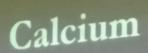


Calcium

- Milk and Milk products, eggs, cereals, millets, fish. cow milk contains 1200 mg / litre whereas human milk contains 300 mg / litre of calcium as calcium caseinogenete. Sources
- green leafy vegetables cheapest source of calcium
- Drinking water may deliver upto about 200mg/day

Bone and Teeth formation, Blood coagulation, muscle contraction, cardiac action, milk production, Relay of electric and chemical messages, keeping membranes of cells intact, metabolism of enzymes and hormones, cell division, transformation of light to electrical impulses in retina





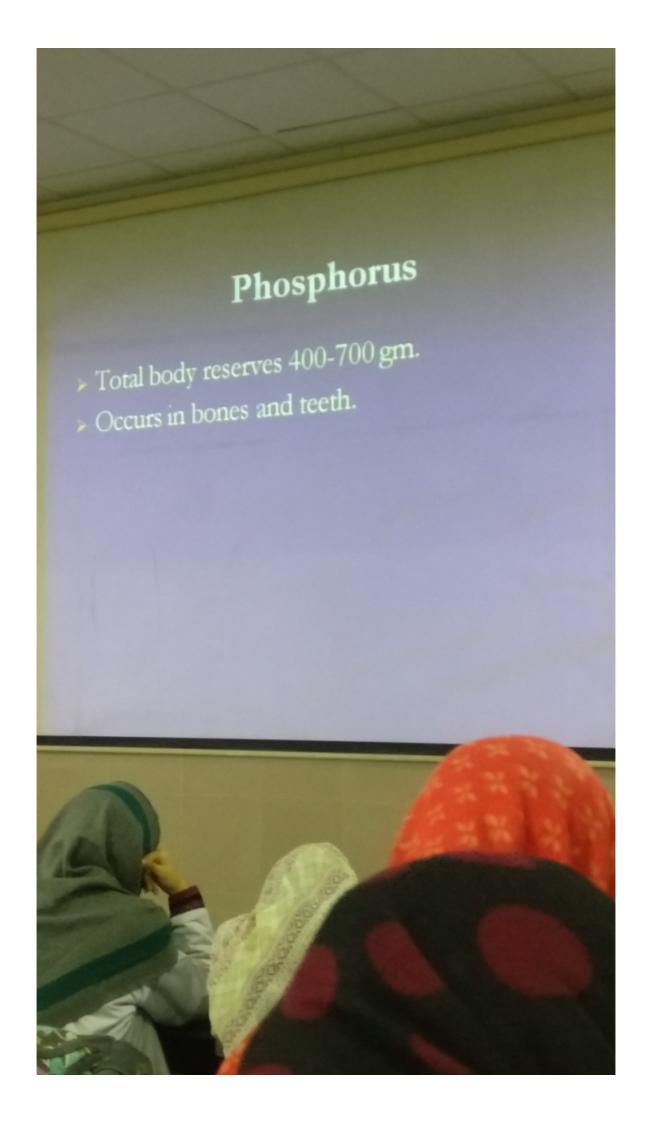
Deficiency diseases

No clear cut deficiency disease if the intake of vitamin D is adequate

Toxicity

> No deleterious affects.





Phosphorus

Sources

Eggs,beans,meat,cereals,milk

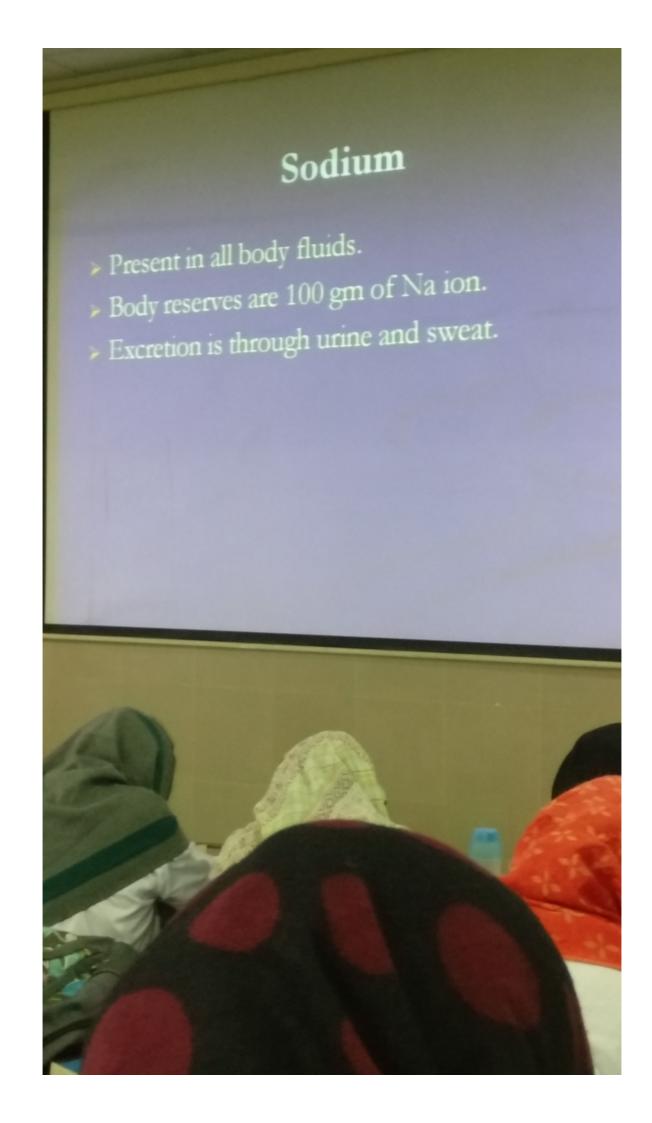
Protein, fat, carbohydrate metabolism, Bone and teeth formation, all metabolisms

