

Edition 2024| English



NEXT STEP LIVING LONGER BOOKS

**Can we increase height by
3 inch in 7 days?**

In Movie, Yes! We can!!!

Just not possible- Let me explain as a M.D.



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Chapter 1

**Increase 3 Inches Height in 7 days, Just Not possible!
50 out of 50 doctors will agree, Yes!**

Just not possible Medically
50 out of 50 doctors will agree

सफ चक क य प से संभव नह है
50 म. 50 डाक्टर सहमत हयगे।



Chap1Fig1



Chap1Fig2

We can increase our height, but we can deal with its effect on our self esteem
(Counselling is the only answer.)

(If your child is noticeably short

- Yes, Growth hormone is approved
- But it is very costly & must be done under the supervision of Endocrinologist)

There is only one way to increase our height which is totally based on our continued good health & hormones our body makes.

This book covers all medical facts related to our height.

Chapter 2

Does Lifting and stretching increase height?

Stretching increase height
& weightlifting shortens height – Not Really

Our spine does have stretchable or compressible intervertebral discs.

Because of Hanging (Stretching) or weightlifting (Compressible) there is sometime fluctuation in height say (1%)

It is gravity effect, there is no actual increase or decrease in our height.

Basketball players are tall because

Only tall people go to basketball

Playing basketball does not

Make them taller

As our growth and height really based on our nutrition.

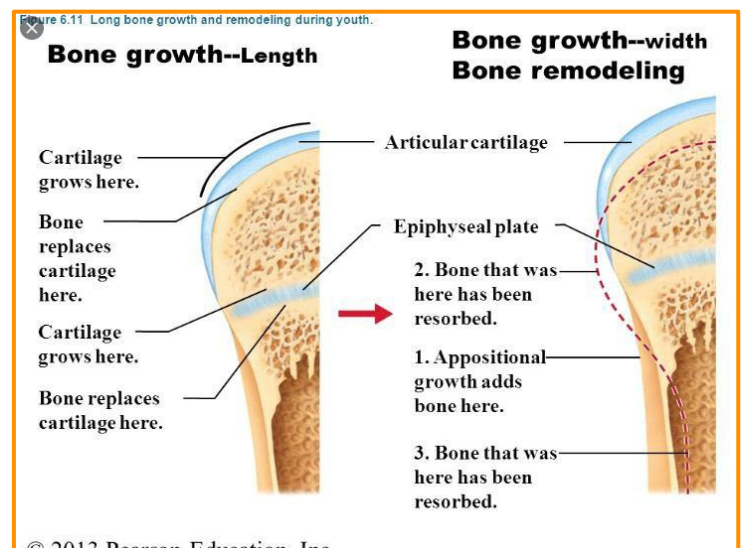
On our hormones.

Or, on our good nutritional status.

Or our not falling sick

Or not having any major illness.

Or our genetic factors

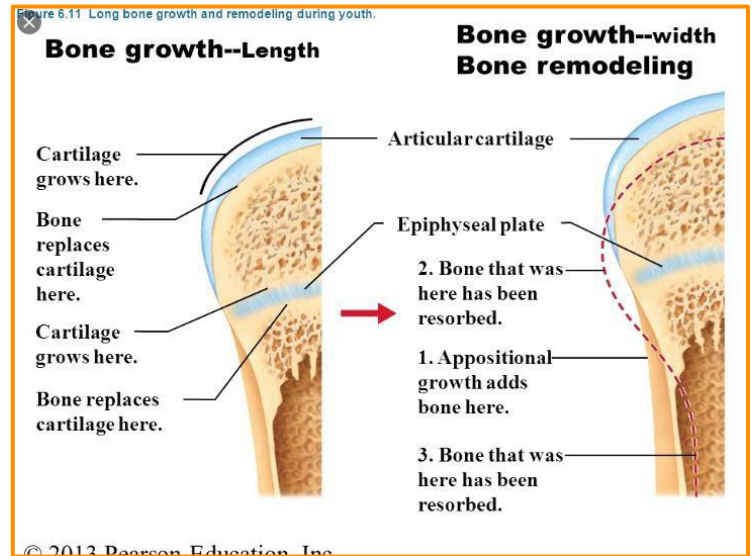


Chap2Fig1

Also, male hormones in boys influence bone growth and female hormones in women have effect on the bone growth (especially during puberty).

Once cartilages ossifies, we just cannot attain any more height.

It is medically not possible.



