



Sharanabasaveshwar Vidya Vardhak Sangha's
Sharanabasaveshwar
College of Science, Kalaburagi
Karnataka 585 103



"Student Webinar"

On

"Vitamins"

Conducted By

Department of chemistry

Date: 2-April-2020

Time:1PM

Through- Zoom Application

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Class-BSc 6th Sem (CBZ)

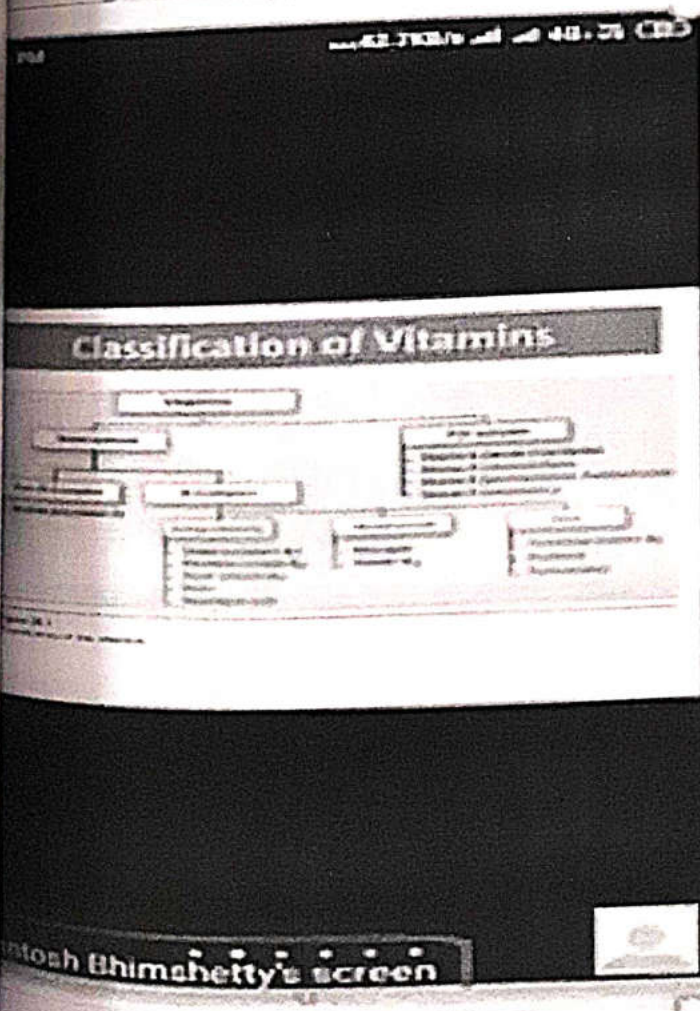
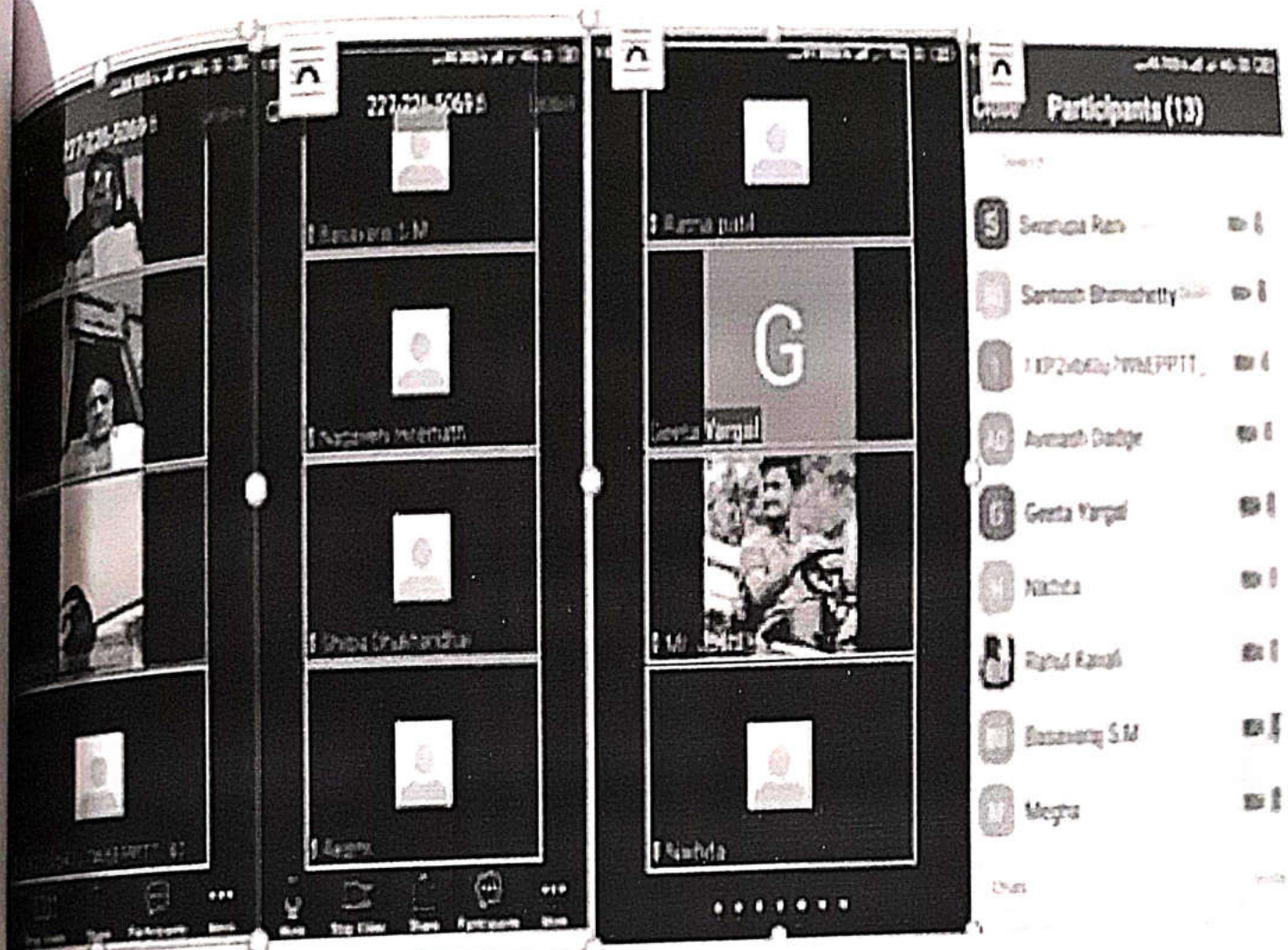
Guided by