RDA

Intake should be equal to that of calcium except in infancy (ratio 1:1.5)

Deficiency rarely occurs





Sodium

Sources

Table salt, fish, meat, vegetables

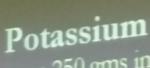
Functions

- Imp. Constituent of ECF
- Action Potential in nerve and muscle RDA
- > 5 gm/day depends on climate

Deficiency Diseases

- Muscle cramps, Anorexia, fatigue.





Total body reserves 250 gms in adults

Sources

Dry fruits, Cereals, Legumes, Lean meat

Functions

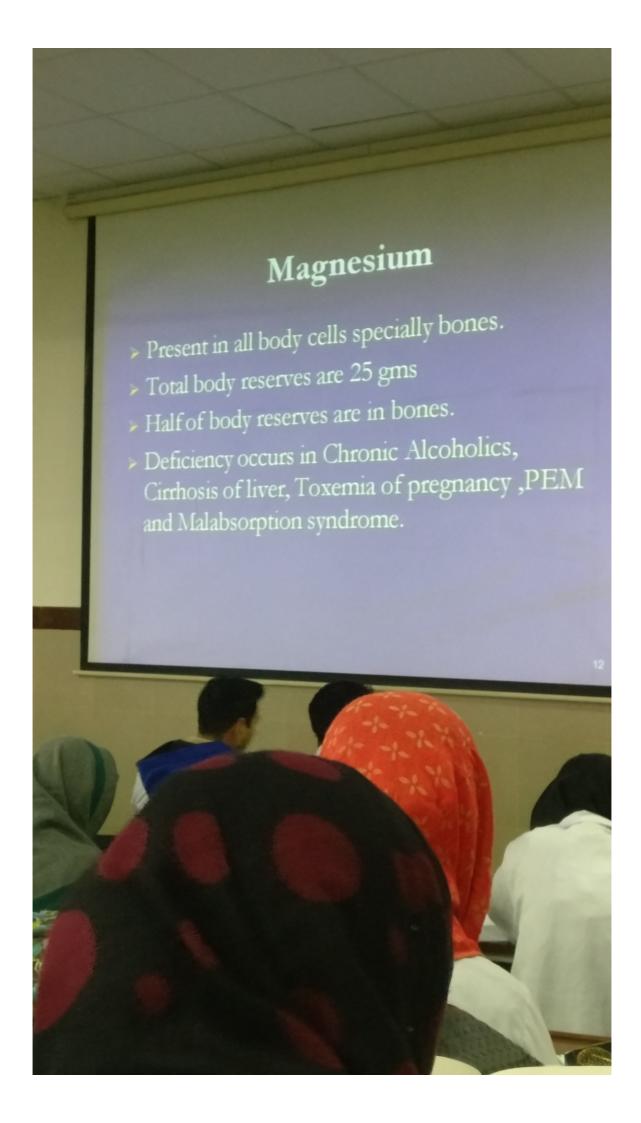
RDA

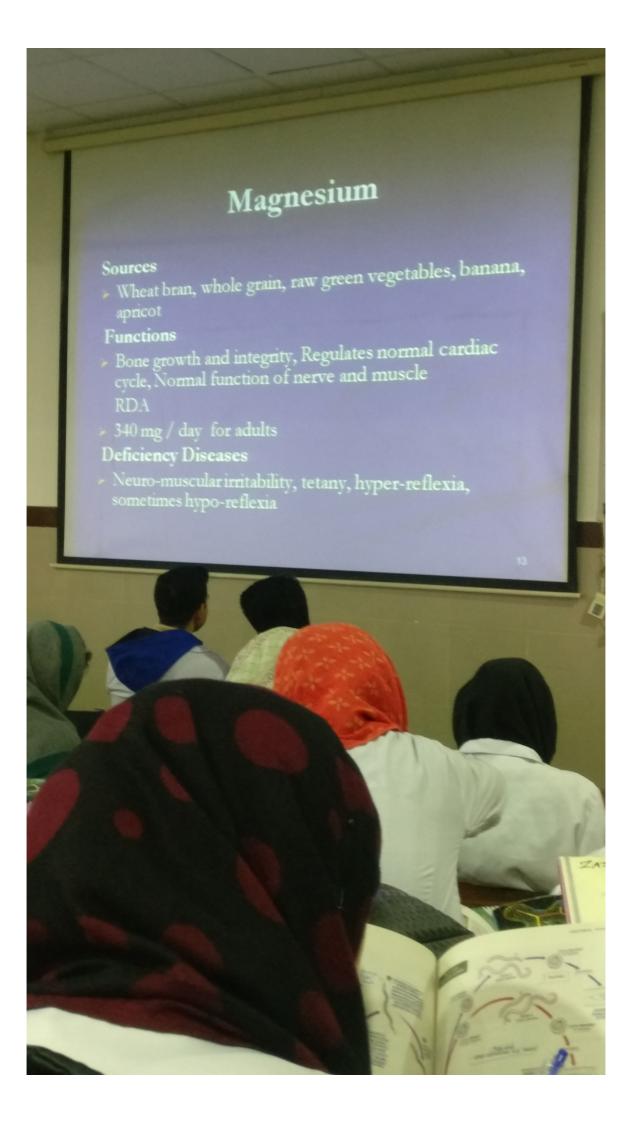
Ideal sodium: potassium ratio is 1:1(in m mol)

