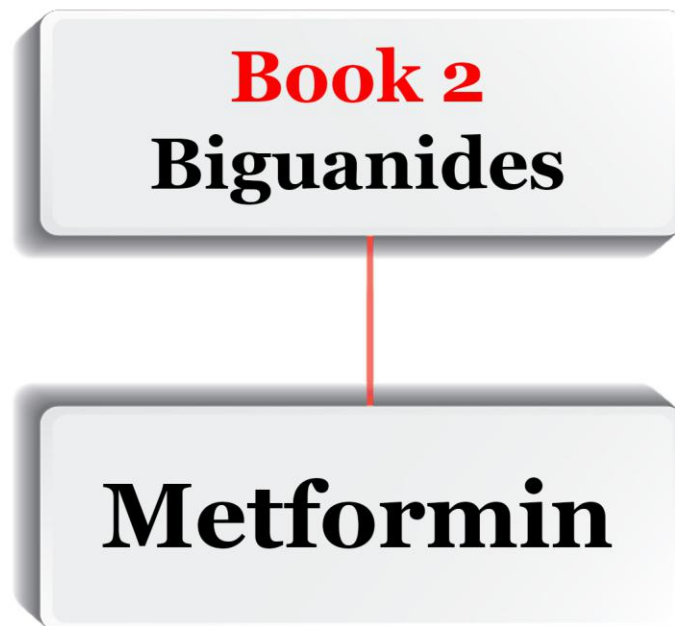
Chapter 5

Today in 2020/2021 we have excellent medicines available

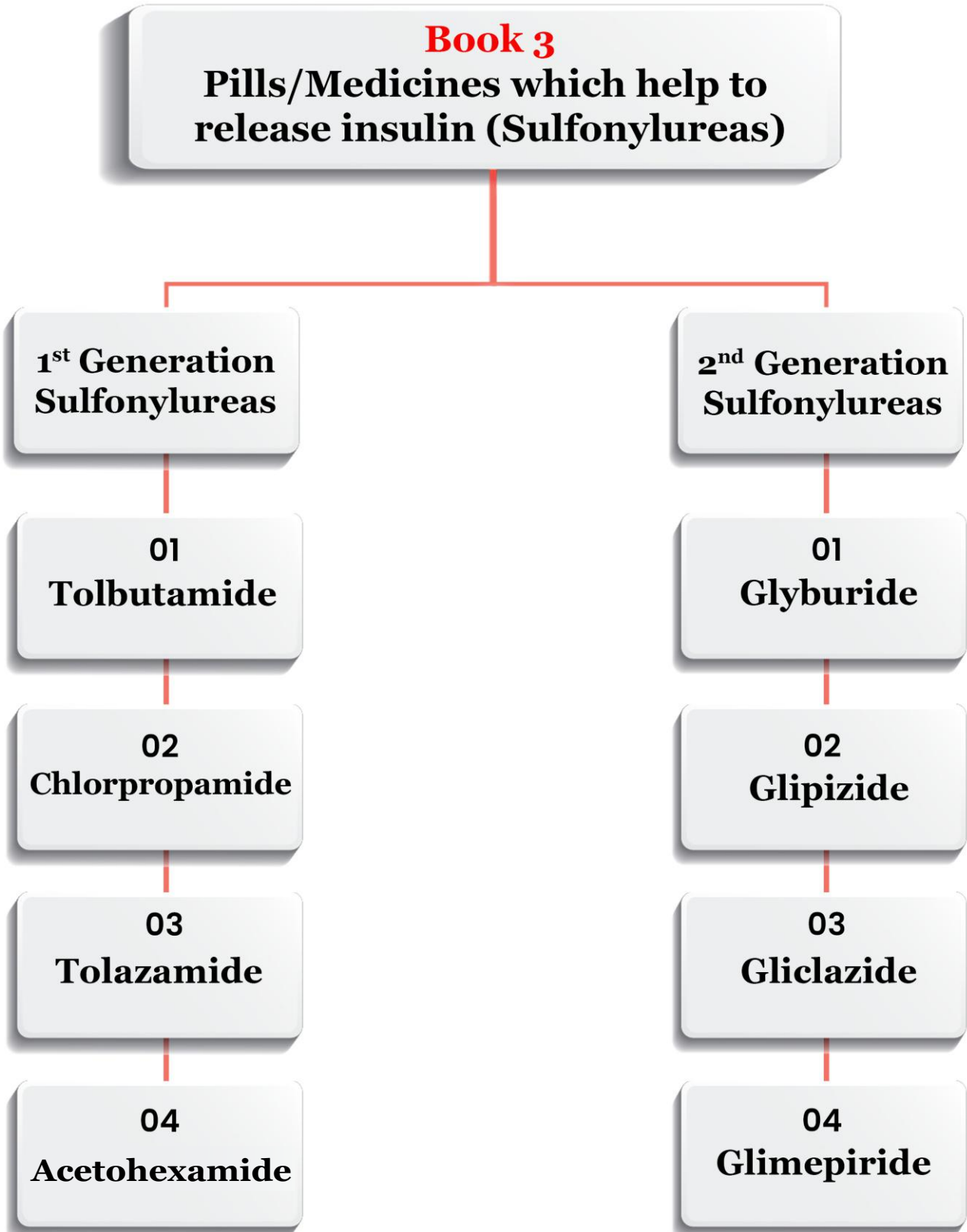
There are a number of medicines available in the market today for the treatment of Diabetes.
The main groups which these medicines belong to are:

