Attempt and upload proper questions for evaluation.....

not notes.....

GSA

Balanced Diet

Day: Date:

Quote:-

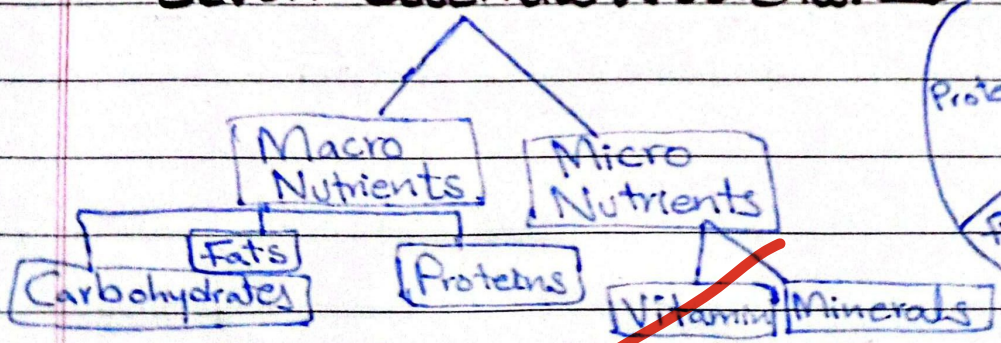
* "The doctor of the future will no longer treat the human frame with drugs, rather will cure and prevent disease with nutrition". — Thomas Edison
* Let food be thy medicine, thy medicine shall be thy food — Hippocrates
* Your body is not a temple, it's an amusement park. Enjoy the ride — Anthony Bourdain

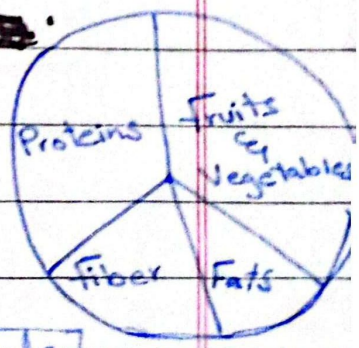
What is a balanced diet?

A Balanced diet is defined as one which contains different items of foods from 8 five groups in such quantities and proportions that the need of all (Seven) nutrients is adequately met.

Seven nutrients we need E

Seven Essential Nutrients:





Others Essential: Water, Fiber

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Five Food Groups:-

Diary

Dairy & Alternatives; Milk, cheese, Yogurt

Protein Foods; Meat, fish, Poultry, eggs

Grains; Bread, rice, pasta, oats, lentils

Vegetables; Broccoli, carrots, spanich etc.

Fruits; Apples, banana, oranges etc.

CamScanner

Day: Date:

Elements Of Balanced Diet & their function and sources

1- **Fats** - In most food s. fats as fuel to generate energy

function: fuels all bodily activities

Source: butter, oil, nuts, meat, fish & dairy products

2. **Proteins:-**

Function: The body is building, maitain & repair muscle tissues.

Sources: meat, poultry, fish, eggs, nuts beans

3. **Carbohydrates:-**

Function: body converts carbs → glucose for body cell needs

Source: release into bloodstream used as energy source

Grains, bread, cereals, vegetables, beans, fruits & dairy

4. **Vitamin & Minerals:** Vital for life

function: Proper functions, growth & development of body.

Sources: Vitamins & minerals sources are varied but fresh vegetables, fruits, meat & dairy products provide most of them

5. **Fibers** Type of carbs not easily able to break down.

Fiber

- Fat soluble
  - Function: Prevent or relieve constipation
- Water Soluble
  - Function: Controls Cholesterol

Sources: bread, rice, lentil, oats, vegetables & fruits.

CamScanner

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Significance Of Balanced Diet:-

1- Proper functioning of human body, some amount of every nutrient is vital.

2- Absence or deficiency leads to prone infection, diseases & fatigue

3- Therefore, balanced diet essential to keep human body safe and sound.