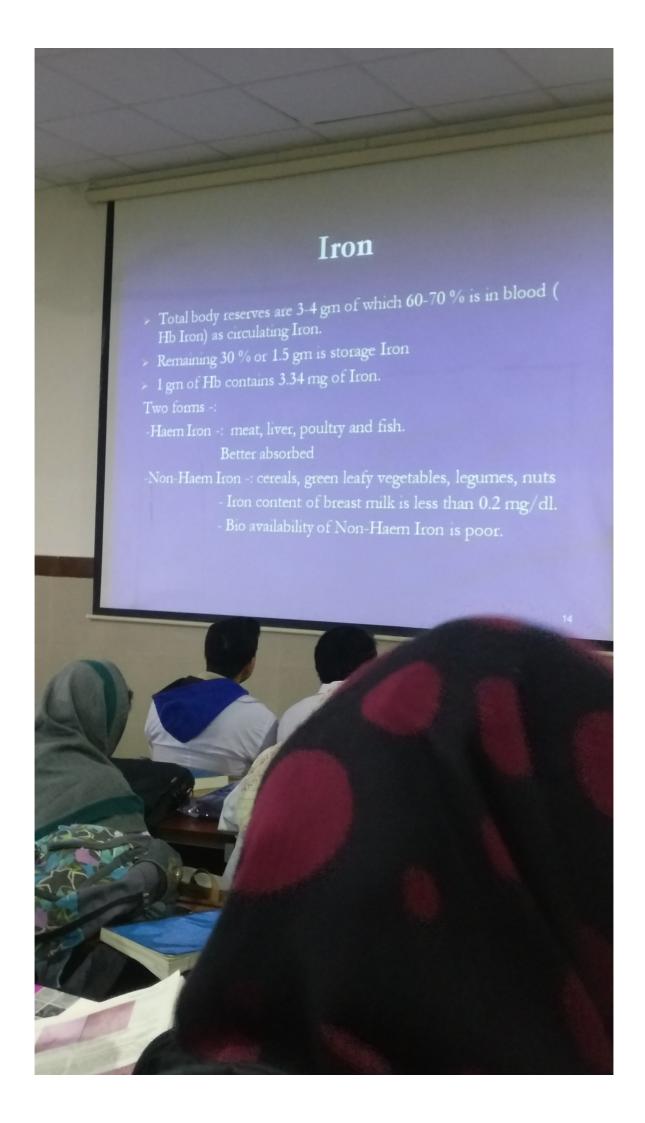
Deficiency Diseases

Hypokalemia, Paralysis, Cardiac disturbances



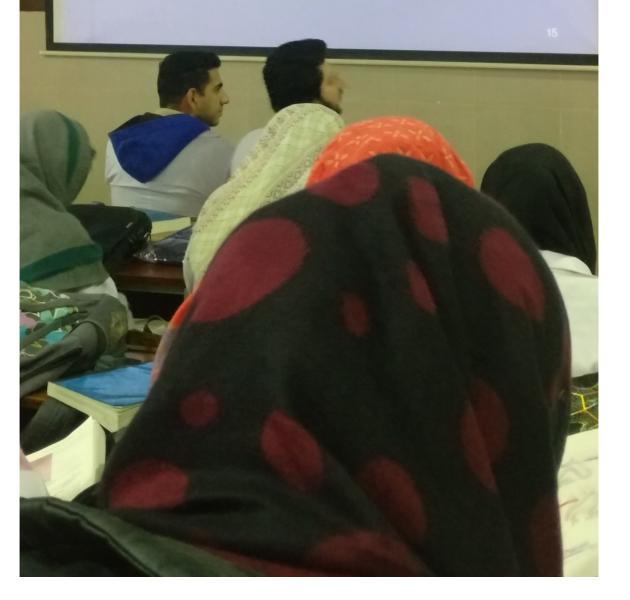






Absorped from Duodenum and upper small intestine Absorption -:

Rate of absorption is influenced by many factors like -:



Tom loss

Total daily loss in adults is 1 mg and in menstruating women is 2 mg

Major routes of Iron loss -:

Haemorrhage (Physiological and Pathological

-Basal losses (sweat, urine, bile)

-IUCD'S

Iron deficiency occurs in

Three stages -:

1st -:

