



BISHOP BENZIGER COLLEGE

OF NURSING

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2.5.4 - Sample Retest Answer paper

RETEST PAPER

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[Signature]

① World health organization

World health organization was launched in 1954.

Objective :- is to obtain the attainment of all possible level of health

Adv structure of the WHO

- World health assembly
- Executive board/body
- The delegate

World health assembly

- It is the supreme governing body of the WHO. The functions are

- Formulates the international health policy & programmes
- Replaces the ~~replaces~~ members.

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- Review the data on the previous year & evaluate the achievements

- Sanction the working year budget.

→ Executive board/body

- Most into ~~implement~~ ^{implements} the decisions taken in the world health assembly

- It also have the rights to take decision in any emergency situation like disasters & other conditions.

Meets twice in a year. First in the ^{beginning of} January & second in



may. and the members are for 3 years.

→ The secretariate

The secretariate members includes the other personnel in the who team. Their role is to arrange the day-to-day services and technical support. The following are the some of the functions :-

- Disease surveillance like communicable & non-communicable diseases
- Health audits
- water, sanitation & food
- Educational audits
- community based development.

Role of WHO in public

- providing leadership or makes centres to health planning in the partnership. Where joint action is needed.
- shaping the research agenda & stimulating the generation, production & dissemination of valuable knowledge
- setting norms & standards - & promoting & monitoring their implementation
- articulating ethical & evidence based policy options
- monitoring the health situation & assessing health trends.

→ Core programmes

- Communicable disease surveillance including leprosy, malaria, filaria, TB, AIDS etc..
- Evidence & information for policy including national health accounts, policies, medical ethics etc..
- Family & community health including reproductive health & research, child & adolescents health, etc..
- Social change & non-communicable disease include cardio-vascular, diabetes, chronic lung diseases, hypertension etc..
- Sustainable development & healthy environment including chemical safety, proper drainage system, environmental pollution etc..

Special programmes

- Roll back malaria
- Revised national tuberculosis control programmes
- National polio surveillance programme
- 3by5 HIV/AIDS
- National leprosy eradication programmes



past overview of WHO

- The world health day on 2011 was launch the world wide campaign of the ~~defused~~ ~~these~~ medicines with the theme of antimicrobial
- 2010 launch the urbanisation of health
- 2009 - make the hospital safe in emergencies
- 2008 - protect the health from climate change
- 2007 - international health security
- 2006 - make every mother and child count -
- 2005 - ~~make every mother and child count~~ work together for health
- 2004 - ~~work together for health~~ Road safety
- 2003 - ~~Road safety~~ make business of life
- 2002 - move for health
- 2001 - mental health

activities of WHO

- ~~The WHO~~

② Health economics

Health economics is a social system that studies the supply and demand of health care resources and the effect of health services on a population.

Five health markets typically analysed are

- Health care financing market
- Personnel market
- Institutional services market
- Input services market
- Professional education market

Importance

- To promote efficiency & equity in health care sector by providing analytical techniques to decision makers or health planners.
- To provide ways of thinking about health & use of health care resources.
- To provide a process for recognizing the scarcity & the need to make choices in health care sector.
- To maximize the social benefits from health producing resources.

Concepts related to health economics

→ Cost of health care

x cost is an amount paid or required in payment for a purchase.

↳ usually measured in money, time, or energy expense.

Types of cost

- Average cost
- Fixed cost
- Total cost
- Variable cost
- Marginal cost



cost related to health problems

- avoided cost: cost caused by a health problem or illness which are avoided by a health care intervention
- direct cost: those cost borne by health care system, community or patient families in addressing the illness
- indirect cost: productivity losses to society caused by the health problem or disease
- cost-effectiveness: Point at which the minimum amount of input is used to achieve a given output
- cost of illness: Permeat cost of acute or chronic disease; it may be an economic, social, psychosocial or personal loss to self, community or family.

→ Health care costs & health expenditure

Health care cost is the actual costs of services related to the delivery of health care, including the cost of procedures, medicines etc.

Health expenditure is the amount spent by individuals, groups, nations or private or public organizations for total health care and all various components.

