

Edition 2024| English



**+ TELEMEDICINE +**

*Can we all live up-to 85 years in India!  
Not in 1980, but today in 2023. Yes, We can!!*

**Telemedicine To Live Up To 85Years!**

**NEXT STEP LIVING LONGER BOOKS**

**Heart Heart Heart!!**

**Planned ♥ Health**

**v/s**

**Crisis ♥ Health**



Author:

(Prof.)Dr.S. Om Goel, MD/DM (USA)

From family of doctors

from AIIMS, MAMC & Delhi University

MD medicine, USA

DM/Fellowship, USA

# TABLE OF CONTENT

## Chapter 1

- 1 Our heart works 24/7. Yes, it does!

## Chapter 2

- 2 Why we should be obsessed with the health of our heart?

## Chapter 3

- 3 Our best hope is preventing heart attack

## Chapter 4

- 4 We cannot afford to have heart attack in this day and age in any country, more so in India

## Chapter 5

- 5 Before reminding what to do, let us define, how things are different in U.S.?

## Chapter 6

- 6 We should start screening our heart at age 30

## Chapter 7

- 7 Does age 30 sound too young? Yes, it is!

## Chapter 8

- 8 Three tests for the well-being of our heart—very simple and life-saving!

## Chapter 9

- 9 Why these three simple, life-saving tests?

## Chapter 10

- 10 Planned Health is need of the hour



# Chapter 1

## Our heart works 24/7. Yes, it does!

### **Think about it**

*We all know if our heart arteries get blocked, we are at very high risk of the heart attack.*

*We understand that, but heart arteries are really the most important arteries in our bodies or the tubes which supply blood to our heart (**Why?**).*

*Just **think about it**, whenever arteries start getting blocked, it is a deposition of sticky cholesterol in our arteries forming plaques.*

*It **happens in the heart** and it happens **everywhere in our body**. It **happens in our kidneys**, it happens in our brain,*

*but **it is only in the heart if there is a sudden blockage** of a small branch of artery it leads to sudden electrical short circuiting and then whole heart fibrillates and cannot pump and we lose our life in 5 minutes.*

*Yes, **in brain there can be a blockage**, we **can have a stroke** but we do not die.*

*Same thing, **in the kidneys**, yes, a blockage happens and we start losing kidney function but again we do not die.*

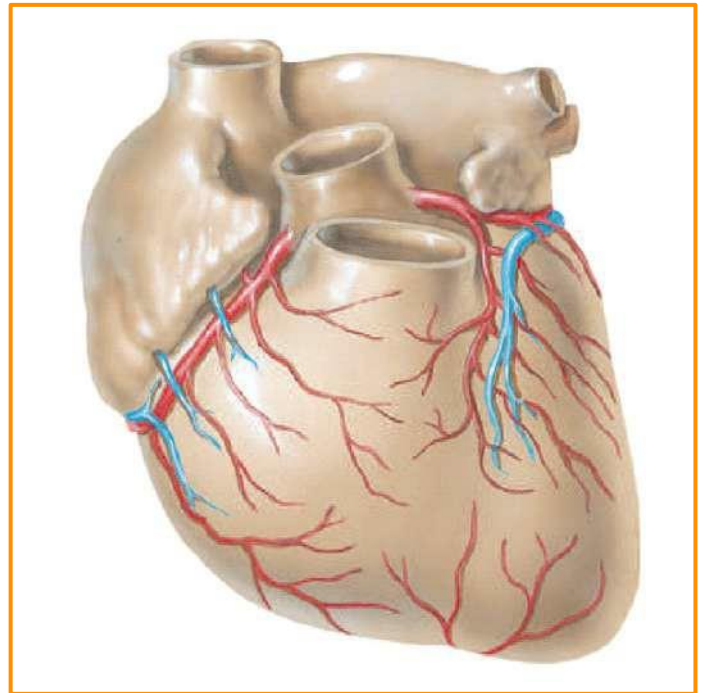
### **Think about it**

*Brain and kidney, as soon as we realize the damage is happening we can do management and recover*

*Our brain functions*

*Or even kidney function*

*(if we get very timely medical attention).*



Chap1Fig1

*Even for heart functions—we do not end up losing our lives in just 5 minutes (if we get proper medical attention).*

**Our body needs oxygen and food and our heart is no exception for that.**

Every cell of the heart also needs food and oxygen.