Decreased storage- without detectable abnormalities





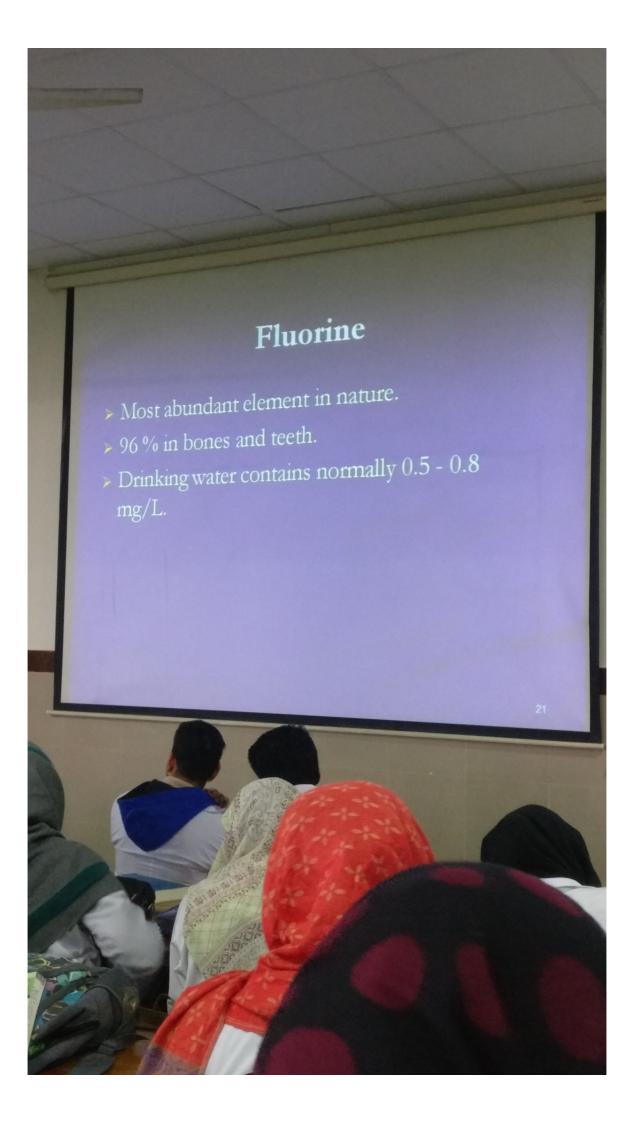
Iodine

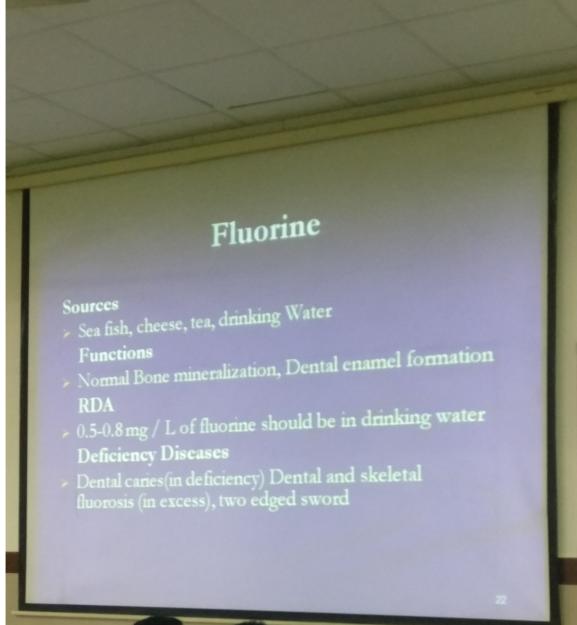
- > Total body reserves 50 mg
- > Blood level is 8-12 mcg/dl

These are chemical substances leading to development of goitre.(cabbage, cauliflower)

