FortiBoost pet

Fortifying tablet

For puppies and dogs

raizup my Pet NUTRITION CARE

Fortifying line

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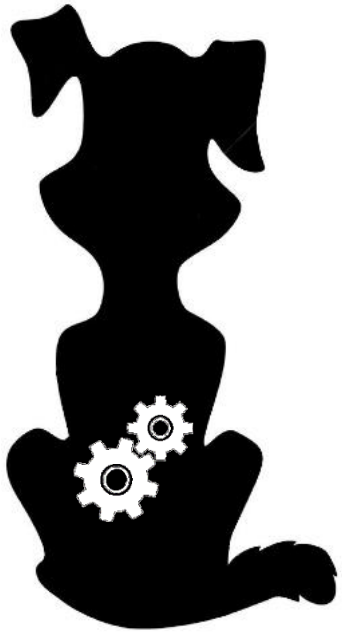
Introduction

- A dog is a living being.
- Many chemicals reactions take place in each of its cells
  - To produce energy (storage)
  - To run cellular processes
  - To build new components of the body
  - To eliminate waste
- It is called metabolism.



Introduction: Metabolism

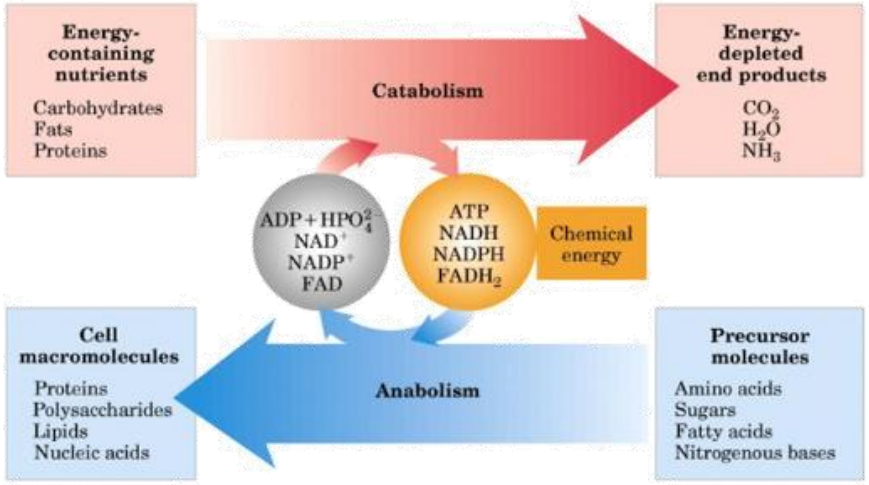
- Metabolism maintains **a dynamic balance** between:

Anabolism

- The **building up** of body tissues and energy stores

Catabolism

- The **breaking down** of body tissues and energy stores to generate energy for body functions



Introduction: Metabolism of the dog

- Higher metabolism than people.
- Dogs breathe faster, pump blood faster, mature faster, and have a higher normal body temperature.
- Young dogs seem to have even more energy than children.
- This high metabolism comes with a shorter life span.

Normal Canine Physiologic Values

Body temperature (average)	102°F (38.9°C)
Heart rate	70 to 120 beats per minute
Respiratory rate (at rest)	18 to 34 breaths per minute
Average life span	8 to 16 years (depends on breed)

The Merck Veterinary Manual

Introduction
Nutritional requirements of the dog

- Nutrition is the key to metabolism.

- The diet needs to be formulated according to
  - The age
  - The breed
  - The specific needs
    - Activity
    - Gestation
    - Lactation
    - Specific risks (obesity, kidney stones …)

Introduction
Nutritional requirements of the dog

- A dog needs a balanced diet to stay healthy.

- If needs increase occasionally, a complementary feed is required to complete the inputs.

FortiBoost Pet target

- **FortiBoost Pet tab** is a fortifier for puppies and dogs.
  - It brings stimulants, trace-elements, vitamins, minerals and prebiotics.
  - It completes a balanced diet to fulfill specific needs of critical phases.

FortiBoost Pet uses

Intense activity

Immune stress

Tiredness, lack of energy

FortiBoost Pet uses

- Intense activity
  - Learning
  - Work
  - Sport

- Immune stress
  - Vaccination
  - Recovery period after disease or surgery

- Tiredness, lack of energy
  - Mid seasons
  - Extreme temperature (heat wave, cold snap)
  - Old age

What will FortiBoost Pet bring?