Chap2Fig2

Chapter 3

Does height have any genetic factor associated?

Think about it

Here is a story, all the doctors were sitting together in St. Louis and having a huge discussion.

It was our observation that all the Chinese children were taller

All their parents who came from China were short, as we all know Chinese are short.

They were saying they take the milk, there are a lot of hormones present in the milk, but the answer is, no hormone will survive when we drink it. It will be destroyed easily in our stomach that is a medical fact.

That is why we give hormone by injection and not gulp by mouth.

There are several things which comes to our mind when we think of height

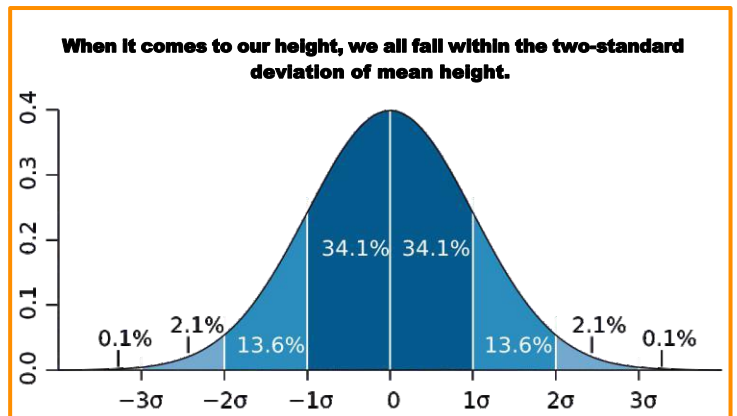
The most important factor which we try to ask and get answer either from parents or Google or various other sources i.e.

Does height have any genetic factor associated?

**Yes, height does have a genetic factor
(Usually 60% - 80%)
(Almost 150 genes are involved.)**



Chap3Fig1



Chap3Fig2

Does height have any genetic factor associated?

**Yes, height does have a genetic factor
(Usually 60% - 80%)
(Almost 150 genes are involved.)**

- and if *both parents are tall*,
- then children will be tall.

Sometimes, children can be short before they reach their puberty, but once they approach puberty, they have growth spurt, they attain full potential of their height.

Chapter 4

The Continued Good Health

*The continued good health,
is especially important factor in maximizing their growth potential and becoming taller.
ireverse is also true
if children are **under nutrition**,
And if they have any **serious illness**, it can affect their growth.*

GI illnesses affect

both height
and weight
and they affect weight more than the height, but yes, they do make
the difference.

Think about it

The children in India keep having these GI illnesses and keep falling ill because of lack of