→ Source of funding of health care agencies

Health care agencies may be of two types:

- proprietary or profit health institutions: They receive payment from those who use their services.
- non-profit health agencies
 - government: public hospitals are funded by governments
 - voluntary institutions: funded by private / trust / charitable

→ Managed care

It is a health care plan that integrates the financing of delivery of health care services by using arrangements which selected health care providers to provide services to lowest individuals.

→ Health Economics & Financing

- Health financing is a major part of health economics & is important in analyzing health policies, sources & fuels of effectiveness of health services delivered to the public.

→ National health policy

Expenditure for preventive & curative services & also expenses at the primary, secondary & tertiary level of health care are included

→ Health objectives & Budget

- Revenue of health sector
- Financial provisions
- Estimate of income & expenses
- Health budget of the nation

→ Expenditure on health

- In medical facilities, financial provision is made by public, private & combined sources
- Large number of people benefit from private sector, the expense made for diagnosis, treatment & other matters.

→ Demand

- The amount & type of health care the consumers demand or is willing to purchase

The demand level around consumer needs desires, type of health care, treatment selection selected by health care providers & special focused needs.

→ Supply

- The amount of resources currently available for delivering health services.
- Supply levels are constantly change because of technological advances



→ Cost containment

- It refers to measures which are designed to reduce health care costs
- A detailed plan & process of maintaining organizational cost & purchased services within certain specified budget limits over a period of time.

Evaluation methods in health economics

⇒ Cost benefit Analysis

- It is used to determine allocative efficiency
- It comparison of cost & benefits across programmes serving different patient groups.

⇒ Cost Utility Analysis

- Multidimensional health outcomes are reduced to a single index using health utilities
- The best known utility measure is the Quality Adjusted Life Year

⇒ Cost effectiveness analysis

- It is a form of economic evaluation applicable strictly only when outcomes are one dimensional.

- It is used to determine technical efficiency

⇒ Cost minimization analysis

- The objective is to decide least costly way of achieving the same outcome
- Outcomes of competing interventions are the same & only inputs net is cost are taken into consideration
- ~~minimize~~

③ Functions of India Red Cross
- launched in 1920

- Relief works
- Milk & medical supplies
- Armed forces
- maternal & child health welfare services
- family planning
- first aid & emergency

→ Relief works

The red cross team members provide relief in case of any emergency disaster and promoting health & also care the vulnerable people & communities. The team work is the important thing because they didn't worried about their health & life they rescue the people's from emergency situations.

→ Milk & medical supplies

They providing emergency supplies like medicines and other products for themselves. and also for the rescues to maintain their health also. The team have special medical benefits from their hospitals.



→ Armed force

The injured person will undergo for treatment on their hospital. Hospital is in Bangalore for all the red cross teams. The injured person will shifted on the disaster/emergency situations. They protect their health from any accidents at their maximum level.

→ Maternal & child welfare services

The red cross team provide special services to the mother & child. For children immunization, health education should be given. For the mother's they provide treatment such as antenatal, post natal etc. -- All these services are given for the members.

→ Family planning services

Family planning services for the couples. And provide health education on family planning like spacing, sterilization etc. -- Special aided services are provided by the red cross society.

→ First aid & emergency

Provide first aid in case of any disaster or emergency cases. They have specialised hospitals & also the red cross team know about the first aid given to the vulnerable people & communities. They have special training for the first aid & emergencies.

④ UNICEF

- The United Nations Children's Fund was renamed to United Nations International Child Emergency Fund
- launched in December 11 in 1946.
- aim is to provide emergency food & child managements.
- UNICEF has close collaboration with WHO and also have other specialised agencies like UNDP, FAO, UNESCO.

- Following are the departments of UNICEF :-

- Health services
- Educational services
- Community development
- water, sanitation & food.

Functions are

- basic education to the world wide
- proper water supply & sanitation
- handker sanitidy should be avoided
- Community based care should be provide
- Prevent health from diseases.



devices are :-

→ procurement devices

Procurement devices include technical or management devices. Special medical devices should be included in these devices. Like cold storage, ~~various~~ medical supplies etc. All the records or reports should be maintained by the health teams.

→ Immunization

UNICEF and WHO combined to promote the vaccination to the society. They provide essential vaccinations to the health departments and also have implemented the ~~various~~ vaccination schedules. They provide vaccination to prevent from the infectious diseases. Also conduct campaigns for the immunization.