4- Who get unbalanced diet face stagnant growth, low physical performance, recurrent diseases & infections

How to Plan a Balanced Diet:

A ~~Perso~~ Balanced diet vary from person to person. according to his/her body

a) Sex; age, ~~calor~~ height, weight, gender

b) Calorie Requirement: Children, Adult, lacting or expecting women

c) Economic Status: If its poor or mediocre, prescribe the foods according to his affordability to maintain his daily diet.

d) Local availability: Get those foods which are locally or seasonably available to get easily. ~~at foo~~

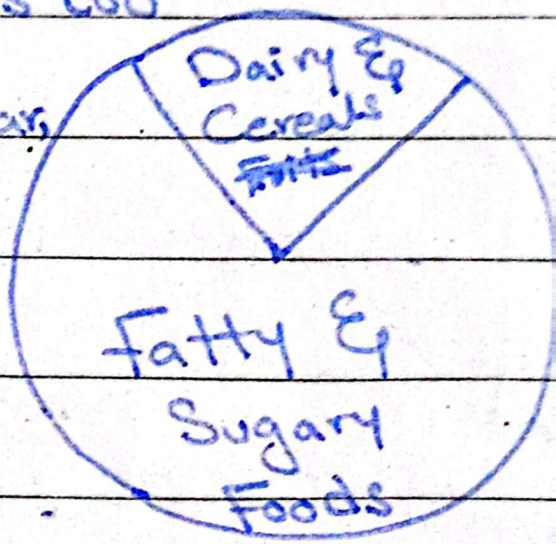
e) Must Include food from 5 groups to attain all nutrients which body need. so balanced diet would be attained.

After that we easily identify which person can get what calorie amount:

Person	Req. calorie
Sedentary child	1,000 - 1,400
Active Child	1k - 2k
Women = 9-13 years	1400 - 2,200
Men = "	1,600 - 2,600

What is UnBalanced Diet?

An UnBalanced diet lacks essential nutrients (proteins, fiber, fats, carbs, minerals) or has too much of certain things (sugar, unhealthy fats, salt).



• Unbalanced

Quote:-

To eat is a necessity but to eat intelligently is an art -

Every time you eat or drink, you are either feeding disease or fighting it -

— Heather Morgan

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Consequences Of UnBalanced Diet:-

Consuming excess sugar, unhealthy fats and salt, junk foods, coupled with insufficient vitamins, minerals, fiber and water creates these widespread problems.

Physical Health Consequences

a) Weight Gain & obesity: Too many calories from processed foods, sugars and fats cause weight gain

b) Type 2 diabetes: Excessive sugar intake leads to insulin resistance.

Heart Disease & Hypertension: Excess Salt, fats and cholesterol raise blood pressure & heart disease risk.

c) Weakened Immune System: Lack of essential nutrients makes you more prone to infections.

d) Osteoporosis: Insufficient Calcium & vitamin-D leads to weaken bones

e) Cancer: Low intake of fruits, vegetables and whole grains increases cancer risk.

f) Dental Problems: High Sugar intake

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causes tooth decay and gum disease

Mental Health Consequences

a) Fatigue: The brain needs consistent nutrients to function well.

b) Mental Health disorder: Deficiencies in nutrients like omega-3s & B vitamins are linked to depression & anxiety.

Gut related Imbalance: Affects digestion causing bloating, cramping & diarrhoea.

Other Issues

Malnutrition: causes fatigue, hair brittle or hairfall, weight gain etc

UNBALANCED DIET AND MALNUTRITION

A diet that doesnot provide the right amounts or variety of nutrients (macro & micro). It's an unbalanced diet.

While Malnutrition is state of poor nutrition resulting from an unbalanced diet.

It's may be over nutrition (too many calories) or under (Not enough calorie) nutrition.

Key difference

Diet (Input) = What you eat (unbalanced)

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Malnutrition (Output): The body's state due to that diet too little, too much or wrong way.

no need for full paragraphs in notes..

use phrases in bullets form....

1) Double burden: An unbalanced diet, nutrient-poor cause malnutrition in all its forms simultaneously. A person can be overweight or obese while also being malnourished due to lacking essential micronutrients.

Impact on Body Function

Malnutrition causes body to break down its own tissues, weakens the immune system and hinders physical and cognitive development.

Forms of Malnutrition caused by unbalanced diet.

Under Nutrition
- Wasting — low weight for height, severe weight loss
- Stunting — Low height-for-age, nutrient deficiencies
- Underweight — Low weight-for-age

Micronutrient related malnutrition:-

~~Hig~~ Hidden Hunger: Inadequate intake of essential vitamins and minerals (e.g vitamin A, Iodine, Iron) often referred as "hidden hunger".

Over Nutrition:- Caused by excessive consumption of energy-~~based~~ dense foods

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that are high in fats and sugars.