- Stimulants
- Prebiotics
- Vitamins
- Trace elements
- Minerals
- Algae

What will FortiBoost Pet bring? Stimulants

Nettle (*Urtica dioica* L.)

- Anti-inflammatory, painkiller
- Stimulating effect, fortifier (called sometimes the green EPO).
- Antioxidant thanks to phenols
- Source of
  - Flavonoids: kaempferol and quercetin
  - Acids: citric acid and formic acid
  - Phenolic acids: caffeic acid and caffeoylmalic acid

Ginseng (*Panax ginseng*)

- Adaptogen, resistance to stress
- General tonic (convalescence, exhaustion)
- Physical endurance (in association with spirulina)
- Wound healing effects
  - Source of tetracyclic triterpenoid saponins and ginsenosides Rb1, Rg1

What will FortiBoost Pet bring?
Prebiotics

Yeasts (*Saccharomyces cerevisiae*)

- **β-glucans of the wall**
- Vitamins B (B1, B3, B6, B9)
- Essential amino-acids
- Trace elements (iron, magnesium, selenium)
- Mineral (calcium, phosphorus)
- Antitoxic due to surface binding to the yeast cell wall.

Chicory inulin

- **Inulin**
- Monosaccharides
- Disaccharides
- Inulin-type fructans

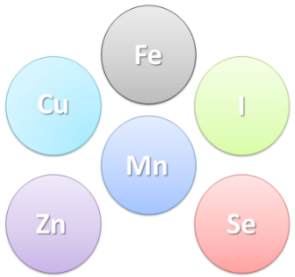
What will FortiBoost Pet bring?
Vitamins, trace elements and mineral

Vitamins

- Vitamins A, B1 (thiamine) , B2, B3 (niacin) , B5,B6, biotin, folic acid, B10, B12, D3, E

Trace elements

- Chelates of copper, iron, manganese and zinc
- Iodine and selenium



Minerals:

- Calcium, phosphorus, sodium and magnesium

What will FortiBoost Pet bring? Algae

Spirulina

- Super feed as it contains aminoacids, trace elements, omega 6 and 3
- Carotenes
- Phycocyanobilin (blue chromophore)

How does FortiBoost Pet work?

- Nutrients brought by FortiBoost Pet Tab contribute to overall wellness.
- It helps to fulfill puppy and dogs needs during critical stages.

Key roles of FortiBoost Pet

Anti-oxidants
Cell regeneration

Metabolism enhancement
Optimized energy

Immune booster

Healthy digestion

Healthy alert brain
Clear eye

Great tasting

Silky coat
Healthy skin

Healthy heart

Strong skeleton
and muscles

Key roles of FortiBoost Pet

- Metabolism enhancement
  - Production of energy in cells
    - Vitamins B complex in mitochondria
  - Catalysis of reactions
    - Increase speed of reaction (Mn)
  - Production
    - Synthesis of proteins (DNA with folic acid …)
  - Regulation
    - Through hormones (iodine in thyroid hormones)
  - Waste management
    - Iron (with Cytochrome P450)

Key roles of FortiBoost Pet

- Antioxidants cell system
  - Free radicals neutralizer
    - Vitamins E and C
    - Cofactors of antioxidant enzymes (Cu, Zn, Mn, Se)
    - Antioxidant activity of nettle and spirulina

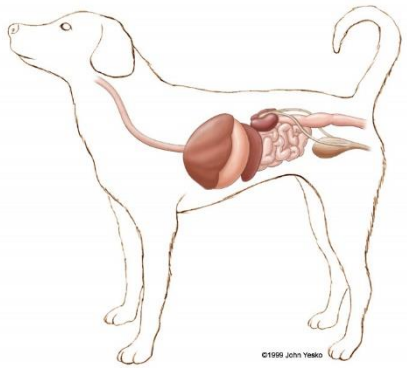
Key roles of FortiBoost Pet

- Immune support
  - Enhance non specific immunity
    - Vitamins, trace elements
    - Nettle, yeasts, Panax ginseng
  - Enhance specific immunity
    - Vitamin (B6)