Dr. Swaruparani

Head of the Department

Dr. R K Shikkargol

Head
Department of Chemistry
Sharanabasaveshwar College of Science
KALABURAGI



Santosh Bhimshetty is inviting you to a scheduled Zoom meeting.

vitamins
Topic: Santosh Bhimshetty's Personal Meeting Room

Join Zoom Meeting
<https://us04web.zoom.us/j/2272265069>

Meeting ID: 227 226 5069

SPRING



VITAMINS.

Vitamin is a group of Organic Substances that are required in the diet of Human and Animals for normal growth, maintenance of life.

Vitamins can not be Synthesized by the body. So we have to take in the form of food.

Classification of Vitamins.

1. Fat Soluble
2. Water Soluble

1. Fat Soluble Vitamins :-

These vitamins are found in fatty foods such as animal fats, fish and Dairy foods.

It includes vitamins are :- A, D, E, K.

They are stored in liver and adipose tissue.

2. Water Soluble Vitamins.

These vitamins are found in Citrus fruits, eggs, fish, milk, legumes and green vegetables.

It includes vitamins are as follows :-

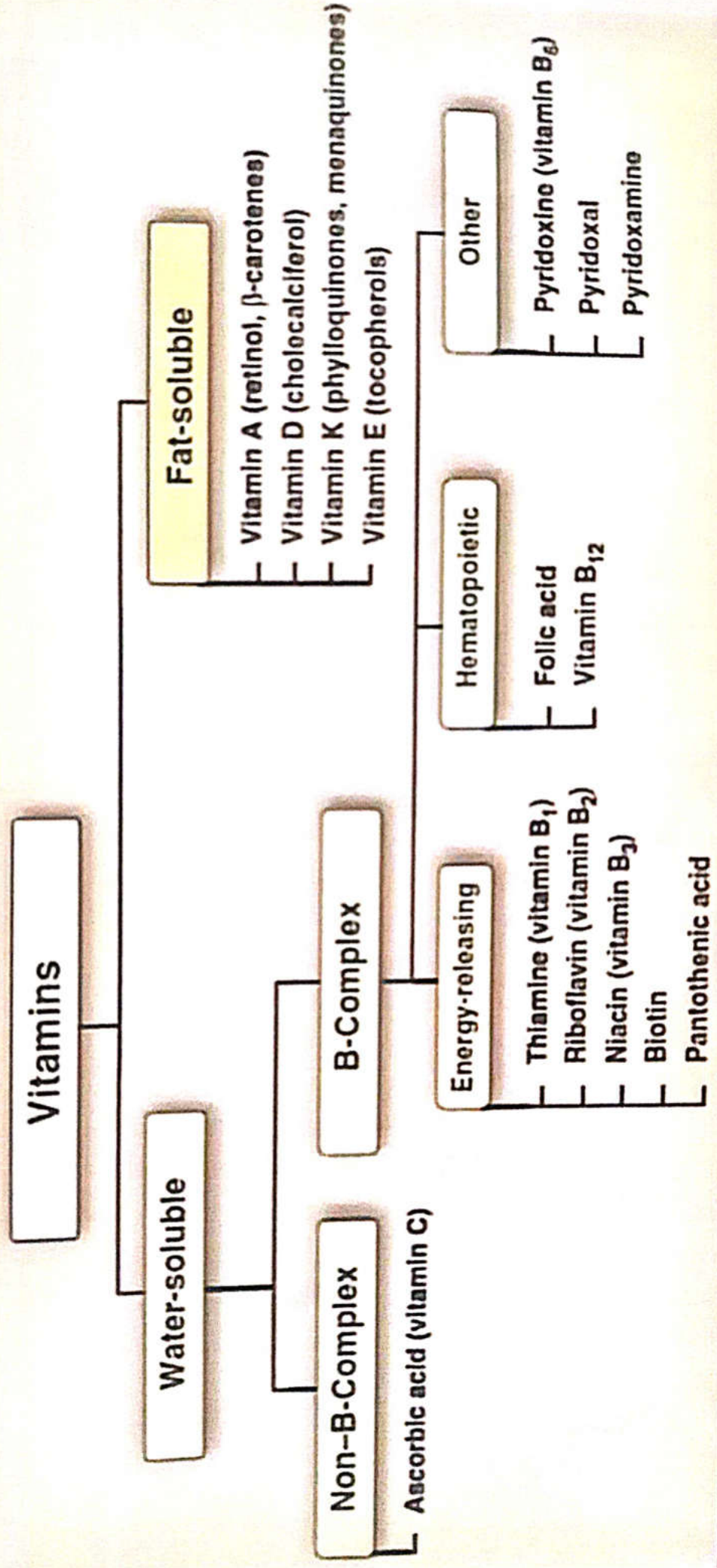
Vitamin B. [B₁, B₂, B₃, B₅, B₆, B₇, B₉ and B₁₂] & also Vitamin C.