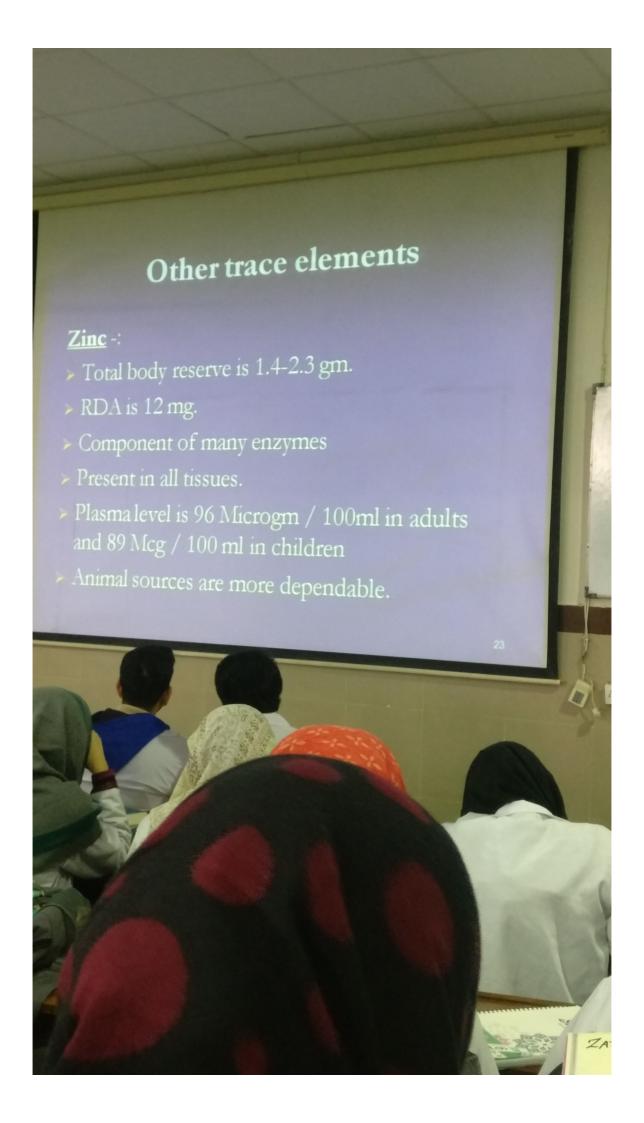


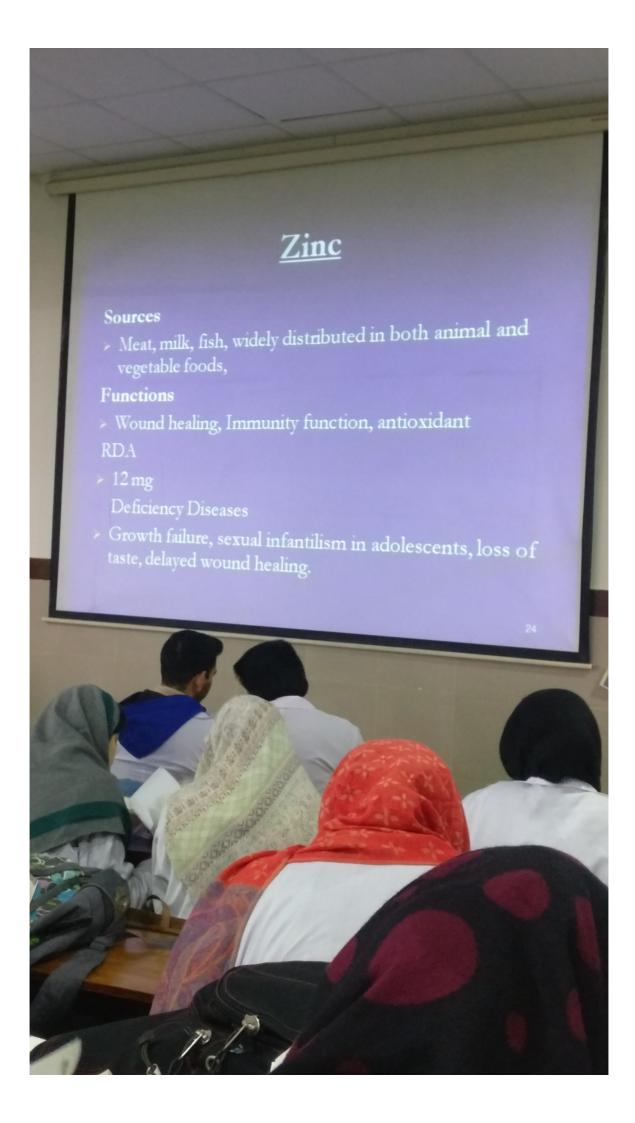
Iodine sea salt, milk, meat, cereals, vegetables, cod liver oil, fresh water (1-50 mcg/L) **Functions** Synthesis of T3 and T4 by Thyroid gland, Growth, Development and Wellbeing