→ Nutrition

The UNICEF promote food supplements to the children to prevent from malnutrition. The main aim is to prevent the malnutrition among children. UNICEF also provide some nutritional programmes for children below 5 years of age.

→ IMCI (Integrated management of neonates & children)

Mainly the IMCI for the neonates & children to prevent from infectious disease & promote positive health. They providing ~~supplies~~ nutritional supplements & immunization to the children. They promoting special health services to the children by health check-ups, maintaining health records, immunization etc.

→ Education

provide health education to the parents & society to prevent the children from malnutrition, nutritional anemia & about immunizations. proper education helps in reducing the diseases & undernourishment. UNICEF conducts many campaigns, health education & other programmes to aware the society.

→ child protection

Protect the child from infectious disease & communicable diseases like malaria, diarrhoea, tuberculosis etc. And also maintain their health by proper health checkups and immunizations. and also protect the children from undernourishment.

→ Emergencies & HIV/AIDS

Prevent the children from harmful hazards and also from the HIV infection. provide proper care for the children in emergency injury or other accidental injuries. HIV infections may be affected to the children by improper use of syringes, from mother to child or other abuses. special attention is needed for the children.

⑤ Cost containment strategy

- cost containment strategy refers to the measures which are designed to reduce health care cost

- It is a detailed plan & process of maintaining expenditure cost & purchased prices within set ceiling specified target limits over a period.

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Reshmi

RETEST PAPER

① Nutritional health programmes in India

There are 7 nutritional health programmes in India. They are 1.

① Vitamin A prophylaxis programme

- * Prophylaxis against nutritional anaemia
- * Control of iodine deficiency disorders
- * Special nutritional programmes
- * Balawadi programmes
- * Mid-day meal programmes
- Mid-day meal scheme

* VitA prophylaxis programme

Vitamin A prophylaxis programme was launched in 1970 under the Ministry of health & family welfare. This programme is mainly for night blindness due to vitamin A deficiency disorder. It provides by administering oily contains medicine which contains 200,000 IU (11mg of retinol palmitate) orally to the preschool children every 6 months. It prevents the childrens from Vitamin A deficiency.

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→ prophylaxis against nutritional anaemia

Nutritional anaemia is the main deficiency disorder in children & women. This programme was launched in 1970 under Ministry of Health & Family Welfare. The main aim is to prevent anaemia from children & mothers. For the mother & children ~~also~~ elementary iron & folic acid tablets are provided to control the anaemia. And also lactating ^{or breastfeeding} mothers to be given 100mg elementary iron & 0.5mg folic acid tablets. 6-12 months provide 30mg elementary iron & 100mg folic acid. The 6-12yr & adolescent provide 30mg elementary iron & 20mg folic acid.

→ Control of iodine deficiency disorder

National goitre control programme was launched in 1962. Mainly the Himalayan regions can be found that most of the people have deficiency of iodine. In that areas more salt content was high. This programme is aim to prevent the iodine deficiency. Proper iron & folic tablets are given to reduce the deficiency disorder.

→ Special nutrition programme

Special nutrition programme was launched in 1975. This programme aim to provide nutritional supplements to prevent malnutrition in children. It is under the national health & family welfare programme. Special nutrition supplements will be given to the beneficiaries like children, adolescent girls & lactating women or nursing mothers. It should be provided through various volunteers in our society.

→ Balwadi nutritional programme

This programme is under the social welfare society. This programme launched in 1961 and the aim is to provide supplementary nutrition to 3-6 yrs of childrens to prevent malnutrition. 3-6 yrs of childrens need 300mg of supplementary nutrition & 10-15gm of protein diet. For adolescent & lactating mother need 500mg of supplementary nutrition and 10gm of protein daily in their diet.

→ Mid-day meal programme

This programme was launched in 1970 under social welfare society. Main aim is to provide supplementary diet to school childrens. This is also known as school lunch programme. The school childrens provide appropriate supplementary nutrition & protein diet. For preschool children need 300mg supplementary & 10-15gm of protein. It also provide childrens to interest to come to the school & become literate.

→ Mid-day meal scheme

This programme mainly for the school childrens. In lunch time, mainly the adolescent girls need more supplementary nutrition & protein diet. This is under social welfare society & ICDS programme were also included in this scheme. Appropriate dietary plans should be need for daily & menu should be change every day. The supplementary & protein diet should be mainly need in the school.