Water Soluble vitamins must be supplied regularly in diet because they are readily excreted in urine and can not be stored in our body.

Except :- V_{B12}.

Because V_{B12} is necessary for the formation of Mature blood cells.

Classification of Vitamins



Biological Importance of Vitamins :-

1. Vitamin A.

Vitamin A is a group of unsaturated nutritional organic compounds that includes Retinol, Retinal, Retinoic acid and Several Provitamin A Carotenoids.

It is important for growth and development for the maintenance of the immune system.

Vitamin A is needed by the Retina of the eye in the form of Retinal.

Retinal Combines with protein Opsin to form Rhodopsin, the light-absorbing molecule necessary for both low-light and Colour vision.

- Retinoic acid is an important mediator of Several biological processes in the body Such as. Embryogenesis, reproduction and immune-mediated anti-inflammatory effects.

Deficiency Causes :-

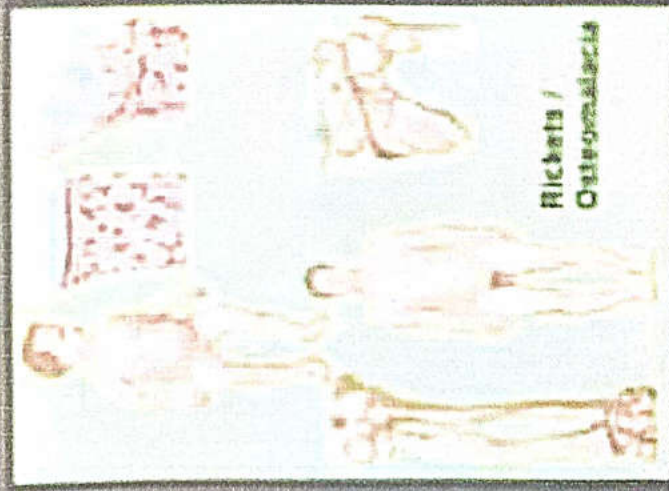
Liver disorder.

Hardening of Cornea of Eye.

Night Blindness.

VITAMIN A DEFICIENCY.