- **Better condition & less diseases**

Key roles of FortiBoost Pet

- Healthy digestion
  - Quality of the gut wall
    - Continuously renewal of epithelium every 4–5 days
      - Vitamin A, vitamin B12
    - Production of mucus
  - Quality of the microflora
    - Yeasts, chicory inulin, vitamins and trace elements
  - Local immunity
    - Copper and zinc: antibacterial and antiviral activity



Key roles of FortiBoost Pet

- Healthy alert brain

  - Quality of neuronal structure

    = Neuroprotective effect

    - Thiamin
    - Vitamins C and E
    - *Panax ginseng*
    - vitamin B12 (myelin synthesis)

  - Neurotransmitters regulation

    - Synthesis: vitamin C, B1, B6, Mg, Fe, Cu
    - Regulation: vitamin B3 (intracellular Ca)

Key roles of FortiBoost Pet

- Clear eye

  Vision improvement

  - Quality of the retina and eye structure
    - vitamin A
  - Eye protection
    - Vitamins C and E
    - Zinc

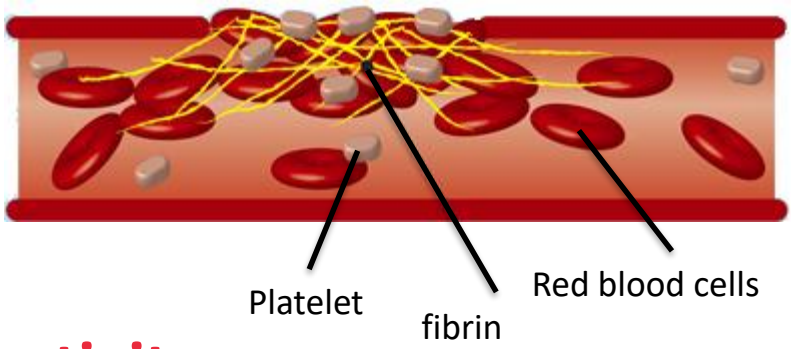
➢ **More watchful & cleverer**

Key roles of FortiBoost Pet

Healthy heart and circulatory system

- Red cells production
  - Vitamin B5, B6, B9, B12
- Blood pressure regulation
  - Vitamin B6, Vitamin D
  - Panax ginseng
- Quality of blood vessels
  - Vitamin B6, K

Formation of red blood clots



➢ **Good metabolism & better activity**

Key roles of FortiBoost Pet

- Strong skeleton
  - Matrix quality
    - Vitamin A
  - Mineralization
    - Phosphorus, calcium, vitamin C, D
  - Quality of joints
    - Manganese

Key roles of FortiBoost Pet

- Muscles quality
  - Growth
    - Trace elements: Mn, Se, Zn
  - Activity
    - Vitamin B1 (muscle contraction)
    - Magnesium (muscle relaxation
    - Vitamin B5, B6, C & E
    - Minerals: Ca, P

Key roles of FortiBoost Pet

- Silky coat and healthy skin

  - Renewal of epithelium
    - Vitamin A
    - Vitamin B3 (DNA repair after sun exposure)

  - Skin elasticity
    - Vitamin C (collagen synthesis)
    - Vitamin B5 (moisture of skin)

  - Quality of pads and fur
    - Vitamin B6: stimulation of keratin synthesis
    - Vitamin B8(biotin)
    - Chelated zinc
    - Spirulina

Tested and approved

- Tested on a group of country dogs
  - Sporty dogs that do long cross country running at least once a week.
    - Group of 25 dogs (Test and control)
      - 15 days of FortiBoost Pet for the test group
      - Assessment of dynamism, willingness, aspect
        - » Dogs more dynamic
        - » More willing for running
        - » Coat looks more beautiful, brilliant

80% of total recovery!

Direction for use

- Easy oral administration
  - High palatability (innards flavor and yeasts)
    - Approved by owners
      - 94% of the dogs have consumed the first tab
      - 89% of the dogs have consumed the tab during more than 10 days
  - Scored tab for all sizes of puppies and dogs

Direction for use

- Dosage:
  - For puppies:
    - 1 tab per 5kg of body weight / day
  - For dogs:
    - 1 tab per 10 kg of body weight/ day

Puppies

1 tab/ 5 kg

Adults

1 tab/ 10 kg

Direction for use

- Direction for use:
  - Give directly to the dog
  - Or put it on the feed.
    - Caution: Do not mix with hot meal (heat destroys vitamins).