② Strategies of HIV/AIDS control in India

National AIDS Control Programme was launched in 1987.

Strategies / Phases

Phase I (1992-1999)

- Mass education & communication is needed for the HIV infected patients. They don't have the awareness about the infection & need psychological support through effective health education & communication.
- In 1996 National Blood Transfusion Policy was implemented for donating blood, storage etc. For transfusing to the patients need special attention & strict checking should be needed.
- Condoms prevent the transmission of infection from one person to another. Many private companies were manufacturing the condoms & it is available from health volunteers & also from the pharmacies.
- Annual serological surveillance is necessary to ~~survey~~^{ascertain} the HIV infected person in the country. Every survey is conducted to identify whether the infection is uncontrolled or decreased.
- Due to unregulated sexual intercourse will also a major problem. ~~The~~ unwanted sex with HIV infected person will ~~also~~ cause infection to the other person.

Phase II (1999-2009) launched in 1999.

- Mass education & communication is necessary for the people to be well aware. They don't have any awareness about the HIV infection. Good health education & campaigns will conduct it helps the people aware about the infection.

→ Volunteer counselling & Testing centers in every locality for conducting HIV tests & also for counselling. It should be necessary in every centers for awareness of the infection.

→ Programme for prevention of Mother to child transmission is necessary and in the case for the baby special attention & care should be need for the mother it should be conducted as campaigns in many medical colleges etc -

→ Treatment & prophylaxis for opportunistic infections should be appropriate and the treatment regimen is based on the signs & symptoms of diseases. And also prophylaxis is need for HIV-TB coinfection.

Plan III (2007-2012)

→ condoms promotion prevents the transmission of HIV infection from one person to another. It can be available in every health centers & also from the medical shops. The government of India promoting the condoms to prevent infection.

→ safe blood supply: proper blood transfusion helps in healthy person and if the person is infected it will be affected to the other receiver.

→ counselling & testing centers are available in each areas. It helps the patients from psychologically problems by conducting counselling & people to testing centers from preventing the infections.

→ prophylactic treatment

Prophylactic treatment helps the patients from their signs & symptoms and also providing psychological supports to prevent depression. They need positive mentality & should be boost up by prophylactic treatments.

→ Care, support & treatment should be needed for the HIV infected persons. Otherwise, they feel isolated or discrimination among the society. Need special attention & treatment for their health & mental status.

→ Collaboration with the HIV-TB action plans. If the person is affected the HIV and TB it should be implemented through the HIV TB action plans. Certain centers should be available in our surroundings for these people.

→ Mainstreaming: our government have ^{certain agencies} ~~units~~ ^{contributing} ~~to~~ for these people. They providing appropriate supports like medicines, rooms, hospitals for the patients is a mainstreaming in the health.

③ Pulse polio immunization

= Pulse polio immunization was launched in 15th August 1995.

- pulse attends for 'post-eradication and utility of life saving efforts'.

- The aim is to prevent the transmission of poliomyelitis.

- Mainly given to the children under ~~15~~ 5 years of age.

- It should be given as OPV or per oral drops.

- OPV was also given at 6 weeks, 10 weeks, 14 weeks.

- The drops is safe and effective to prevent the poliomyelitis.

- The vaccine kept in a cold chain. to prevent from sunlight or otherwise it will be damaged.

- The damaged vaccine can be identified by its colour code. If it is blue or pink while it is lost otherwise it is pink it is damaged.

Nurses responsibilities

- The nurse should identify the child's name & age should be mentioned and mark should be added in their under finger.
- The nurse should check the potency of the vaccine.
- The nurse should check the cold chain contains proper ice packs.
- ~~The nurse should maintain proper record & reports.~~
- The nurse should register each & every child's identity.
- ~~The nurse should check the child have any fever or symptoms.~~
- The nurse should inform the mother that breast feeding should give after 2 hours if vaccine is given.

④ Role of a community health nurse in RNTCP Revised

- The community nurse should identify TB suspected persons in the community area.
- The community nurse should register the TB suspected persons names & address.
- The community nurse act as a depot and health educator to give health education & awareness campaign to the people.
- The community nurse should visit & give directions on waste disposal of suspected person.
- The nurse should ~~provide~~ act as DOT provider to provide drugs to the TB patients.