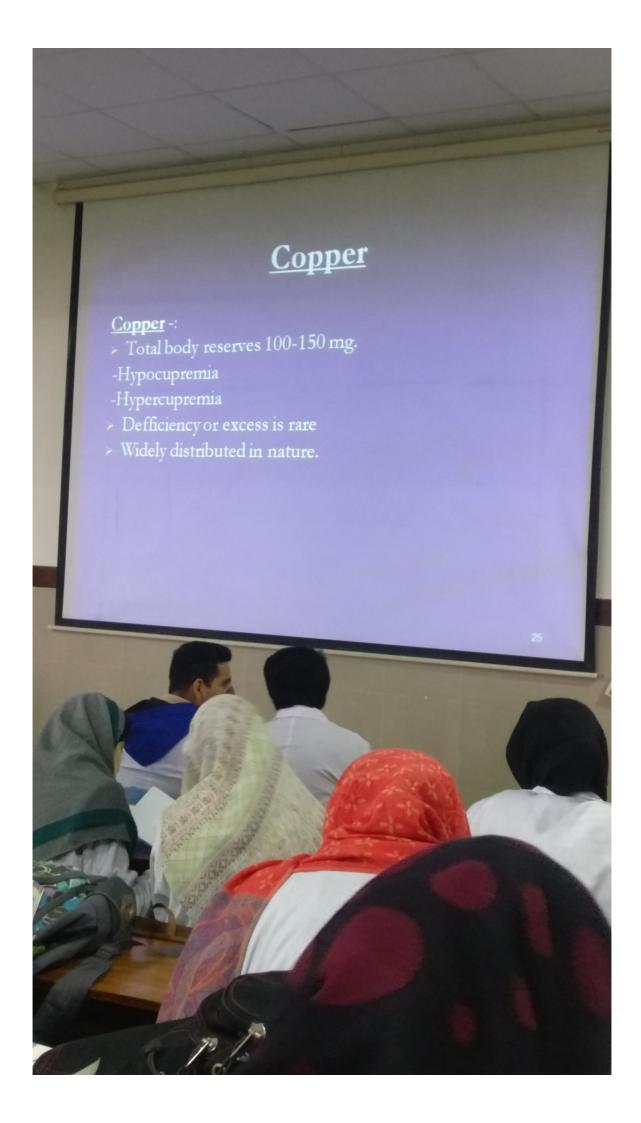


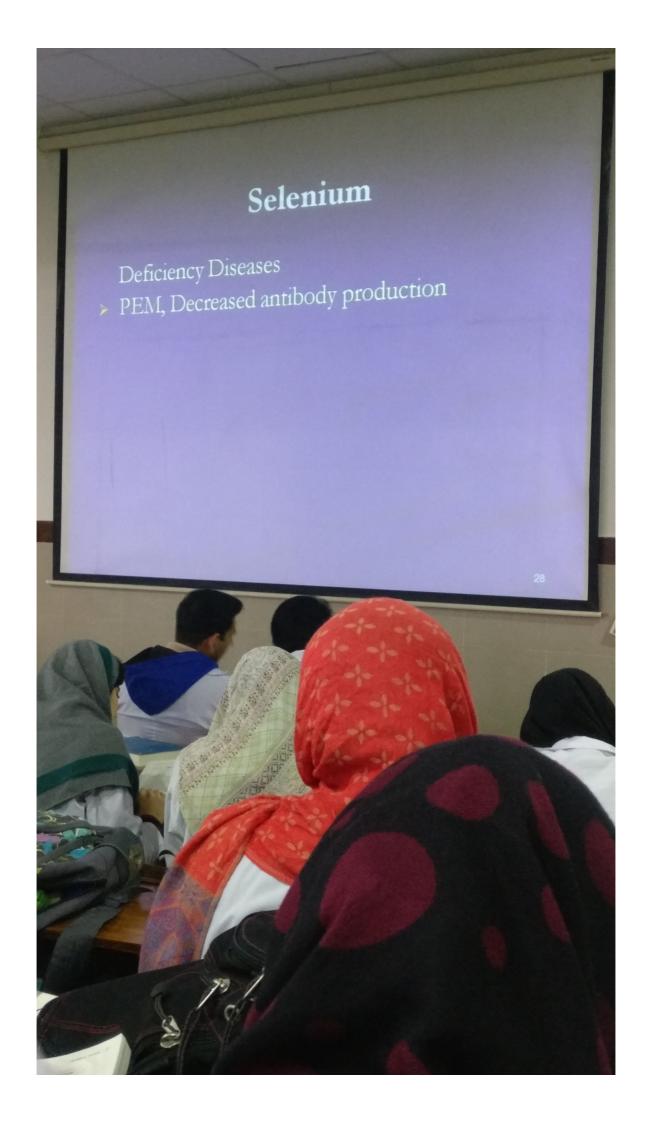


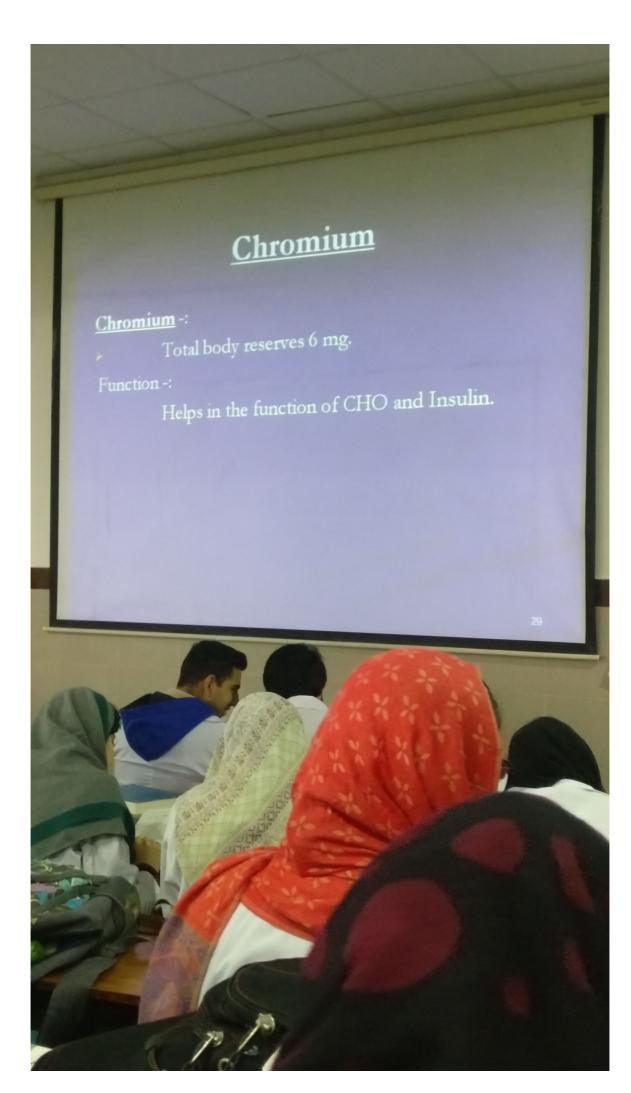


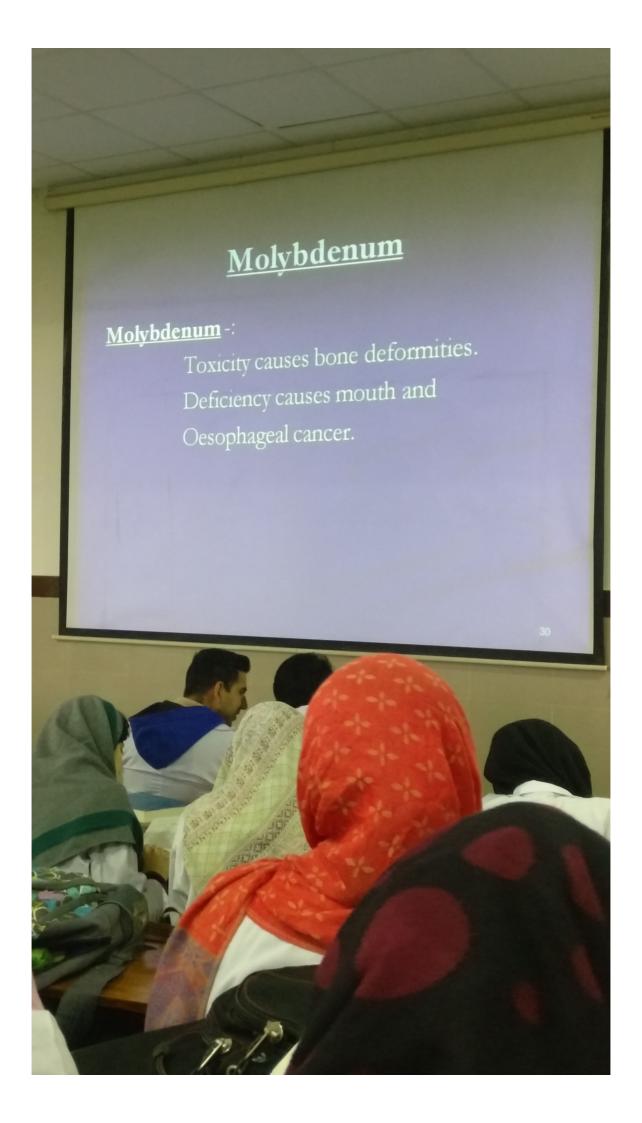