Packaging

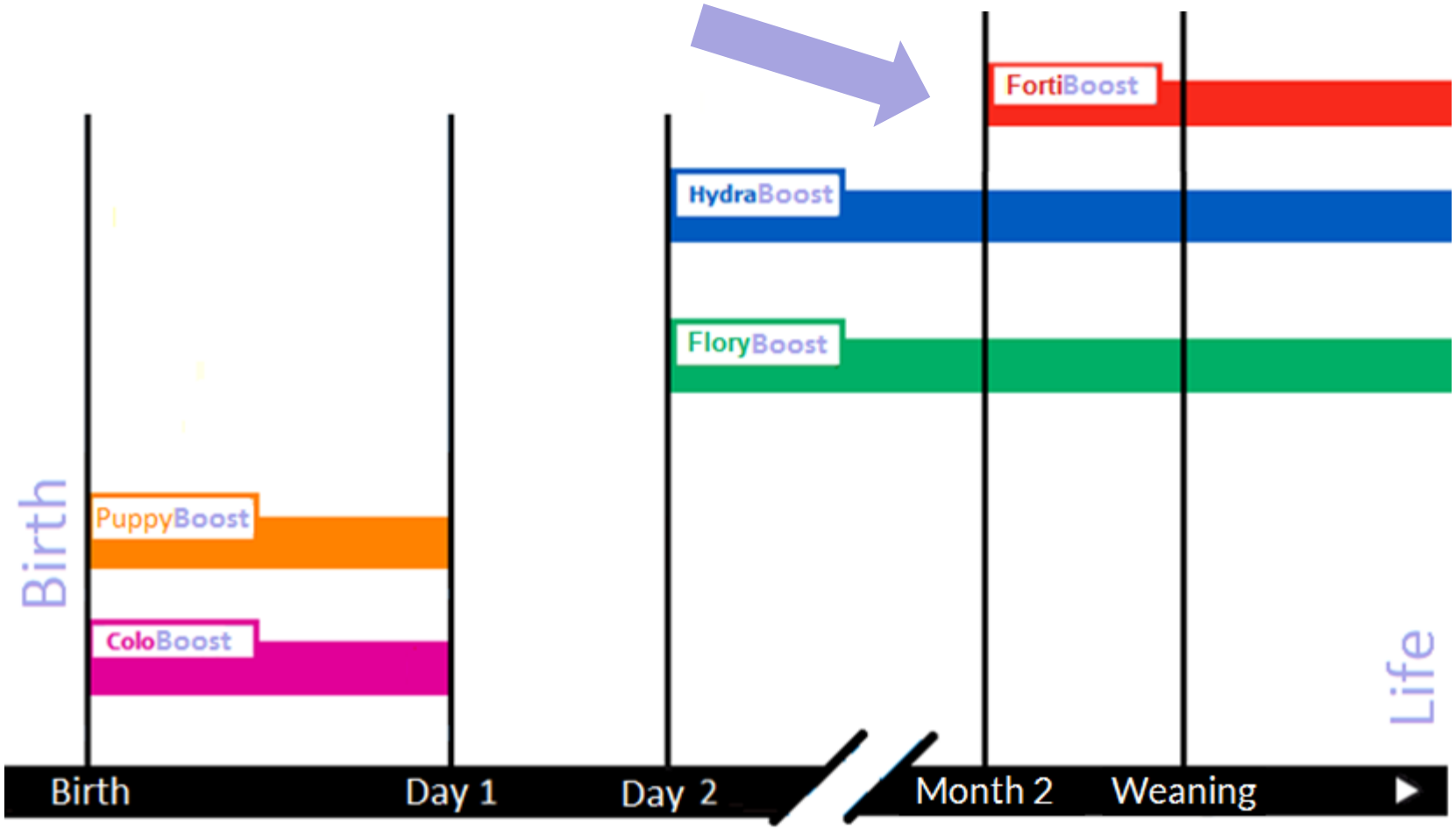
- Pillbox
  - 50 tablets of 2g

FortiBoost Pet
Take home message

- Dedicated to all weakened puppies & dogs
  - From 2 months old to adults

- To use in case of:
  - Intense activity
  - Immune stress
  - Fatigue

Puppy program



FortiBoost pet

Thank you for your attention

Fortifying line

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To know more

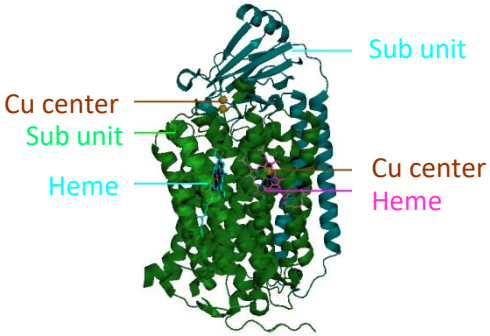
Vitamins

- Needed for numerous functions:
  - Plastic role (building and repairs): vitamin A , D_3
  - Role in metabolism: vitamins B