- The nurse should advise to follow-up of taking proper medicine at right time, right dosage of right duration of time.
- The nurse should advise that the medicine that should be given back to the ~~nurse~~ for the next visit.

5) Role of a CHN in RH

- The Community nurse should conduct the survey on pregnant & infants in their area.
- The community nurse should register the ~~name~~ ^{each} every pregnant mother name & address.
- The community nurse should provide complementary nutrition to the pregnant mother & lactating mother.
- The community nurse to ~~check~~ ^{provide} the antenatal, ~~postnatal~~ ^{postnatal} care.
- The community nurse provide vaccine for the infants & immunization card should be given to the parents.
- The community nurse should advise the mother regarding breast feeding.
- The community nurse should conduct family planning spacing method techniques mass media campaigns or health education to the couples.

Anti-Adult measures

Residual spraying

DDT was implemented in 1940s.
 Indoors housing malarias & febrile diseases spraying is done to prevent the mosquito vector borne diseases.

Space application

It should be in outdoors like air spray or foam to prevent the malarial diseases and is effective to the surroundings.

Individual protection

Individual protection means closing the windows & evenings, full sleeves dresses, repellents etc. methods are using in our home made techniques are mostly using it is not harmful.

⊕ Integrated child development scheme (ICDS)

- ICDS launched in 1975
- aims to reduce the mortality & morbidity of infant, reduce the morbidity & mortality of maternal ex.
- It is a centrally sponsored scheme.
- package of service rendered to mother & child.

Anti-level measures

Lacicides

It is also a pesticides to prevent the vector borne disease. It is like air or foam ^{is effective} method.

Source reduction

Source reduction method is like ~~pollutants~~, mosquito repellents, aerial pesticide method to destroy the vector borne diseases.

Integrated control

It is like individual protection like wearing full sleeves, mosquito control machines, closing windows etc. - all the methods to be used.

Integrated management of neonatal & childhood illness

- It is a comprehensive package of services rendered to the ^{look} most ^{low} to prevent childhood illness like diarrhoea, malice filaria etc.
- Beneficiaries
 - infant
 - child

- Beneficiaries are: under five children

- Pregnant women
- Adolescent girls.

- Services are:

children:

- checkups
- Immunizations
- Referral services
- Supplementary nutrition etc.

maternal

- checkup (antenatal, intrapartum & postnatal)
- Immunization
- Supplementary nutrition
- Family planning etc.

- essential components are:-

- Improve health & nutrition workers skills
- Improve health systems
- Improve family & community practices

- Training given to the doctor for cuppatient ⁱⁿ management of sick young child & infant.

- Home visits are conducted by the volunteer teams.

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50Protein Energy Malnutrition (PEM)

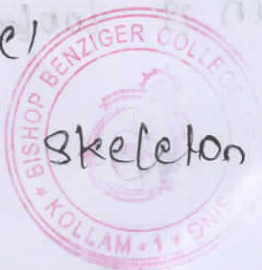
It refers to the deficiency of energy and protein in the body and it is reflected by decreased growth rate and indicated by reduced height and weight in children and adult in comparison to the established standard.

Causes

- Inadequate intake of food
- Infections like diarrhoea, measles etc.

Clinical forms of PEMMarasmus

- Protein calorie malnutrition is called marasmus.
- In greek it means 'waste'
- Child has monkey face and skeleton covered.



with shrunken, wrinkled skin like that of an old man. The child has an emaciated look.

• Child is irritable and suffers from cyanosis.

• No colour change is noticed in face & skin.

• The disease is also often accompanied by GI problems resulting in further loss of vitamins, minerals and water. The child passes bulky, semisolid stools that are acidic.

• Period of recovery is much longer.

Kwashiorkor

• Deficiency of protein food during growth period known as kwashiorkor.

• In greek it means "displaced child".

• Child has moon face, muscle wastage is not noticed because of edema and has pot-belly because of fatty liver.

• Child suffers from anorexia, apathy.

• The skin looks like depigmented & peels off.

3
In some cases, ulceration will be seen on lower limbs, knee, shoulder etc.

- The neuro is soft and taken on copper tint, the loss of pigment is permanent.