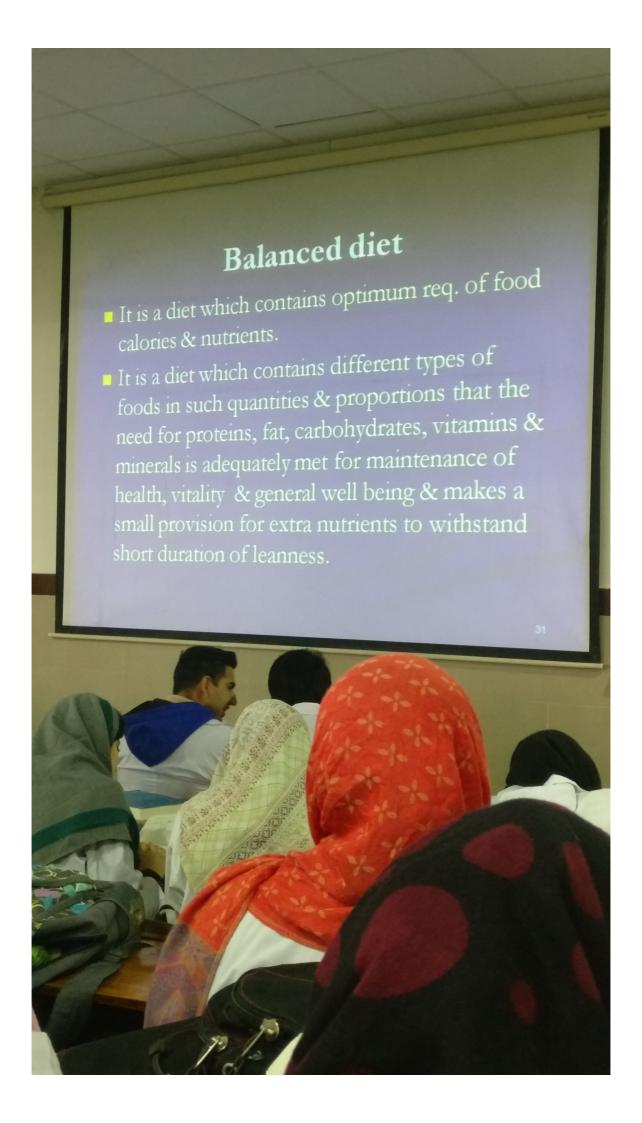


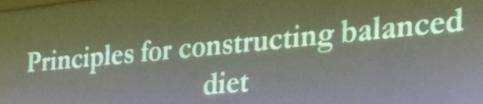












Carbohydrates

50 - 70%

Proteins

10 - 15%

- Fats

15 – 30%

Q- If Asia 33 years of age has daily caloric req. of 2000 kcal, how much grams of proteins, fats & carbohydrates should be taken by her to meet her caloric requirements?