  - Hormone-like function: vitamin D_3 (Regulation of calcium and phosphate balance)
  - Role of carrier: folic acid
  - Coenzyme role: B_6
  - Protection role: E
  - Role in catabolic reaction (energy production): B_2, B_3

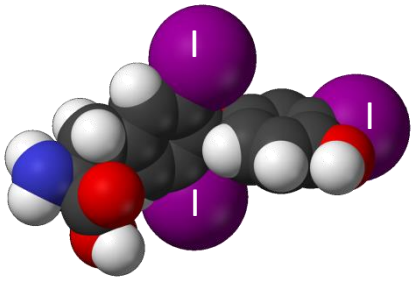
To know more

Trace elements

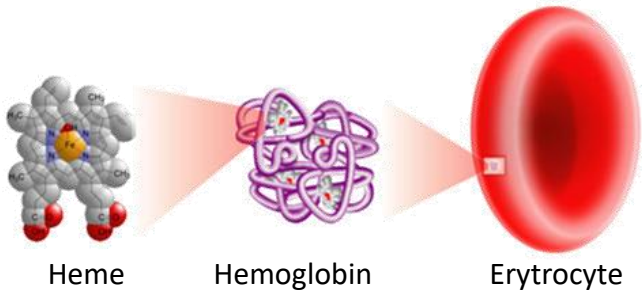
- Specific functions indispensable for life:
  - Catalyst
    - » Copper in cytochrome C oxidase (respiratory chain in mitochondria)
  - Regulator
    - » Zinc in DNA synthesis
  - Structural components of larger molecules
    - » Iodine in thyroid hormones: tri-iodothyronine (T3)
    - » Iron in hemoglobin