One of the effects of this deficiency is night blindness. Another is xerophthalmia. A person suffering from this deficiency has difficulty in climbing stairs and in walking. There is a pain of the rheumatic type on bones and legs and the lower part of the back.



Vitamin B₁

Vitamin B₁ helps the Body's Cells change Carbohydrates into energy.

The main role of Carbohydrates is to provide energy for the body. Especially the Brain and Nervous System.

It plays a role in Muscle Contraction and Conduction of Nerve Signals.

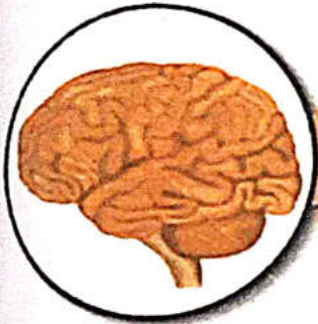
Vitamin B₁ is absorbed in the intestine and most of the Exceeded product of its Metabolism products are excreted in the urine.

Deficiency Causes :-

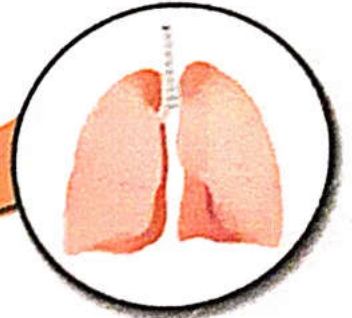
Loss of Appetite.

& Retards growth

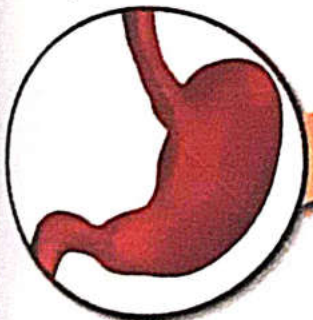
Vitamin B1 deficiency



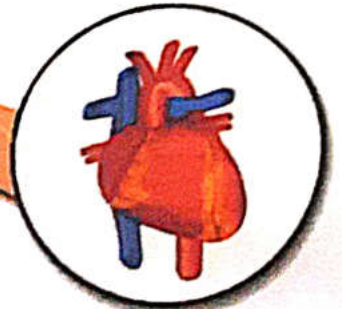
Fatigue,
Depressions,
Memory impairment,
Brain dysfunction,
Central nervous disorders