- *clean water,*



Chap4Fig1

- *clean hands,*



Chap4Fig2

- *and clean food.*



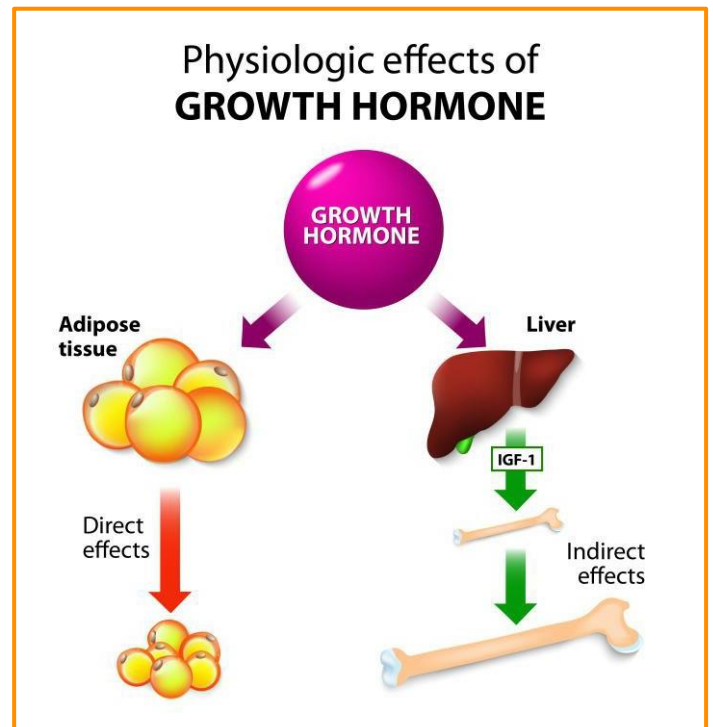
Chap4Fig3

Chapter 5

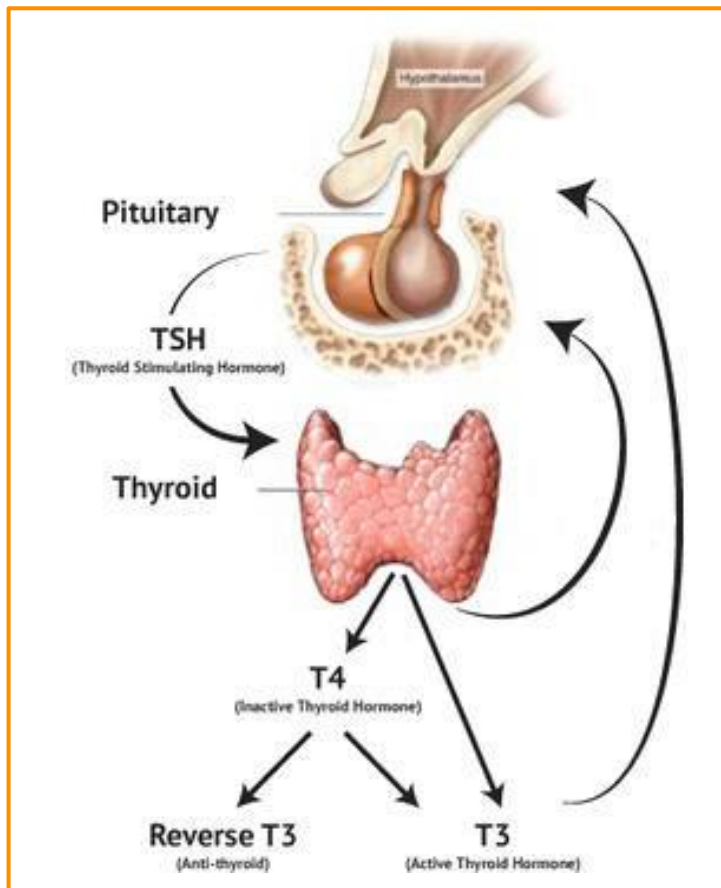
What we need for gaining our full potential of height?

Two most important hormones for our growth and gaining height are:

1. Growth hormone



Chap5Fig1



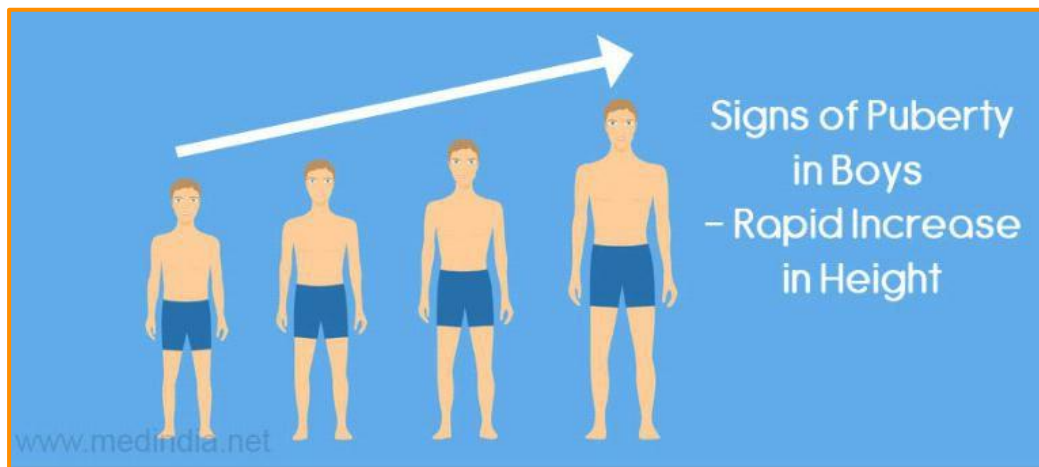
Chap5Fig2

2. Thyroid hormone.

They both are well known hormones into our growth.