**Important fact is** that just **like every part of the body,**

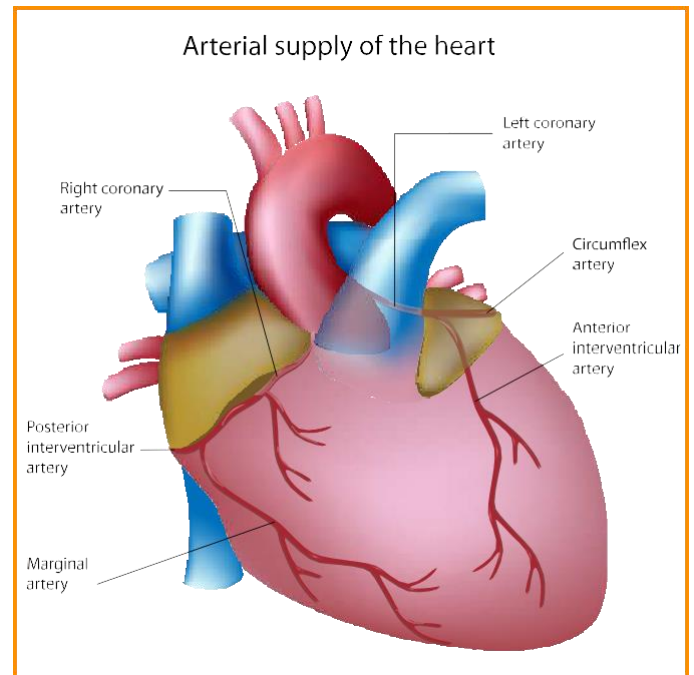
- a) heart has its own blood supply and,
- b) it gets its blood supply through two arteries which, eventually become three arteries
  - I. Aorta
  - II. Left Coronary Artery
  - III. Right Coronary Artery, and,
- c) those three arteries **independently supply** each and every part of the heart and, take food and oxygen to every part of the heart.
- d) In case of the heart, heart has two arteries, it becomes three and all three of them are the terminal branches.

**Terminal branches** mean

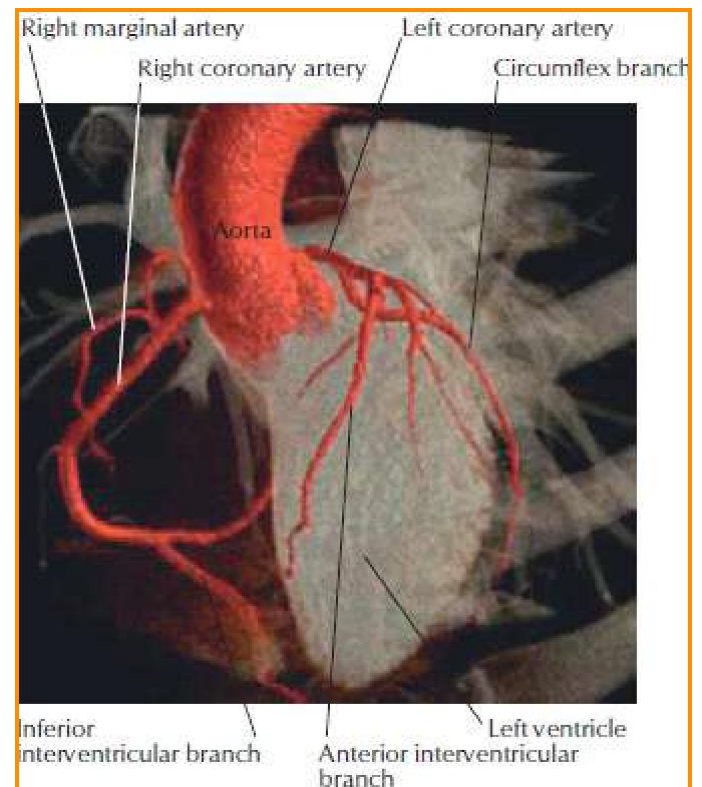
they do not communicate with each other so, each one of those three arteries supply a specific part of the heart.

