

Submitted By :- ZAKIR Ullah

Submitted To :- mam: Sana kha

paper :- Biochemistry (1)

ID :- 16822

Q: 1 ⇒ Fat Soluble vitamins
are absorbed By Body:-

∴ Fat Soluble vitamins
∴ vit, A, D, E, K...

→ we eat food have contain
Fat Soluble vitamins.

→ Stomach digest the food
and then travel to
Small intestine.

→ where the fat
food further ~~absorbed~~
is digested.

(2)

→ The substance which
need to absorbed fat
soluble vitamins.

→ produce by liver (Bile)
to break down fats.

and absorbed by the wall
of intestine.

→ fat soluble vitamins enter
to lymph vessels into
the blood stream.

Q.2 \Rightarrow Bloor Classification
of lipid \Rightarrow

\therefore in (1943) has proposed

the following classification of lipid.

1) Simple lipid

2) Compound.

3) Derived lipid.

\therefore Simple or Homo lipid.

1) These are esters of

fatty acid with alcohol.

1) Fats & oils \Rightarrow

These are fatty acid

(4)

with ~~with~~ with alkoxy

alcohol, glycerol.

① Fat are Solid & oil are liquid

② waxes.

These are esters

of fatty acid with high

molecular weight Alcohols.

* Compound lipid :-

These are the ester of fatty acid with alcohol & possess additional group (s)

They :-

lipoprotein

- Sulfolipid.

- Glycolipid.

- phospholipid →

→ Glycerophospholipid

→ Sphingophospholipid

* Derived lipid :-

These substance are

derived from simple

& compound lipid by

hydrolysis.

Carotenoids.

Fatty Acid :-

∴ important component of

lipid is Fatty Acid.

(6)

→ These are Carboxylic acid or organic Acid.

→ which have long

Non-polar tail. Hydrocarbon chains.

⇒ Small polar head contain oxygen.

Saturated Fatty Acid:

⊙ They no double bond.

⊙ high melting point.

⊙ Shape: like rod.

⊙ myristic, lauric.

(7)

unsaturated fatty Acid:-

- ① There have 1 or 2 double bond
- ② Naturally containing even number & unbranched.
- ③ Shape:- group molecule.
- ④ oleic, linoleic, etc

Q:3: Significance of essential minerals.

1) mineral are important

for making enzyme & hormones.

(8)

(2) mineral provide Balance

diet

(3) help to maintain proper

Blood volume, Blood pressure

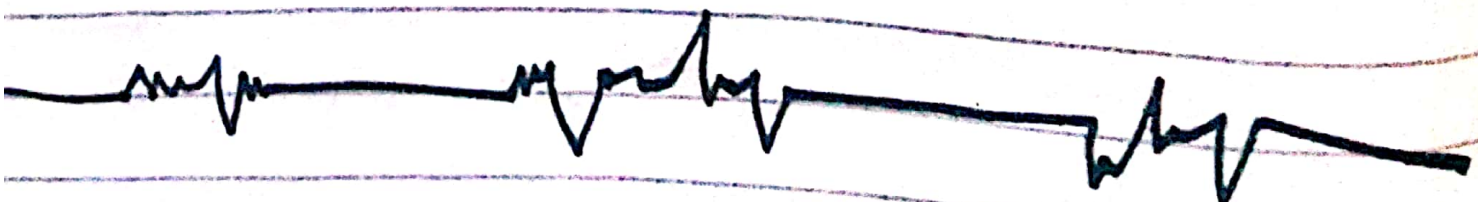
pH, fluid.

(4) help to Normal

function of muscle

(5) help in the prevention

of osteoporosis.



Q:4: → Digestion & Absorption

of lipid :-

- 1) lipid are insoluble in aqueous solution
- 2) It lead certain problem in digestion & absorption of lipids.

Digestion in Stomach :-

- heat of the stomach liquidizes the lipid.
- emulsification of lipid start ~~form~~ in the

Stomach By peristaltic

Contraction.

→ Both lingual lipase & gastric lipase acts on short chain triglycerides.

Digestion in intestine

∴ → Emulsification of lipid occurs in intestine -

→ Pancreatic action on lipid.

⇒ Bile Salt → These are

Called Biological detergent.

(11)

→ They helps in emulsification

of lipid by forming micell

→ Cholesterol is synthesized
in liver

→ Secertion of Bile in

Small intestine.