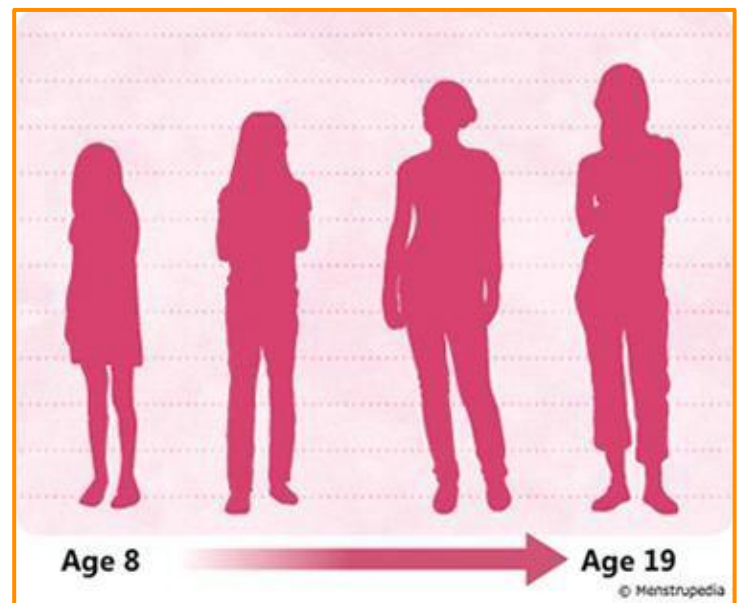
Biology of the linear growth (Linear growth means growth in height) It depends upon lot of the hormones.

3. Insulin-like growth factors.
4. Androgens (Male Hormones)



Chap5Fig3

5. The estrogens (Female Hormones) to promote linear growth by stimulating growth hormone and insulin-like growth factor-1 secretion, but they also lead to little earlier fusion of the growth plates and cessation of the linear growth (means our height.)
6. Body needs nutrition, proteins, and proper hormonal balance for our growth.



Chap5Fig4

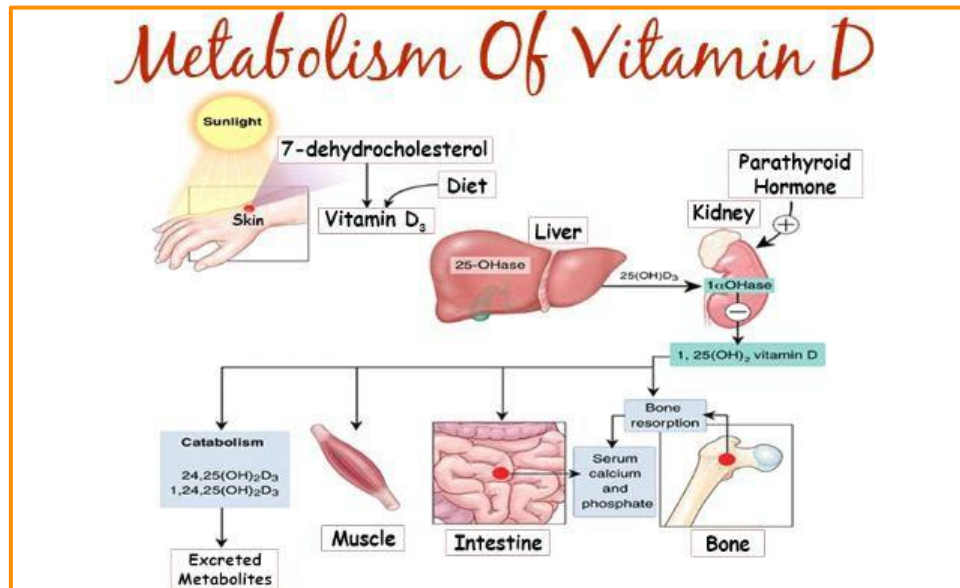
So, all these factors together affect the linear growth (height) and affect the growth plate.

7. Calcium is obviously especially



Chap5Fig5

8. Vitamin D



Chap5Fig6

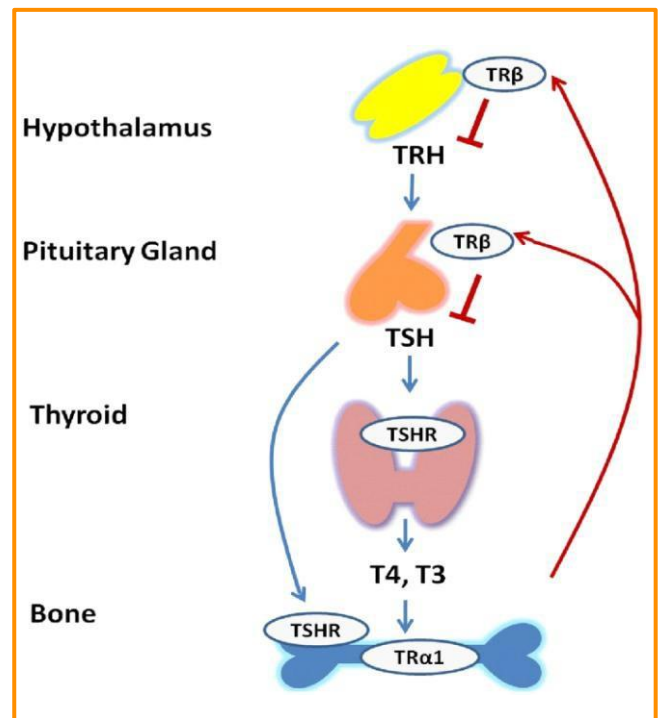
9. Parathyroid hormones are important.
(Any deficiency may affect bone growth.)