- Patient recovers within a short period of time.

Prevention

- Improvement of sanitation and programme of immunisation, nutrients education etc.

- Family planning and spacing birth.

- Diet of the child must contain protein energy rich foods (milk, egg, fresh fruits, etc)

- Food fortification

34 - Early detection and treatments (ORS for

children with diarrhoea, periodic surveillance)

Rehabilitation

- Follow up care

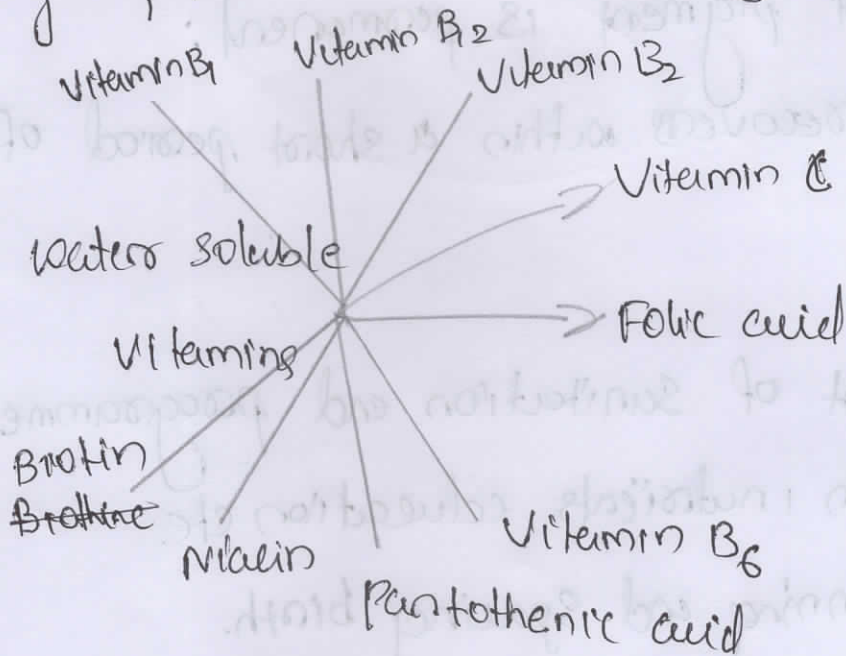
- Hospital treatment in severe PEM

- Nutritional Rehabilitation services.



2. Water soluble vitamins

It is easily absorbed and belongs to the B-complex group.



Vitamin B₁ - thiamin

Functions

- It is also known as antineurotic vitamin.

Functions

1. It is important for the synthesis of glycine.
2. It helps the heart in its normal action.
3. Oxidative decarboxylation.

Deficiency

- Beriberi
- Anorexia
- Constipation
- Itchiness and sleeplessness

Sources:-

Rich sources:- whole grain, dried yeast.

Good sources:- oils seeds, nuts, legumes.

Few sources:- meat, fish, milk, vegetables, fruits etc.

Daily requirement:-

1.2 - 1.8 mg

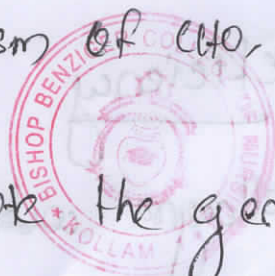
Riboflavin

It is yellow green fluorescent pigment.

Functions

1. It is essential for the metabolism of CHO, fat and protein.

2. Riboflavin is known to promote the general well being among individuals.



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• Essential for healthy skin, normal vision etc

Deficiency

- Cheilosis
- Angular stomatitis
- Glossitis
- Seborrheic dermatitis
- Photophobia
- Anaemia

So

Sources

- Milk and milk products, fleshy food (egg, meat, fish etc)
 - Cereals :- ~~and~~ root & tubers and other products.
- RDA :- 0.6 mg (1000 kcal)

Niacin

Functions

- Essential for the metabolism of CHO, fat and proteins
- Essential for the normal function of the:-

'Skin, intestine, nervous system

Deficiency

- Pellagra ~~with~~

Sources

- Chicken yeast, livers, cereals, meat, fish, dal - & good sources.
- Fero sources like millet cereals, roots and tubers, coffee, tea, milk etc.