→ They are :- Sodium glycocholate
Sodium ~~gly~~taurocholate.

→ Bile Salt phospholipids

help in emulsification.

⇒ Digestion of lipid by pancreatic

enzyme :-

These enzyme digest

the lipid

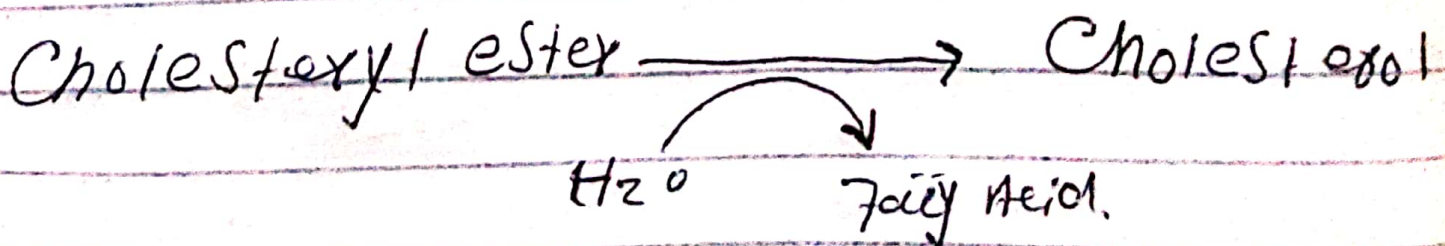
(12)

- o) pancreatic lipase.
- o) Cholesteryl esterase.
- o) phospholipase A₂

⇒ phospholipase A₂ lysophospholipid

Begin detergent. help in emulsification. & digestion of lipid.

⇒ Cholesteryl ester.



(13)

Absorption of lipid:-

→ mixed micelles are hydrophilic exterior & hydrophobic interior core.

→ it attached to the

microvillus surface of

upper part of small intestine

→ All digestive product

diffuse in the mucosal cell.

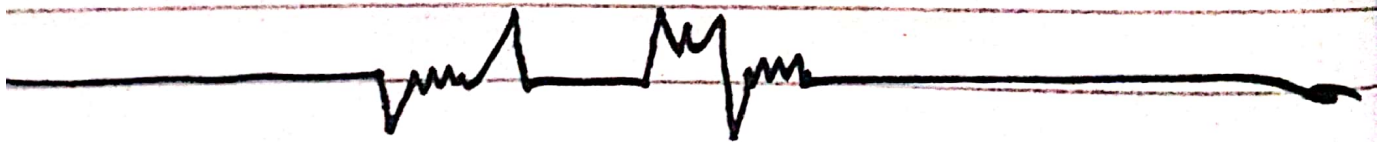
→ Short & medium chain

Fatty Acid do not require

Bile Salt for absorption.

(14)

→ They Absorbed directly to
intestinal cells and then
enter portal Blood then
lymph & transport to
the liver Bound to serum
albumine.



Q: 5:

1: Retinol :: (vit. A)

① Function :-

It play critical role in
~~ve~~ vision.

(15)
2) They are intracellular

messenger that effect

transcription of number of
gene.

3) Bone remodeling.

Sources:-

•) present in Animal cell.

•) Famous sources of vit A
is (Carrot)

Deficiency:-

•) Blindness (Night blindness)

•) dry, scaly skin.

•) Decrease thyroid hormone - hypothyroidism

(ii) Thiamine:

one of the vitamin (B)

* Function :-

1) help Body Cell Energy

Carbohydrates into energy
(specially nervous system)

2)

2) Muscles Contraction.

3) essential for the metabolism
of pyruvate

Sources :-

o) wheat germ.

(17)

⊙ Egg

⊙ Nuts & Seed.

⊙

Beef Steak

Deficiency ::

•) Nerve damage

•) weakness. Fatigue.

•) Brain damage.

•) PSYCHOSIS.

ciii) ⇒ Pyridoxine ::

→ This is vit B6.

* Function ::

•) protein, fat, carbohydrate

metabolism.

2) Creation of Blood cell

3) & Neurotransmitter.

4) Not produce our Body

get in Suppliment.

* Deficiency:

•) Skin Rashes.

•) Sore lips.

•) mood change.

•) weak immune function.

•) Seizures.

(19)

Sources:

o) Soya Beans.

o) Oats.

o) wheat germ.

o) Some Fish

o) Pork.

o) Chicken.

o) Banana.

कवि