If both parents are tall, then children will be tall.

10. Genetics does influence our height.
(60% to 80%)

At least in India and China,
The childhood health issues are especially important
& it affects the growth and attaining their maximum height.

Any illness in children especially the serious illness,
will affect their growth and the lengthening of the bones.



Chap5Fig7

Think about it

We all know whenever there is a fracture, doctor places plaster bringing fractured ends close to each other and eventually our bones heal, and remodels and we are fine.

Think about it

Some studies have been performed where Indian & Chinese families moved to the US as immigrant. Their food became very nutritious, healthy & they got access to excellent healthcare, and it did influence the height of their children, so called next generation. They really got taller.

Think about it

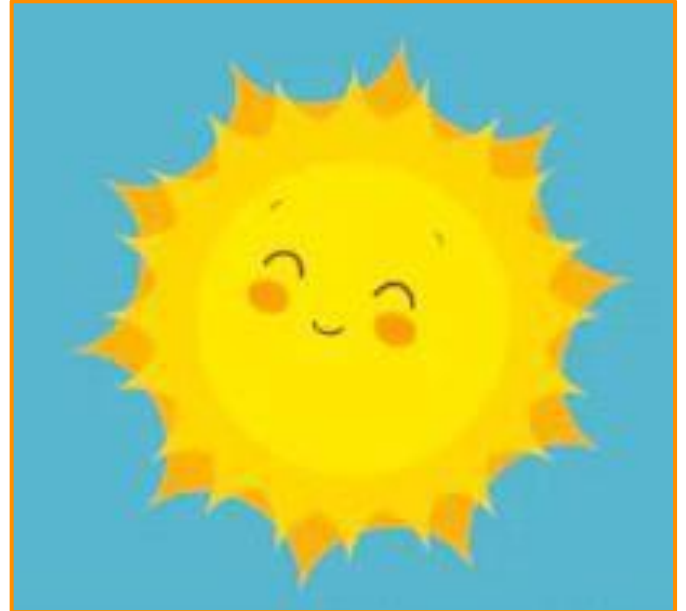
When we were young, we played outside, and we had an exposure to sun with our skin and kidneys have an important role in making vitamin D.

But currently in 2020,

Because of the more time we spent indoor, or almost all the time

we do not get enough of vitamin D.

All the children and grown-ups are deficient in vitamin D.



Chap5Fig8

*Literally, we should **keep it in our minds** & take it for granted that upcoming generation will **lack vitamin D**.*

*So, we should **consult doctors** for timely **checkup of vitamin D level and take supplements**.*

They are unbelievably cheap or say not costly at all and quite easy to compensate.



Chap5Fig9

Think about it

All these years in US, we drink milk supplements with vitamin A & D.

11. We must get enough sleep.

- As mentioned, the growth hormone is important
- and sleep has a dramatic effect on the growth hormones
- Growth hormone peaks at the highest while we are sleeping.

12. Regular Exercise helps

is so important,
it keeps us extremely healthy,
promotes our health,
increases blood circulation
and so, our good health and general wellbeing promotes growth of the bone or our overall growth.

13. Good posture and exercise.

While they do not directly affect, but indirectly maintaining healthy posture helps in minimizing, wear, and tear of the joints,

and so, our good health and general wellbeing promotes growth of the bone or our overall growth.

What we all parents need to be aware of

(So that our children gain their full potential of height)

Chapter 6

How do we gain Height?

How do we gain Height?

Usually we gain height by the growth of our long bones which are present in our arms and legs.

To be honest, Health of baby starts with mother's pregnancy & Her nutrition taken during pregnancy.