Book-2 Biguanides

Metformin: The most famous and most used medicine and 1st medicine to start the treatment of diabetes.



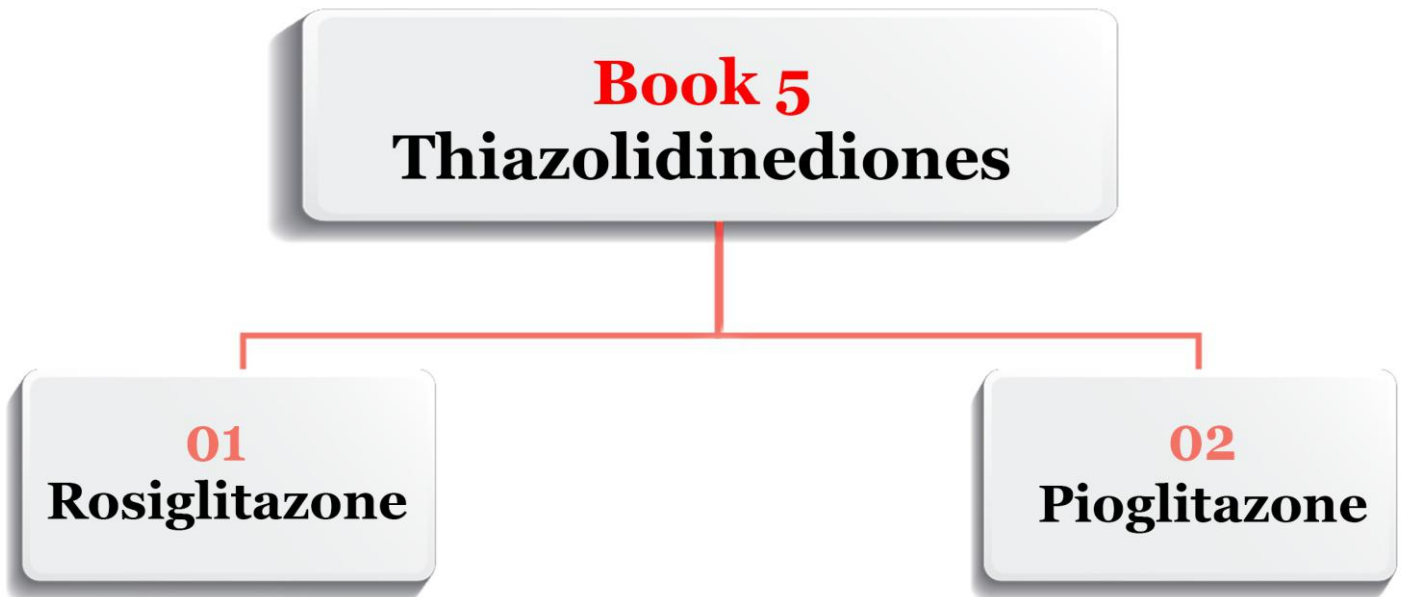
Book-3 Pills/Medicines which help to insulin (Sulfonylureas)