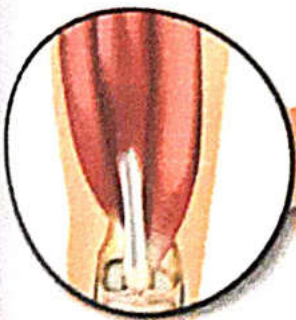
Difficulty in breathing



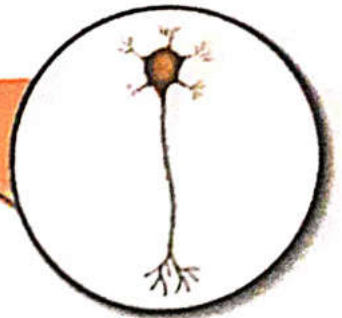
Anorexia,
Indigestion



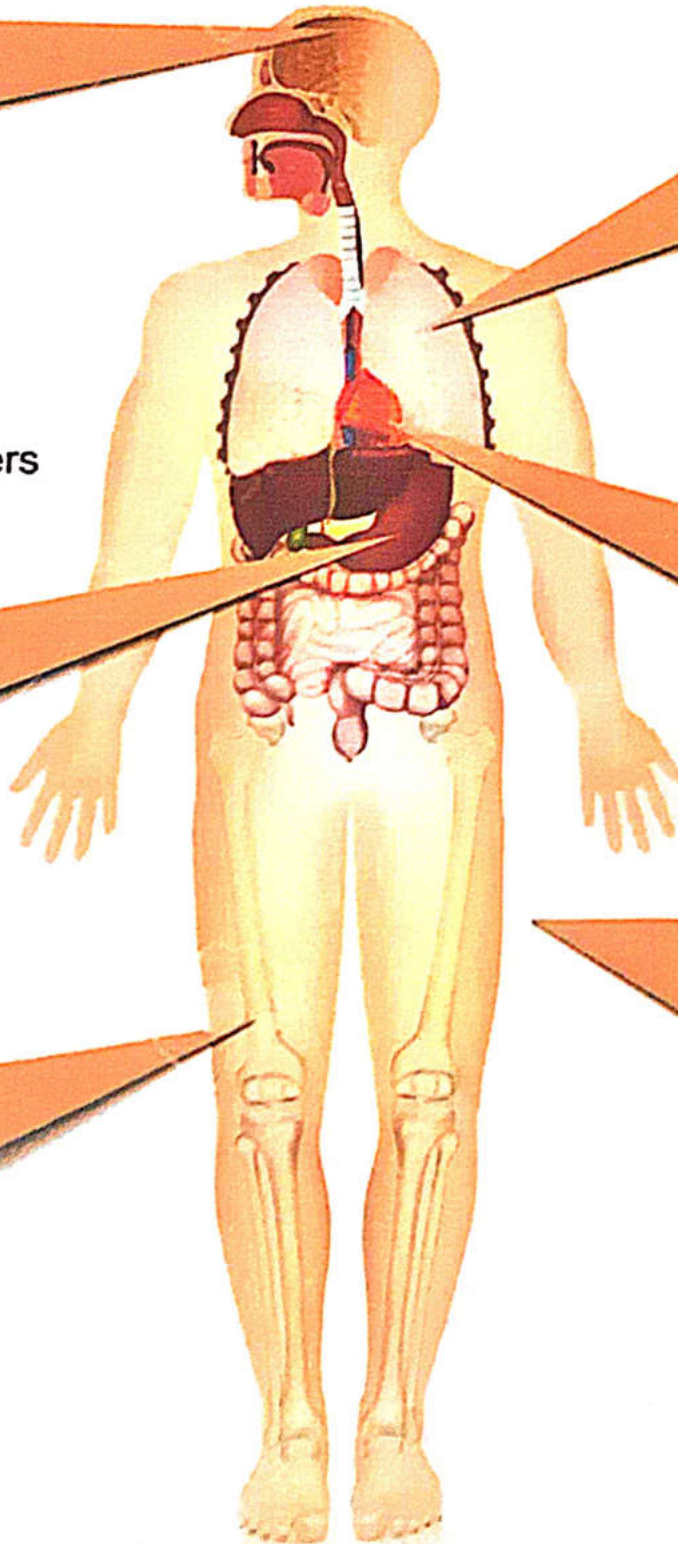
Fast pulse,
Metabolic acidosis



Inefficiency



Beri - Beri disease



Vitamin B₂.

It helps in Break down proteins, fats and Carbohydrates

Vitamin B₂ is a water soluble Vitamin. So it is dissolved in H₂O.

Riboflavin helps to Convert Carbohydrates into Adenosine Triphosphate (ATP)

ATP produces energy as the Body requires it.

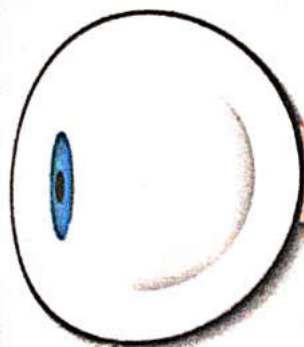
The Compound ATP is Vital for Storing Energy in Muscles.

It improves Blood Glucose levels.

Deficiency Causes :-

Digestive disorders and burning Sensation of the Skin.