cytochrome C oxydase



tri-iodothyronine



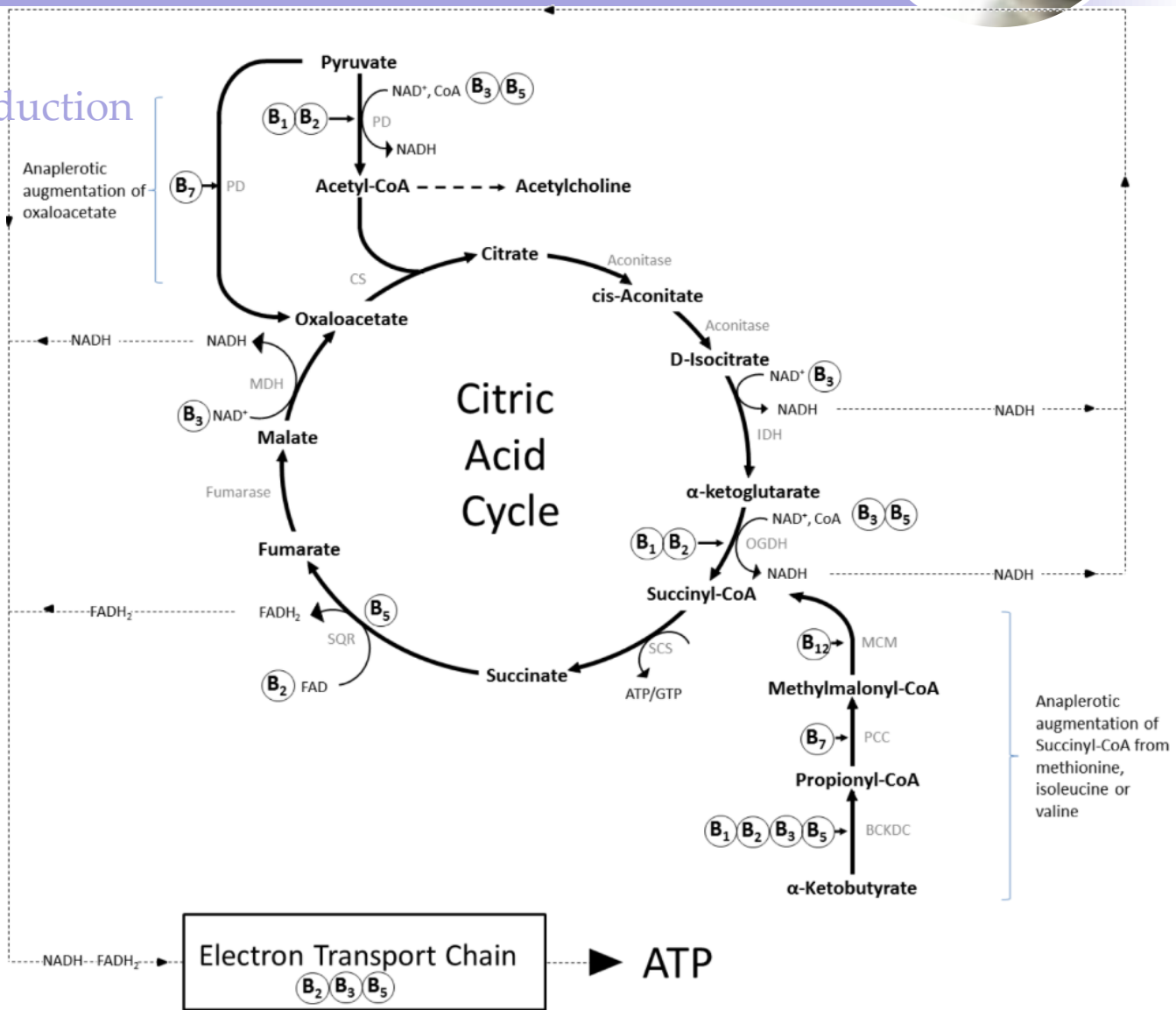
Hemoglobin

To know more

- Minerals
  - Calcium
    - Bone formation, blood coagulation, muscle contraction (included heart), and nerve impulse transmission …
  - Phosphorus
    - Bone growth, function of many enzymes in the body, and production of protein
  - Magnesium
    - Helps in the production of protein as well as absorption of vitamins, enzymes and other minerals.
  - Potassium :
    - Function of enzymes, muscles, and nerves. Maintains the fluid balance of the body.
  - Sodium:
    - Maintains the fluid balance of the body and helps the absorption of the nutrients.