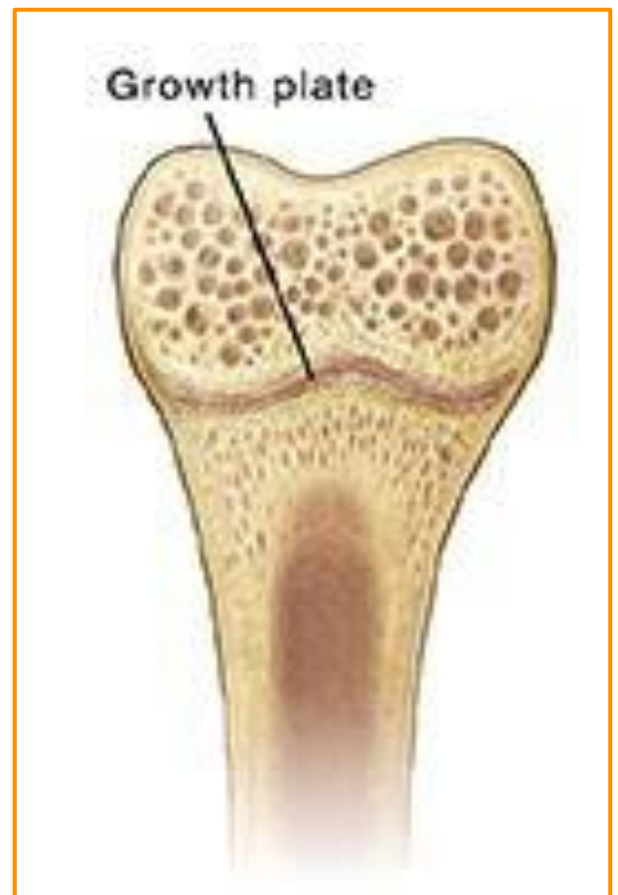
What is crucial for our bones to grow longer?

- There are cartilages at the end of the bones which we call growth plates
- And they keep growing and keep adding bones towards the ends,
- So that bones keep increasing in length during the childhood.
- When the boys and girls attain their puberty,

Growth spurt happens & final height is attained.

In Late teens, we complete our growth spurt

Growth plate cartilage is replaced by the bone and at that time no further growth of the bone is possible.
In other words, we cannot gain anymore height.



Chap6Fig1

Chapter 7

Medical Facts about Height

Think about it

One must understand, that throughout our life, bone is being constantly reabsorbed and new bone keeps forming all our life.

Before we are born, all the bones in the mother's womb are made up of cartilage and once a child is born,

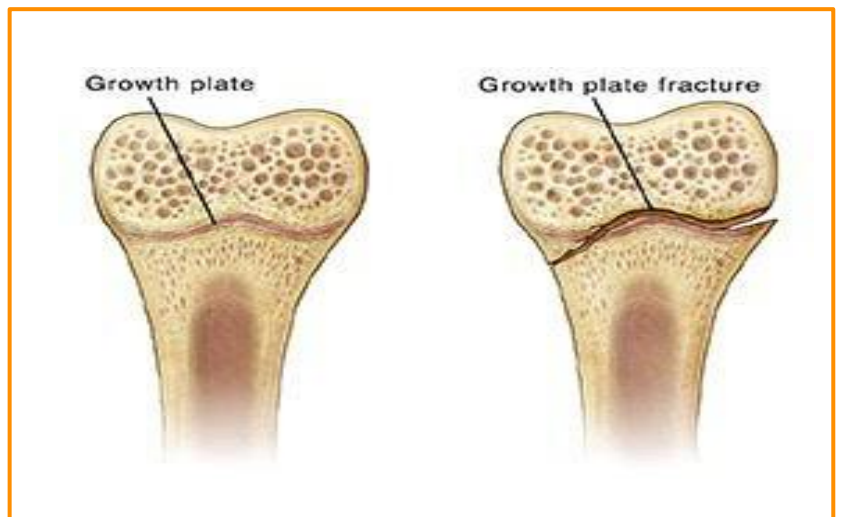
*they are transformed into bone by the process we call the **Ossification**.*

Bone Age

*Usually, when these bones close in late teens and we can tell it by the x-ray studies, we call that age as “**the bone age**” of young individual (boy or girl).*

Please understand this

- Once the growth plates are closed,
- There cannot be any increase in the length of the bone
- & no increase in height anymore.



Chap7Fig1

Please understand

- Bone can become stronger.
- Yes, they can become thicker,
- But they cannot increase in length.