Vitamin B2 deficiency



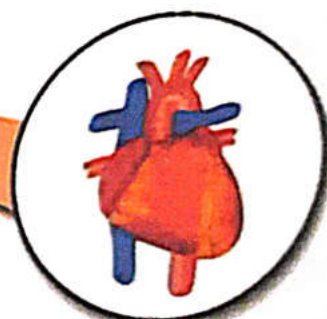
Blurred vision,
Cataract



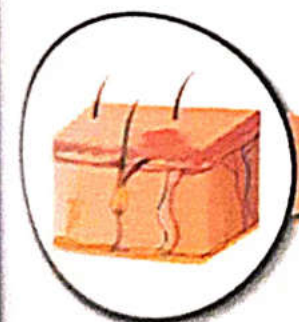
Fatigue,
Headache



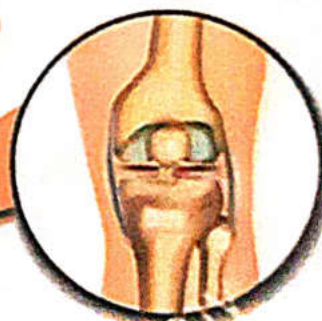
Gingivitis
Sore throat



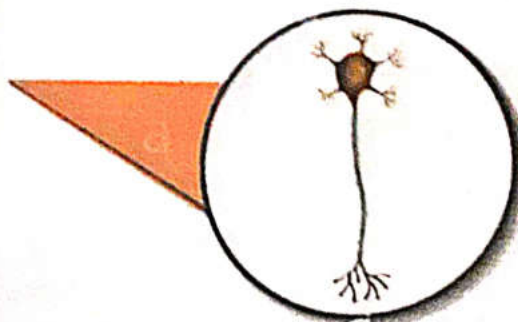
Anemia



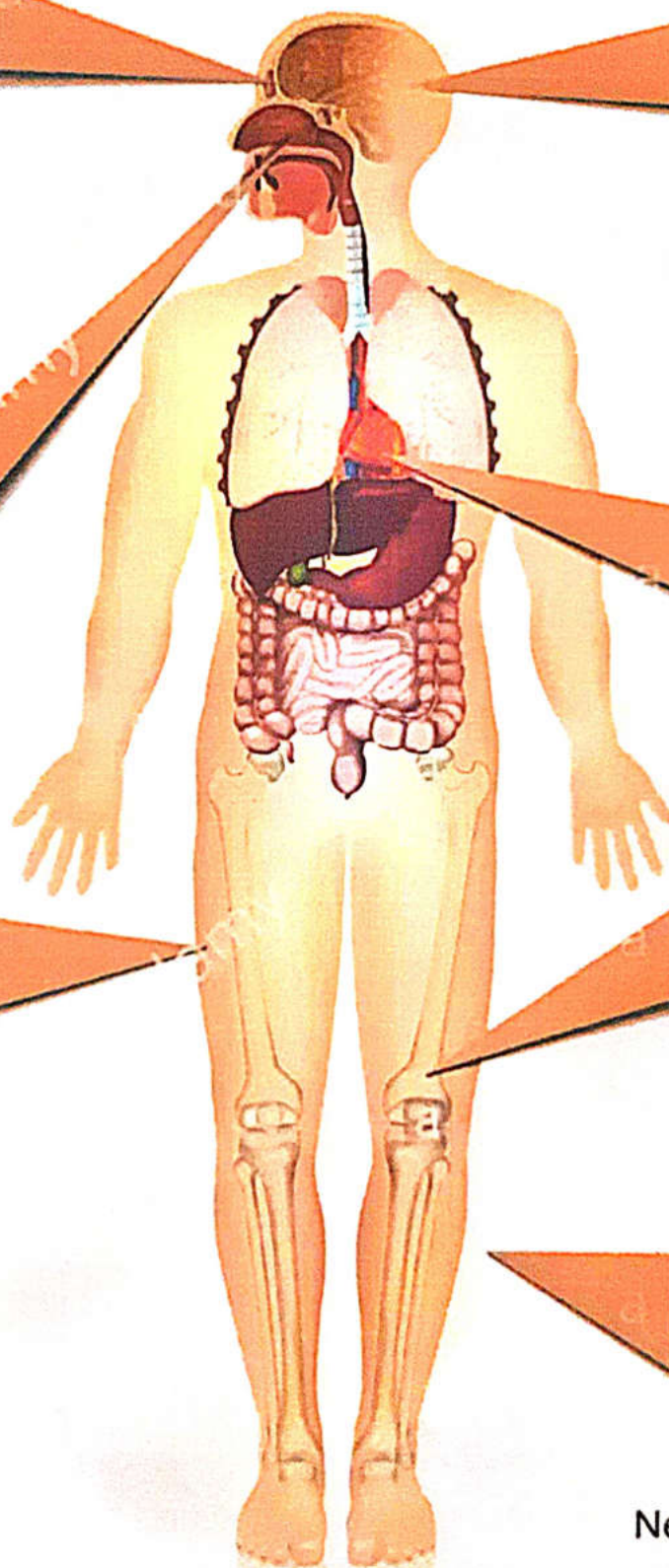
Inflammatory
skin lesions,
Rough skin



Growth problems



Neurological disorders



Vitamin B₆.

Vitamin B₆ Make antibodies which are need to fight many disease.

It helps in production of hemoglobine., which carries oxygen in the red blood cells to the tissue.

It Break down proteins, which keep blood sugar in normal.

It helps in proper functioning of Nervous System.

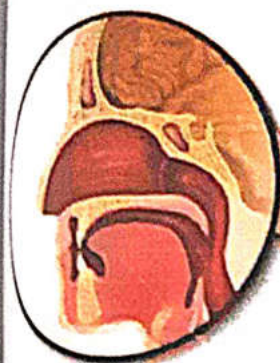
It maintain proper balance of Sodium and phosphorous in our Body.

Deficiency Causes :-

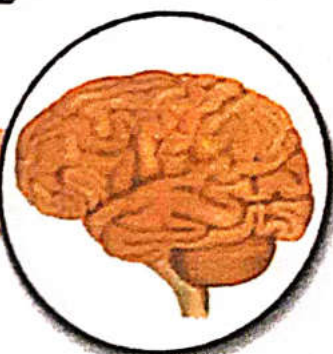
Anemia,

In adult Causes Depression Confusion.