**If any branch of these arteries is damaged or blocked,**

- then that part of the heart **CANNOT** get its blood supply from other arteries
- and we can have a heart attack.



Chap1Fig2



Chap1Fig3

# Chapter 2

## Why we should be obsessed with the health of our heart?

*Yes, we should be obsessed with the “health of our heart”!*

### *Think about it*

*We all know that only time we are suddenly gone, the only medical reason and basis for such a situation is the heart attack, and we can lose our life in 5 minutes, and we all know how impossible it is to get medical attention in 5 minutes.*

### So, our best hope is:



Chap2Fig1

1. To **anticipate** the risk of heart attack.
2. To go through **fundamental screening every five years (for heart)** to assess the status of our heart.
3. To obviously do everything to **maintain health of our heart** that is actually the best approach.

# Chapter 3

## Our best hope is preventing heart attack

As a MD/physician,  
Medically, and Statistically speaking,

### 1. Question is why our heart is most important?

The answer is,

if even one single small branch of the artery becomes blocked by plaque or cholesterol (then it can damage a part of the heart) and we can have a heart attack and we may lose our life in minutes.

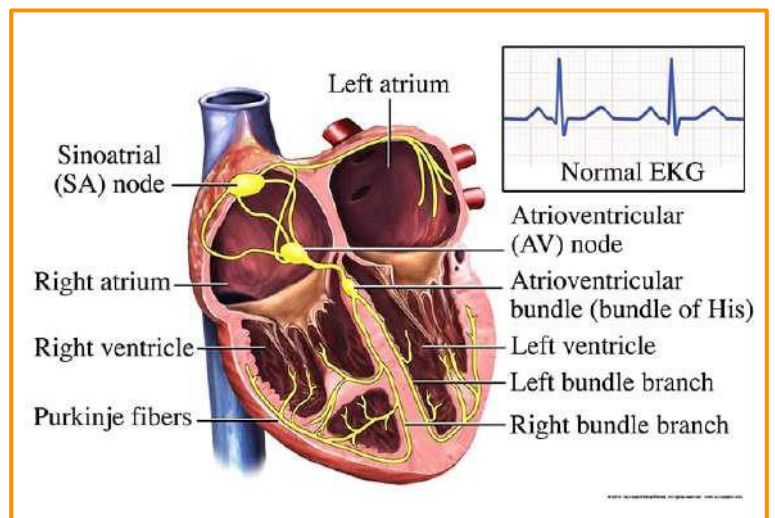


Chap3Fig1

### 2. And the Question is why our heart does not work even though only a small part of the heart is affected?

The answer is,

our heart is electrical and, if there is a short circuiting of the electrical wires in the heart and, the heart kind of starts beating irregularly (happens in heart attack) and, the heart is not be able to function as a pump.



Chap3Fig2

### **3. The Question is** **heart is a muscle, what is its most important function?**

**The answer is,**

besides pumping food and oxygen into all of the body, **to pump food and oxygen to the brain.**

And we all know brain is so important for us.

If our brain is gone,

we are gone.

That is why we do **CPR (Cardio Pulmonary Resuscitation)** also, in which, we, with our hands, pump/compress our heart and force the blood into the brain.



Chap2Fig3

# Chapter 4

## We cannot afford to have heart attack in this day and age in any country, more so in India

### Think about it

If we have to take our family members to the hospital,

we all know, it will take an hour or more,

in heart attack minutes count, whether we live or die.