Consequences of this Relationship

⇒ Non-communicable Diseases

Unhealthy diets → heart disease, cancers, Strokes, diabetes

⇒ Weakened Immunity:-

Malnutrition → pneumonia & malaria

⇒ Reduced Development

Chronic Malnutrition → Stunted growth, impairs cognitive development

⇒ Economic Impact

Malnutrition → ↓Productivity, Slows Economic growth

Factors

Poverty, Food environment, Lack of knowledge, Medical Issues

Prevention & Treatment

- Balance Diet
- Nutrient-Dense Choices
- Fortification & Supplements.
- Policy Intervention

Reasons for UnBalanced Diet:-

Behavioral & Knowledge
- Lack of nutritional knowledge
- Poor dietary habits

Psychological factors
- Mental Health
  - Stress, depression, anxiety
- Eating disorder
  - over eating, under eating
  - anorexia nervosa: anorexia, self-starvation (fasting)
  - bulimia nervosa: Bulimia, disorder intake food, but rids the body through

Socioeconomic factors
- Poverty
- Social Influence

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Difference between Marasmus & Kwashiorkar :- Both are form of Malnutrition

Marasmus: Deficiency of both calories and proteins alongwith essential nutrients proteins carbohydrates & fats.

Kwashiorkor:- form of malnutrition. Deficiency of proteins. May receive enough calories but protein intake remains insufficient.

Differentiate b/w

	Marasmus	Kwashiorkar
Cause	Deficiency of Proteins & calories	Severe Proteins deficiency
Agegroup	b/w 6 months & 1 years	b/w 6 mnths & 3 years
Oedema	Absent	Present [Sweling in ankles, feet, face & belly]
Fatty liver	No enlargement of liver	Often enlarged
Appetite	Poor appetite	Generally a voracious feeder
Nitritional Requirement	Intake Proteins, Carbohydrates & fats	Adequate Protein Intake
Weightloss	Very Severe	Some degree of weightloss
Symptoms	Only thinning of limbs	→ Thinning of muscle limbs

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Treatments

1. Dietary Management
2. Medical Supervision
3. Nutritional Supplement (Ready to use sup foods; Micronutrient supplement)
4. Prevention
5. Include variety in meals
6. Monitor child growth
7. Hygiene & sanitation
8. Community Support

Vitamins

Latin word "vita" means life

Vitamins are groups of organic compounds required in small amounts for normal growth, development and metabolic function in humans

There absence can lead to deficiencies

There excess leads to toxicity

× Classification on the basis of solubility

Characteristics

1) They can not be synthesized by body tissues timely enough to meet our needs
2) Water soluble can't store in body. It excretes with urine
3) fat soluble can be stored in adipose tissue and liver.
4) Synthetic vitamins are identical to natural vitamin
5) Once growth & development are completed. Still body vitamins remain essential for body for healthy maintenance of cells tissues & organ of the body

6) When absent from diet, they will cause a specific deficiency.

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Functions:-

a) They buildup resistance of body against diseases.

b) Prevent & cure various diseases caused by deficiency.

c) Help digestion & utilization of mineral salts & carbohydrates

d) Help health protection

e) Maintenance of proper health and normal growth.

Classification on the basis of Solubility:-

Fat Soluble	Water Soluble
• It stored in body fat tissue. It can accumulate or save for later	• Our body is a watery environment So, they flushed out by kidneys through urine
• It dissolve in fat tissue	• It dissolve in water
Vitamins are A, D, E, K	Vitamins are B and C
	B-complex are eight B vitamins B1, B2, B3 B5, B6, B7 B9, B12 Only this can be stored in liver for many years.

Which vitamine is also a hormone? D Ans synthesized by body.

Classify on the basis of synthesis:-

2 branches

Vitamin synthesize by body	Take Get from your diet
Vitamin D	
Sun Exposure	
Vitamin Ca	
Bones Ca, d	

diet → absorb to blood → deposit in bones

Phosphorous (in form of phosphate) protect this calcium.} demineralization

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Vitamins

- Fat Soluble
  - Vitamin A — Retinol, retinal, retinoic acid
  - Vitamin D — Cholecalciferol, Ergocalciferol
  - Vitamin E — Tocopherols
  - Vitamin K — Phylloquinones, menaquinones
- Water Soluble
  - B-Complex (9 vitamins)
    - Energy relasing vitamins
      - Thamine (Vit. B_1)
      - Riboflavin (Vit. B_2)
      - Niacin (Vit. B_3)
      - Biotin (Vit. B_7)
      - Pantothenicacid (Vit. B_5)
      - Lipoic acid
    - Hemopoietic Vitamin
      - Folic acid (Vit. B_9) old name Vit M
      - Cobalamin (Vit. B_{12})
    - Other
      - Pyridoxine (Vit. B_6)
  - Non B-Complex
    - Vitamin C (L-ascorbic acid)

Tania Ranta Never
Play Poor Basketball
For Country

Vitamin-A :-

Sources: Carrots, Papaya, Meat
Eggs, Mangoes, Avocado, Peaches
Apricot

Function:- Vision,
Skin & cellular health
Antioxidant activity
Gene transcription
Immune function.