Chapter 8

Healthcare in India & China as compared to US

Think about it

Some studies have been performed where Indian & Chinese families moved to the US as immigrant. Their food became very nutritious, healthy & they got access to excellent healthcare, and it did influence the height of their children, so called next generation. They really got taller.

As a physician,

I will say that most important factor we must consider is the continued health of the children.

As soon as children are not feeling good, we need to quickly consult a pediatrician and manage as quickly as possible.

Because of their low body mass, & small size children are overly sensitive to any illness.

Chapter 9

Gaining Height “Rule of 5”

After baby is born:

First 2 years growth is fast and then slows down

(From 4 years to 10 years of age we can follow rule of time We gain 5 cm in height every year)

Rule of 5:

5cm/year - Age 4-5 years

5cm/year – Age 5-6

5cm/year – Age 7-8

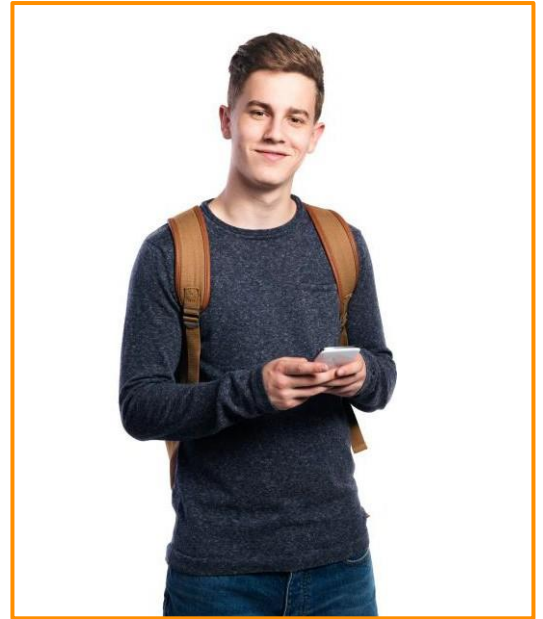
5cm/year – Age 8-9

5cm/year – Age 9-10

Late teens during puberty

There is growth spurt & height gain at puberty

(Under the effect of both our hormones & growth hormones)



Chap9Fig1



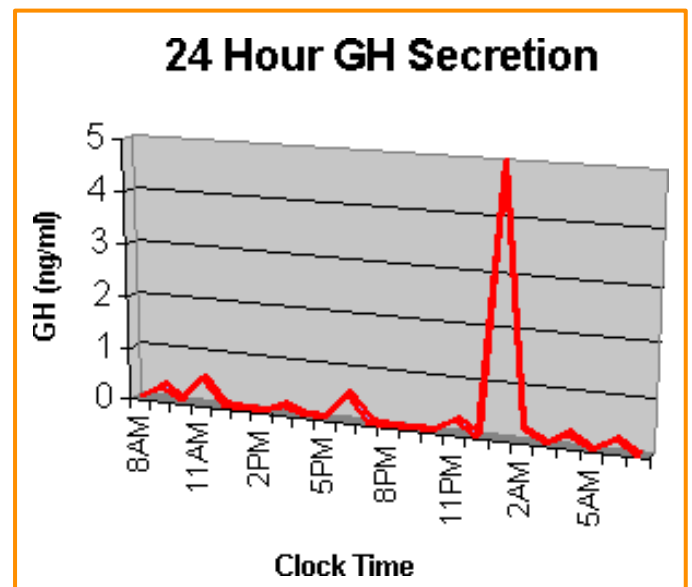
Chap9Fig2

Chapter 10

Medically speaking short structure does not affect psycho – social function

(Medically speaking short structure does not affect psycho – social function.)

If children stay short like below standard deviation, **top medical bodies in US have approved growth hormone**, but it must be strictly done under the guidance of an **endocrinologist doctor**. As a balance of growth hormone in body is very delicately maintained.”



Chap10Fig1

Chapter 11

Principal mechanism for bone grows

Principal mechanism for bone grows.