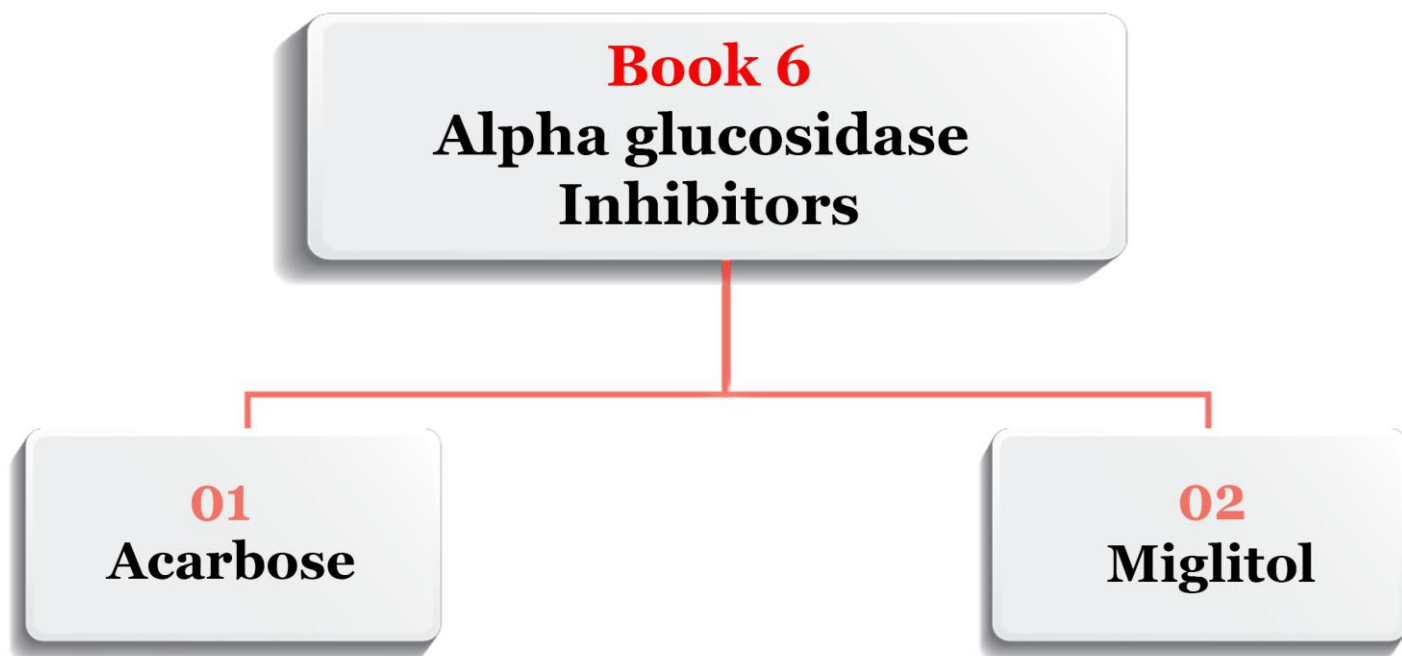
Book-4 Insulin releasing medicines (Non- Sulfonylureas)