**We all understand that we cannot afford to have a heart attack.**

**We specially cannot afford to have heart attack in India**



**INDIA & SEVERAL OTHER COUNTRIES**

Chap4Fig1

- a) because it is almost impossible to get medical attention within minutes,
- b) because of the **traffic** and because of a **huge number of vehicles** on the road and,
- c) because nobody is tuned to **ambulance sounds** to provide you **passage in case of even an emergency.**

**In other words, there is really no good system to get urgent medical attention like that available in most of the western countries.**



# Chapter 5

## Before reminding what to do, let us define, how things are different in U.S.?

### 1. First thing in USA, awareness is huge.

Doctors are also very aggressive and proactive.

### 2. Money is always a huge factor,

in this case, insurance does pay everything for the medical treatment of the patients.

### 3. Insurance pays, not only the hospital treatment,

insurance also pays for your evaluation by your physician, if you have what we call the “red flags” or the “danger signs”.

### 4. And in USA,

insurance also pays for every year physical examination and gold standard blood tests.

### 5. Doctors are highly trained

in figuring out any so-called red flag signs or danger signs (which we may not realize ourselves).

### 6. Even if we have a heart attack,

then ambulance is available within minutes.



Chap5Fig1

**7. The ambulance staff in USA is also**

highly trained and highly paid.

**8. Technology in ambulance itself is very advanced.**

**9. Technology helps us to connect with the M.D. doctor in the emergency room.**



Chap5Fig2

**10. Emergency care really start at our doorstep (in coordination with M.D.)**

# Chapter 6

## We should start screening our heart at age 30

### **Think about it**

*I worry about diabetes, blood pressure, for myself and family, but most importantly I worry about heart and sudden death.*

*I do have a huge family in Delhi NCR where I was born and grew up. (In our generation, we all used to have big families and joint families).*

*And we all had arranged marriages (still do) and we usually marry into a family which is also big in our generation, so we end up with lot of relatives and several generations.*

*And, in my home in India, four generations live together, though on independent floors of the home.*

**Answer is, we have to anticipate the health of our heart.**

**We have to know whether we are at risk of having a heart attack in near future.**

To be honest,

- a) Considering everything,
- b) considering every situation,
- c) considering all the factors and what is happening today in Indian communities.

**I will highly recommend that we start screening our heart at age 30.**

# Chapter 7

## Does age 30 sound too young? Yes, it is!

### Think About it

*We are usually healthy*

*and statistically the risk of having heart attack is almost NIL at this age.*

*Believe it or not, one reason of my huge concern is that we are NOW having heart attacks in the youngish population that is in 40s, 50s of age.*

### Think About it

*There was a huge story in the Calcutta edition of the newspaper “Times of India”, few months back (in 2020) which says:*

*“1 in 4” every person in Calcutta (under 40 years of age) has heart issues*

*or at the risk of heart attack!*

*That is a huge number!*

### 1 of 4 cardio patients in Kolkata now under 40

Prithvijit Mitra | TNN | Aug 20, 2018, 07:44 IST

✉ 🖨 A- A+

**Ad**  
Buy Apollo Alpha with 30 days Money back guarantee  
Apollo Tyres



KOLKATA: Cardiac ailments are striking earlier than ever before in Kolkata. Around a fourth of the city's heart patients are now aged below 40. Of them, nearly 10% don't survive the first heart attack, said senior cardiologists.

Chap7Fig1

# Chapter 8

## Three tests for the well-being of our heart—very simple and life-saving!

For the well-being of our heart,

### We have to do three tests:

1. which are simple
2. which are noninvasive and,
3. they are relatively very cost effective also.

### These tests are:

1. **Electrocardiogram or EKG.**
2. **Ultrasound of the heart** or what we call **echocardiogram.**
3. **CT angiogram** of the heart.



Chap8Fig1

# Chapter 9

## Why these three simple, life-saving tests?

Because all these tests give us very different information and they are complimentary to each other.

With all three tests done, we have more than 99% information about our heart. We can pretty much say we know 100% of our heart.