Vitamin C deficiency



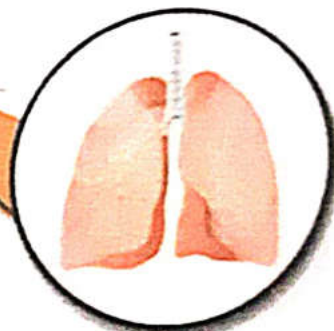
Bleeding of the skin and mucous



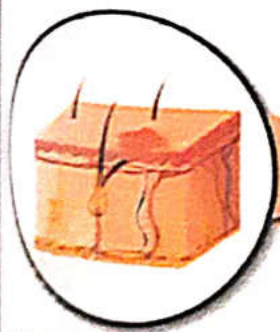
Fatigue,
Depressions



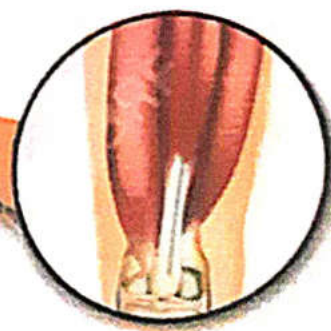
Gingivitis,
Loose teeth



Increased
susceptibility to infection



Rough, dry skin



Muscle weakness



Joint and
body aches

Symptoms of overdose

Nausea
Stomach cramps,
Diarrhea

Symptoms of Vitamin B6 Deficiency

➤ **Skin disorders:** Dermatitis (skin inflammation), Stomatitis (inflammation of the mucous lining of any of the structures in the mouth), Glossitis (Is inflammation or infection of the tongue), and Painful fissures and cracks at the angles of the mouth and on the lips.

➤ Abnormal brain-wave patterns, convulsions, and muscle twitching.

➤ Depression, irritability, anxiety, confusion, headache, and insomnia.



Dermatitis



Stomatitis



Glossitis



Abnormal brain-wave patterns



convulsion
benign
fibrile
convulsions

convulsion

Vitamin C

It is essential for the development and maintenance of Connective tissue.

It plays an important role in bone formation.

It helps in wound healing and maintenance of healthy gums.

It protects immune system.

Acts as Antioxidant, Protects Cholesterol.

Deficiency Causes :-

Symptoms of weakness.

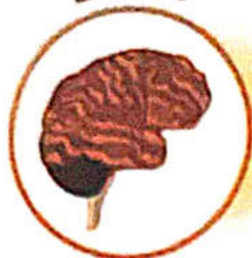
Anemia.

Gum disease.

Skin problems.

VITAMIN D deficiency

Brain



Depression
Schizophrenia

Respiratory



Asthma
Wheezing

Circulatory



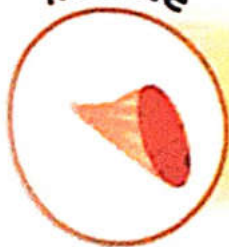
High blood pressure
Coronary heart disease

Pancreas



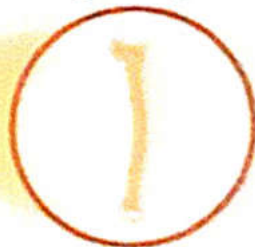
Type 1 diabetes

Muscle



Aches
Weakness

Bone



Rickets
Osteoporosis

Crohn's disease
Multiple sclerosis
Rheumatoid arthritis

Cancer
Influenza
Tuberculosis

Shop for Vitamin D Supplement

Vitamin D.

It maintain normal blood levels of Calcium and phosphorus

It helps to form and maintain Strong bones.