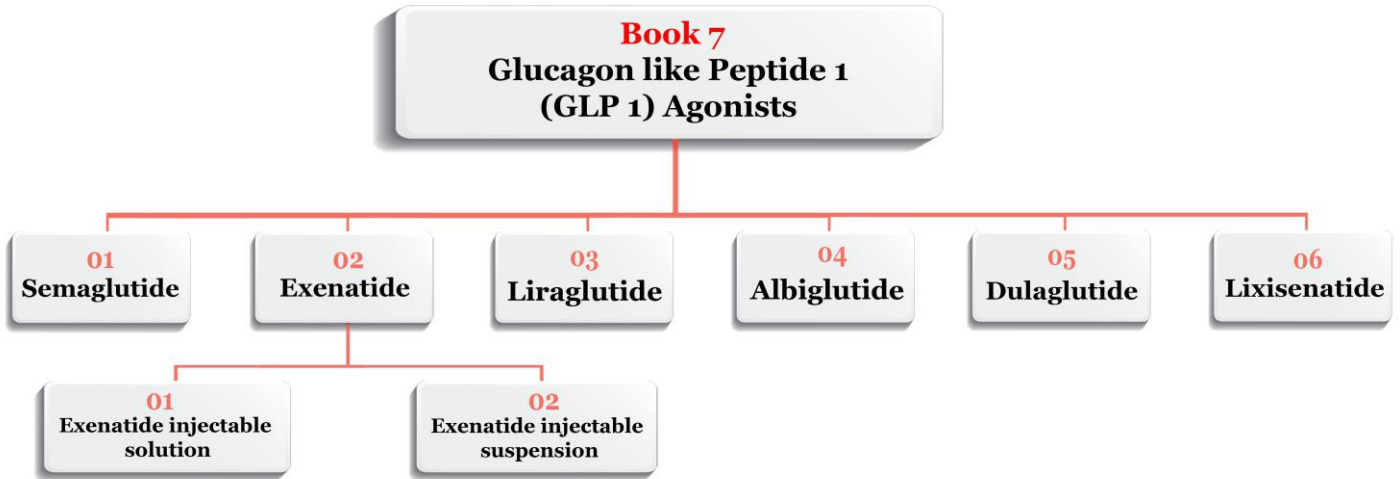
Book-5 Thiazolidinediones



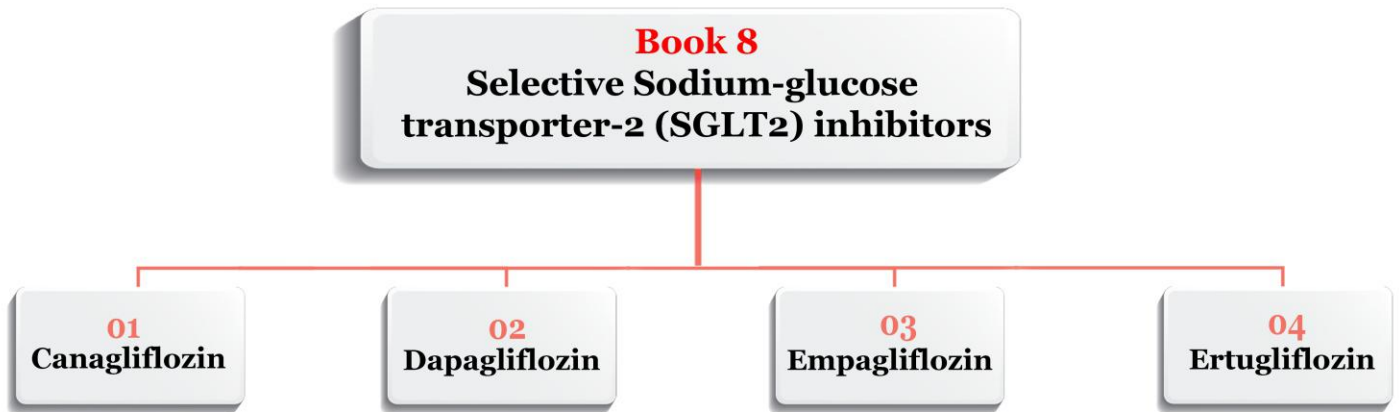
Book-6 Alpha glucosidase Inhibitors



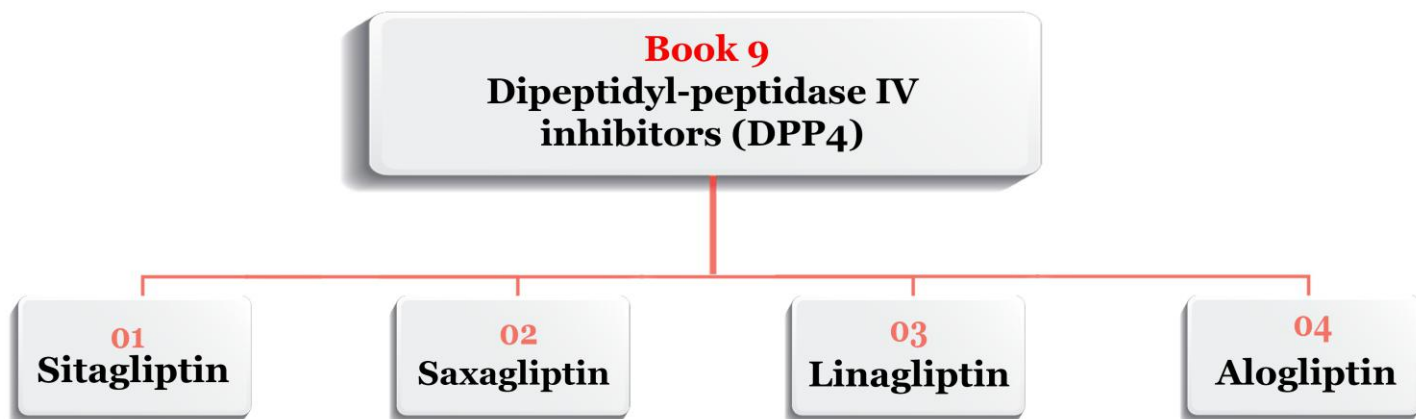
Book-7 Glucagon like Peptide 1 (GLP 1) Agonists