Daily requirement :- 6mg / 1000 kcal.

Folic acid

It is found in green leafy vegetables.

Function

- Required for cell division
- Essential for nucleoprotein synthesis.
- For the maturation of erythrocytes.

Deficiency:-

- Megaloblastic anemia
- Neural tube defect

Sources

- Green leafy vegetables and fruits
- Groundnuts, beans, fruits, organ meat



Daily requirement:-

Adult :- 100 - 200 mg/day

Vitamin B₁₂ / Cobalamin

It is also known as Antipernicious anaemia factor.

Functions

- Essential for the maturation of RBC
- It stimulates growth and appetite
- Required for the synthesis of myelin

Deficiency:

- ~~Nervous lesions~~
- ~~Nervous tissues are degenerated~~
- Nervous lesions
- Macrocytic anemia with degenerative changes in gastric mucosa.

Sources

- Food sources:- meat of all animals
Eggs, fish and milk and sea foods.

Daily requirement :- 1mg - 12mg

Pantothenic acid (B₅)

Functions :-

- Synthesis and breakdown of fatty acids.
- Heme synthesis
- Metabolism of some amino acids

Deficiency

- Burning feet
- Anemia
- Muscle cramps.

Sources

- Whole cereals, legumes
- Brewer's yeast, liver, wheat germ etc.

RDA :- 5 mg / day

Biotin

Functions :-

- Helps to maintain the skin and nervous system in sound condition
- Essential for normal gestation, cell metabolism,



and lactation.

Deficiency

Egg white injury factor (Avidin)

Sources

Nearly present in egg white.

Vitamin B6

Functions:-

- Helps in conversion of tryptophan to niacin
- Hem synthesis

Sources

- whole grain, cereals, nuts, dried yeast etc.

Deficiency

- Nervous irritability and convulsion
- Peripheral neuritis

Daily requirement

2mg/day.

5. Calcium deficiency

Osteoporosis

- Poor calcium deficiency disease is osteoporosis.
- In osteoporosis serum calcium level is normal but body store is reduced. During the old age the capacity of the body to absorb and utilize the calcium is diminished.
- In women hormonal imbalance during, menopause or removal of ovaries at earlier stages result in this.
- It is mainly seen in the bone due to decalcification, back pain, loss of weight, fracture of bones and loss of teeth are some clinical symptoms.

Risk Factors

- Females
- Family history
- Alcohol
- Caffeine



Tetany

is another symptom of calcium deficiency.

• Hence, ~~the~~ it is hyperexcitability of nervous system, irritability, confusion, pain, spasm, bronchial muscle spasm, GI spasm pain and convulsion are the symptoms of tetany.

• In chronic tetany nervous stages acquire and impairment of memory false palsy; depression, irritability, loss of nail and hair, pitting of teeth are the other symptoms.

Calcium and Vitamin D deficiency result in rickets and osteomalacia and osteopetrosis occurs in children & adult.

4. Functions of Protein

Building block :- Protein is to supply amino acids to cells for the continuous replacement of tissues throughout life.

2. Sparing action:- When the diet contains insufficient CHO & fat for fuel proteins are used as fuel by the body

3. Act as binding factors:- Lipoproteins and serum proteins are very essential for our body for transporting many chemical substances

4. Defence & de-toxification:- It is used to build special white blood cells and antibodies to help defend against disease of infection, are called immunoprotein

5. Regulation of body processes:- Body protein have highly specialised functions.

6. Water balance:- Plasma protein especially serum albumin & globulin play an imp. role in regulating osmotic pressure and control water balance throughout the body

7. Help metabolism:- Manufacturing agent like digestive and cell enzyme



8. Formation of enzymes, hormones, and other secretion like, trypsin & pepsin & hormones like insulin and thyroxine

7. Principles of Menu planning

- 1. Disease condition of the patient
- 2. Meal planning should meet the nutritional requirements
- 3. Family composition
- 4. Meal pattern must fulfill the family needs
- 5. Planning should save time and energy
- 6. Economic consideration
- 7. Meal planning should give maximum nutrients.
- 8. Meals should give satiety
- 9. Consideration of food individual likes and dislikes
- 10. Food and habits
- 11. Left over food
- 12. Psychological aspect
- 13. Seasonal availability
- 14. Meal planning should provide variety

6. Factors affecting food and nutrition

1. Physiological Factors
2. Sociocultural factors
3. Psychological factors.

1. Physiological factors

- Hunger:- starving people will usually accept anything edible that will full the stomach.
- Sensation produced by food:- Palatability of food is a combination of taste, texture, flavour and temperature.