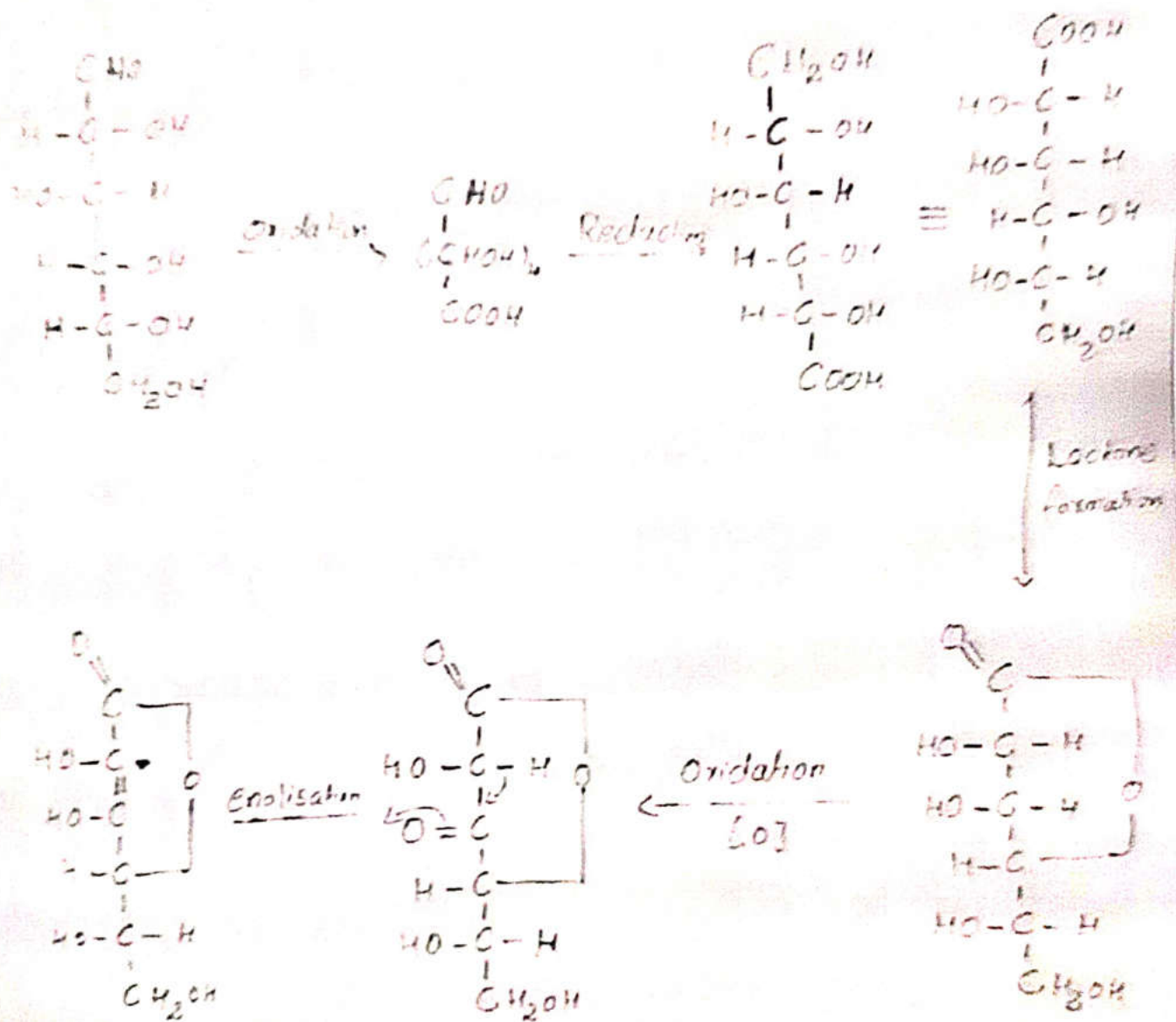
It induces the Synthesis of Specific Calcium binding protein in Bones.

Vitamin D regulates the Calcium level by reabsorbing Calcium through the kidney.

Deficiency Causes :-

Breast Cancer,
Prostate Cancer,
Heart disease.
Weight gain.

Synthesis of Vitamin C.



Vitamin C

L-Ascorbic Acid.

Questions discussed during Webinar.

1q). Where does fat Soluble Vitamins Store in our Body?

Ans :- It Stores in Liver and Adipose tissue.

2q). Why water Soluble vitamins required regularly in food?

Ans :- Because water Soluble vitamins are readily Excreted through urine So it not be Stored in our body.

3q). Why Vitamin B₁₂ does not Excreted regularly?

Ans :- Because Vitamin B₁₂ is necessary for the formation of mature blood cells.

4q). What happens when Vitamin-B₁₂ Excreted regularly?

Ans :- It Cause Anaemia.

5q). What happens when Vitamin C deficiency in our Body?

Ans :- It Causes Gum disease as Gingivitis, loose teeth, Bleeding of the Skin & mucous muscle weakness, dry Skin takes place etc.

Feedback on this Webinar.

First of all I thank for a Chemistry department for giving me an opportunity to do this Webinar.

Here I have got a complete knowledge of this topic,

I have enjoyed this topic by sharing my collected knowledge through a Zoom application.

Here I have got a first opportunity to do Online Webinar.

At last I thank all the Participants, Teachers and friends by encouraging and supporting me to do this Successful Webinar.

Thank you one and All.