Book-8 Selective Sodium-glucose transporter-2 (SGLT2) inhibitors



Book-9 Dipeptidyl-peptidase IV inhibitors (DPP4)



Book-10 Amylinomimetic group

Book 10
Amylinomimetics

01
Pramlintide

Book-11 Bile acid sequestrants

Book 11
Bile acid sequestrants

01
Colesevelam

Book-12 Dopamine 2 agonist

Book 12
Dopamine 2 agonist

01
Bromocriptine

Chapter 6

There are dramatic advances in treatment of diabetes today in 2021

Think About It!

We are **NOT** perfect; we don't need to be. But we **CANNOT** quit trying either.

Every high sugar management prescription always includes:

1. Medicine(s),
2. Diet, and
3. Exercise

Without these, it is impossible to achieve our targets.

In our medical world, medicines can be given by

By mouth/oral medication

or

By Injection below our skin
(very easy to learn)



Chap6Fig1



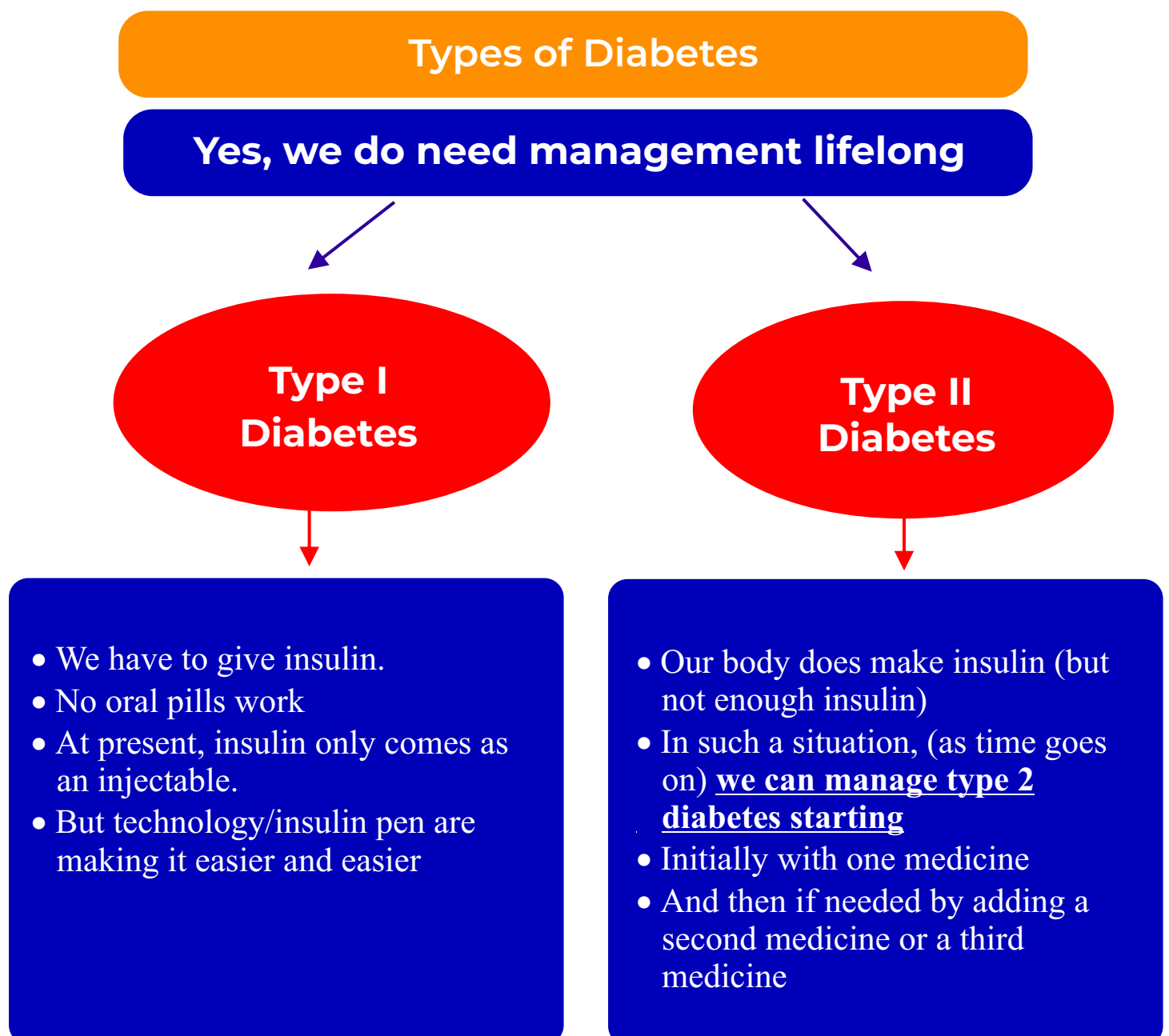
Chap6Fig2

Chapter 7

Type 1 vs Type 2 Diabetes

Think About It!

We were always scared of needles and injection needs some degree of training so that it does not lead to any infection on the injected place. We have to follow the sterile techniques that do not lead to any infection of the injection sites.



Chapter 8

How do we decide less dose or more dose of medicines

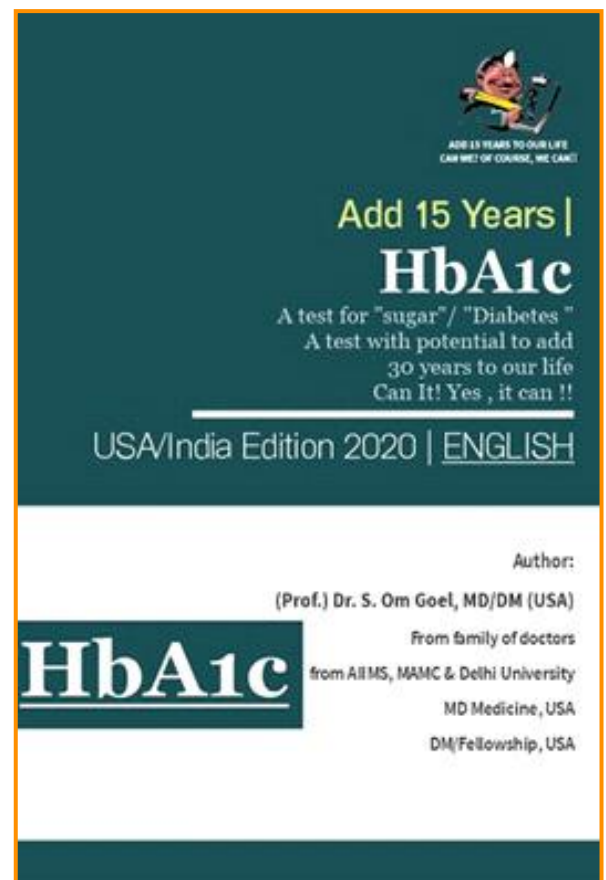
Think About It!

Our blood sugar changes all day based on

- *Our meals,*
- *Level of activity etc.*
- *HbA1c remains stable over three months.*

How do we decide less dose or more dose or combination of medicines?

I. We actually use HbA1c as our guideline for the treatment of diabetes.



Chap8Fig1

II. We set up a **target for HbA1c** in diabetic management and we want that the **HbA1c always remains 7 or less than 7.**

HbA1c < 7

III. **If we met our target**, we can lower the dose.

Start with one medicine, if blood sugar is not very high

IV. **If our HbA1c is high**, then we can give the increased dose or add a 2nd pill or add even a 3rd pill.

Start with one medicine, Add a second medicine, if needed And add a third medicine, if necessary

Chapter 9

Early diagnosis and early treatment: an absolute necessity in 2021

Think About It!

Every mom knows how her baby will start walking around in 1 year of age.

Every physician knows how to diagnose diabetes (called Prediabetes) year before you have any “symptoms”.

Actually, if we can diagnose Diabetes, even before it happens to us (called as Prediabetes), we can really delay complications as mentioned and it will be a very wise thing to do.

Most important thing we have to understand is that if medicines are taken early in the diagnosis of high blood sugar/diabetes then it can delay complications related to diabetes by