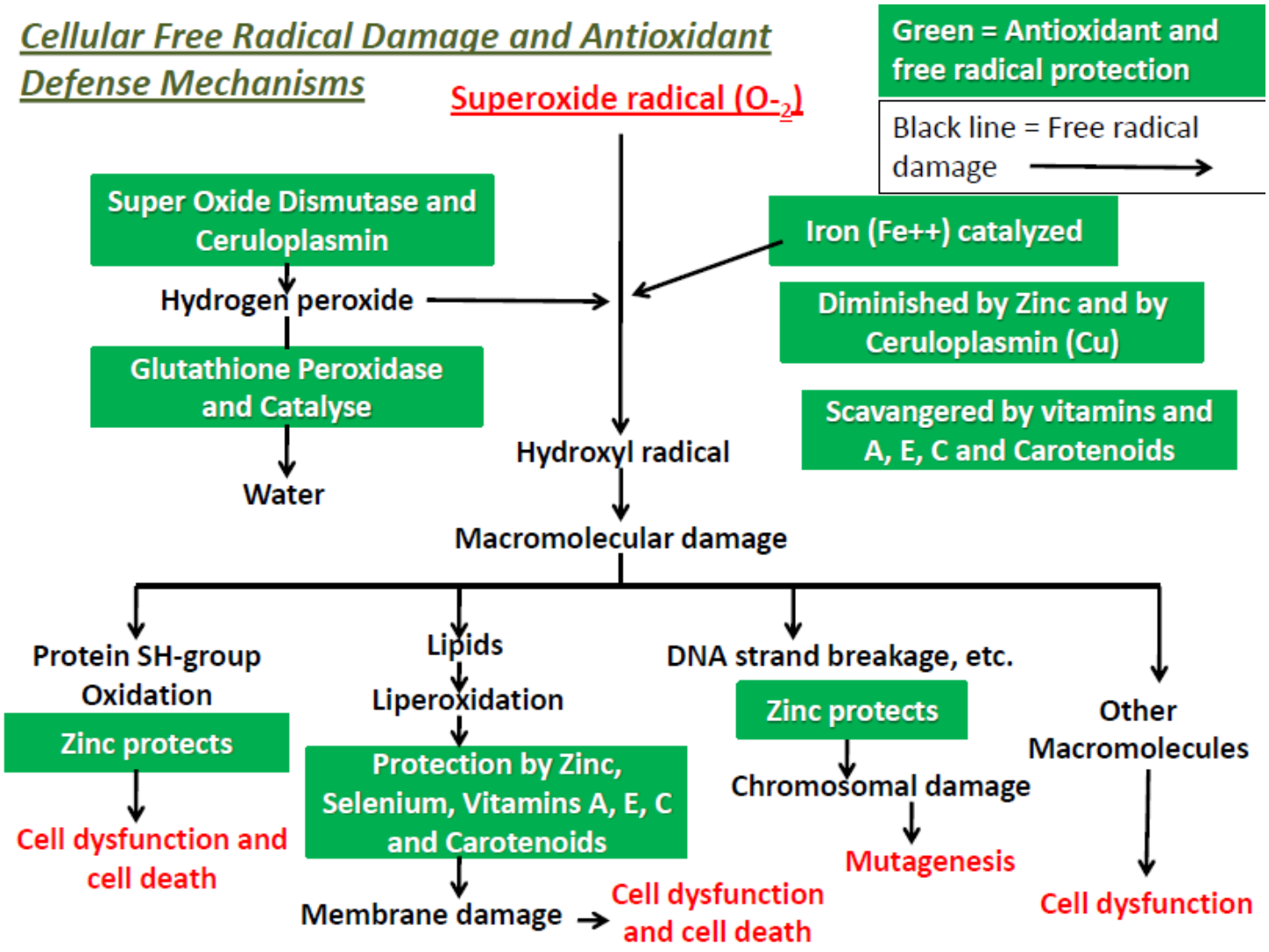
To know more
Energy production

The role of B-vitamins in mitochondrial energy production



Source: D.O. Kennedy. B Vitamins and the Brain: Mechanisms, Dose and Efficacy — A Review. Nutrients. 2016 Feb; 8(2): 68.

To know more
Antioxidant cell system



To know more
Antioxidant cell system

- Vitamin E –Tocopherol: The body's natural fat soluble antioxidant
- Ascorbic Acid: Vitamin E recycling
- Sulfur Amino Acids: Glutathione, taurine, mercapturic acid formation
- Copper: Copper-zinc superoxide dismutase (cytoplasm)
- Zinc: Copper-zinc superoxide dismutase (cytoplasm) (membrane stabilization), Metallothionein
- Manganese: Manganese SOD, (mitochondrial protection)
- Iron: Catalase
- Selenium: Glutathione peroxidase and Sulfhydryl protection
- Riboflavin: Co-enzyme for glutathione reductase
- Nicotinic Acid: NADPH (required for glutathione reductase)
- Magnesium: Glutathione synthesis
- Phosphorus: Hexose monophosphate shunt

To know more
Antioxidant cell system

- Multilayered defense system in the cell

Defense line	Type of defense	Main location
1st	Catalase, Mn - SOD	Mitochondrion Matrix
2nd	Vitamin E – Membrane Bound enzymes	Mitochondrion Inner Membrane
3rd	Cu, Zn - SOD	Mitochondrion Inner Membrane space and Cytoplasm
4th	Glutathione Peroxidase	Cytoplasm
5th	Ascorbic Acid, Glutathione, Serum, Tissues and Uric Acid, Ceruloplasmin …	Cytoplasm