Date:

What is Beri Beri?

Beriberi is a disease caused by vitamin (B1) deficiency. It often occurs in people with a diet that consists mostly of white rice or highly refined carbohydrates.

Beriberi (deficiency of Thiamine)

- **Wet beri** → affect heart Circulatory. Extreme case: heart failure
- **Dry beriberi** → damages Nerves lead to decrease muscle strength & muscle. Eventual: Paralysis

In US, occur mostly in people with alcohol use disorder & also occur complication of weight loss surgery.

Symptoms:- Wet beriberi: swollen lower legs, rapid heart rate shortness of breath during physical activity.

Dry beriberi:- Vomiting, involuntary eye movement paralysis, difficulty in speaking.

Causes:- Diet low in thamine, Commone in those regions of world where diet is unenriched processed ~~with~~ white rice which only has a tenth of the amount of thiamine as brown rice, according to National Institutes of Health.

Risk:-
- Hyperthyroidism
- AIDS, alcohol misuse

Common deficiency Thiamine
- People with cancer
- who are nursing
- Restrictive diets

with

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How is beriberi Diagnosed?

Blood & urine test will measure level of thiamine in your body.
Neurological exam to look for symptoms like lack of coordination, difficulty walking
Physical exam like rapid heartbeat, swelling of lower legs & difficulty breathing

Treatment:-

Thiamine supplements, thiamine pill
Follow up blood test to see how well your body is absorbing the vitamin.

Prevention:-

Rich in vitamine like thiamine are:
- beans & legumes • seeds • meat • nuts • dairy

What is Pellagra? Pelle→Skin, Agra→Sour

Pellegra is a serious condition that impacts the skin, cognitive function, and digestive system. It's caused by low niacin due to malnutrition or absorption issues
Caused by low-levels of niacian, also known as Vitamin B-3. It's marked 4D's by dementia, diarrhoea, dermatitis, death. First discovered by Spanish Don Gasper Casal in 1735 as a disease of 3D.

Symptoms Niacin deficiency noticeable in body parts such as your skin or gastrointestinal trad

Dermatitis: Rash on face, lips, feet & hands. In some cases, around neck, this symptom known as

• red, flaky skin • thick, crusty, scaly • itchy, burning patches of skin

dementia symptoms are

• apath • depression • headaches • anxiety

• confusion or mood changes

Other possible Symptoms

• decreased appetite • trouble eating & drinking

• nausea & vomiting

Causes:

Primary Pellagra: caused by diets low in niacin or typtophan. Tryptophan can be converted to niacin in body, so not getting enough can cause niacin deficiency.

Corn contain niacytin that human can't digest and absorb unless prepared properly.

Secondary Pellagra: occurs when your body can't absorb niacin. Things that can prevent your body from absorbing niacin include: • alcoholism • eating disorder • gastrointestinal disease such as Crohn's disease & ulcerative colitis. • carainoid tumors

Diagnosed:

Difficult to diagnose due to range of symptoms. no specific test for niacin deficiency

Doctor check any gastrointestinal problem, rashes or changes in your mental state

Also test your urine.

Treatment:

Primary pellagra is treated with dietary changes and niacin or nicotinamide supplements.

• Early treatment, make full recovery & start feeling better within a few days of starting treatment.

Skin improvement may take several months

If left untreated, Primary pellagra causes death

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after four or five years.

Treating Secondary Pellagra also respond well to taking niacin or nicotinamid either orally or intravenously.

- Either Primary or Secondary, keep rashes mosturized & protected with sunscreen.

Sources of niacin

Available in Plant & animal foods.

bakers' yeast and meat (including liver) cereals, • legumes • green leafy vegetables • fish as well as • coffee and tea.

Niacin in plants occurs as nicotinic acid

Animal tissue mostly as nicotinamide.

good structure.....