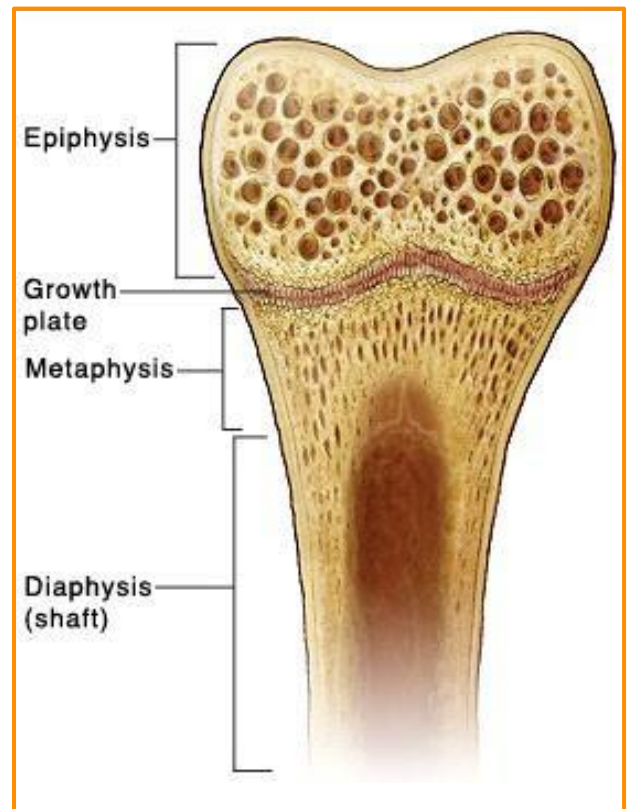
- In response to the growth hormone stimulation. The long bones grow length in the epiphyseal cartilages.

Epiphyseal Cartilage (growth plate) keeps adding bone till growth plate becomes ossified leading to Bone fusion between the shaft and epiphysis of each long bone

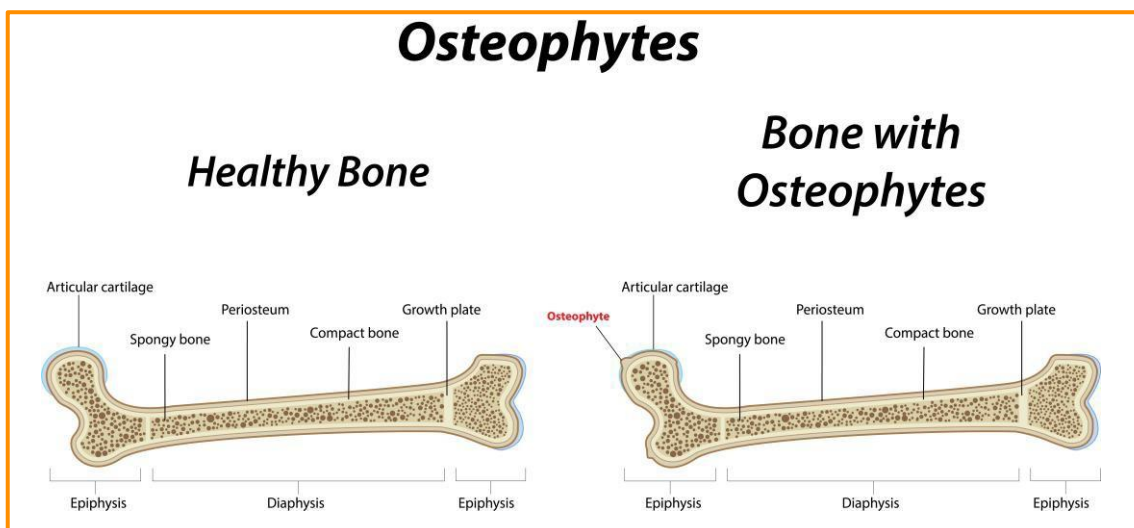
No further lengthening of the bone can occur after growth plate is ossified.

Also, growth hormone strongly stimulates **Osteoplast cells Which makes bone and are important for the bone becoming thick**. So, even if we cannot grow in length growth hormone is still important to continue for our bone to become thicker (& stronger) throughout our life.

Once growth plate is ossified (Cartilage) and bone look quite different in the x-ray.



Chap11Fig1



Chap11Fig2

Growth plates

All our long bones have what we call growth plate.

Growth plate is an area of the soft bone Cartilage at each end of the long bones.

The growth plates allow the bone to grow as the child grows. A time comes when the growth plates fuse somewhere from 14 to 18 years old.

After that it is not just possible to gain height anymore.

No stretching or hanging will help.

All advertisement saying, increase 3 inches in just 7 days, which is not more than just playing with parents or individual's emotions.

100 out of 100 doctors/M. D's/ Physicians can verify this fact.