2. Sociocultural factors

◦ Role of culture

Table patterns are deviated by cultural and occupational factors.

◦ Social value of food

All occasions are accompanied with food.



• Religious and moral values:

Muslims doesn't take pork. Brahmins doesn't take pork.

• Age

Age also influence food intake

3. Psychological factors

Food satisfies the emotional need.

8. Body mass index

The most effective and scientific method is Body Mass Index. It is used to assess the obesity.

BMI is defined as weight in kgs divided by square of height in meters.

$$BMI = \frac{\text{Weight in kilograms}}{(\text{Height in meters})^2} = \frac{W}{H^2}$$

$$\text{Normal value for men} = \frac{W}{H^2} = 20-25$$

$$\text{For women} = \frac{W}{H^2} = 19-24$$

values over 25 indicate obesity.

Normally, it is used to classify the obesity and overweight in adults.

On the basis of BMI obesity is graded as :-

Normal - 18.5 - 24.99

Overweight - ≥ 25

Grade I - 25 - 29.9

Grade II - 30 - 40

Grade III - > 40 .

9. Beriberi

Severe deficiency of thiamine causes beriberi.

Dry beriberi

It causes degeneration of nerve of arms and legs and heaviness and stiffness in leg muscles result in difficult mobility. There may be loss of muscular co-ordination called ataxia. Tingling and numbness of legs, toes, ankles and hands are followed by wasting of muscles.



2. Wet Beri-beri

All symptoms of dry beri-beri, plus puffy oedema in legs and bloated cardiac muscle and lungs observed. Enlargement of heart, later palpitation, dyspnoea, serious case can progress to output of cardiac failure - this condition is called Shoshin beri-beri.

3. Infantile Beri-beri

It acquires in infants b/w 2 to 5 months of age.

The symptoms are restlessness, sleeplessness, irritability, diarrhoea, and enlargement of heart etc. The affected ~~part~~ may develop cyanosis, skin turn to blue, loud cry. If treatment is delayed, it leads to death.

10. Anthropometric Methods of Nutritional Status

Assessment

It involves obtaining physical measurements of an individual and related them to standards that

reflect the growth and development of the individual.

Commonly measurements are:-

- Height and weight
- Head circumference
- Arm circumference
- Waist circumference

24 These measurements are another ^{required} ~~used~~ for evaluating over nutrition & under nutrition, so it results accurate measurements.

3. Pellagra

Severe niacine deficiency disease is pellagra or 3D disease. It from Italian word 'Pella' means skin and 'agra' means rough. The effect of pellagra are known as 3'D disease.

It is characterized by 3 disease:-

1. Dermatitis
2. Diarrhoea
3. Dementia



1. Deromatitis

Lesions are seen on face, neck, surfaces of the hands, elbows, feet and other parts of the body which are exposed to sunlight. Skin is cracked and burning sensation, scaly and itching are common.

2. Diarrhoea

Nausea, vomiting, and diarrhoea are other symptoms. Mucus membrane of alimentary canal is affected and glossitis, abdominal pain, loss of appetite are seen.

3. Dementia

It acquires due to impaired ability of the brain to obtain energy from C10, which in turn result in delirium.

Pellagra is common among poor & maize eaters.

Maize has a very high leucine content and the excessive leucine interferes or inhibit with the utilization of niacine.

11 Distribution of body waters and H₂O daily requirement

The total body fluid is distributed among 2 major compartments:-

1. The extracellular fluid or waters present outside the cells: ie, interstitial spaces and blood plasma.
2. The intracellular fluid or waters present inside the cells.

Water Requirements

A minimum 6 to 8 glasses of water is recommended:-

Oral intake of water:-

1. Beverages and liquid foods:- Such as tea, coffee, milk, shakes, soups are largely made up of water

2. Water content of solid foods:- fruits, vegetables.

The water consumed from beverages and solid food amounts to 200 ml / day approximately.