If all three tests are normal,

then any doctor will reassure you that you cannot have a heart attack over next five years.

It just does not happen.

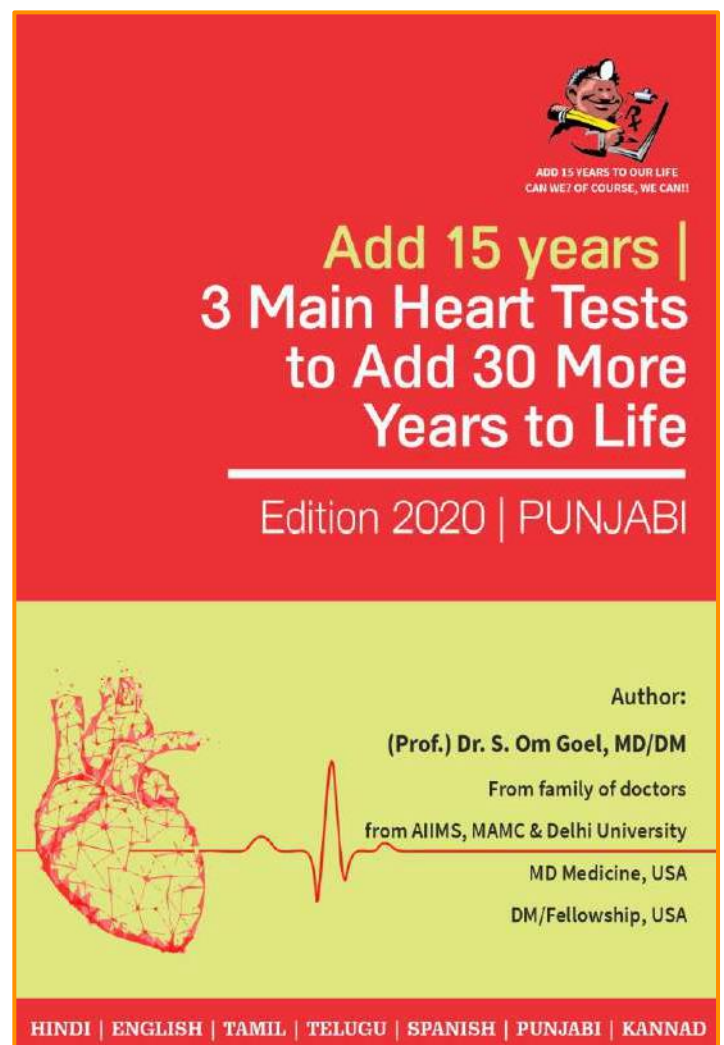
We have written a book explaining in detail about these heart tests.

Most important of these 3 tests obviously is the **CT angiogram** which tells about the **heart arteries or the three tubes** which takes all the blood supply to the heart.

The way it is done is that **we hang water or normal saline** and we **put color in that water** and we just let that **water go into our blood**.

*And then as the color in the water/normal saline goes into the blood it eventually goes to the heart also and*

*then we quickly take CT scan slices*



Chap9Fig1

*and we have excellent software now which puts together all the information making a 3-D picture of heart arteries filling up with the color and usually the blood tube should be very smooth and if there is narrowing in the tube it will show.*

This test is done under the supervision of cardiologist  
and usually cardiologist interprets the test also.

# Chapter 10

## Planned health is need of the hour

### Think About it

*Just 2 days earlier, I was having a conversation with my childhood friend and a brilliant cardiologist.*

*I mentioned about my “heart screening” delay due to “Covid environment”.*

*I cautiously asked him—  
“how about you?”*

*And, (his answer did not surprise me at all)  
he said—  
“he has already done it 3 times in past years”.*

*Please analyze the title,*

**Add 15 Years |**  
**Heart Heart Heart!!**  
**Planned♥ Health**  
**v/s**  
**Crisis♥ Health**  
*(Choice is yours)*



Chap10Fig1