



**Farook Training College Innovative Academia (FTCIA)
Online Collaborative Learning Project (OCLP)**



Pre-Edited Version of Study Materials.

(Chance for minor errors)

Farook Training College Innovative Academia (FTCIA)

Online Collaborative Learning Project (OCLP)

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The entire materials are prepared by the B.Ed students (2020-22) of Farook Training College, Calicut, Kerala.

It is expected that this will be a support for those who need simplified, concise but comprehensive study materials for their examination preparation. It is a smart footstep to self learning and peer learning.

A note of appreciation to all student teachers who are the workforce behind this great endeavor.

Team OCLP
FTC

EDU03:SCHOOL ORGANISATION

Unit 1

EDUCATIONAL MANAGEMENT

Concept need, scope and functions of management

Management is goal oriented activity

- Educational management means to operate the educational organisation

Meaning

- managing an educational system to extract maximum output
- educational management is the process of planning ,organising, directing and controlling the activities of an educational institution by utilising human and material resources so as to effectively and efficiently accomplished the functions of teaching extension work and the research

Needs

- effective and efficient functioning of educational institution
- bring qualitative change in educational institutions
- define functions of educational institution
- to achieve institutional objective
- to coordinates the school activities
- enable optimum utilisation of available resources
- to improve interpersonal relationship

- to manage interpersonal conflicts
- enhance efficiency and effectiveness of human and material resources
- to climate change
- to simply the complexities
- encourage members to get maximum output
- facilitates expansion and diversification
- planning of curricular and cocurricular activities
- help in financing and budgeting of the institution
- further technological advancement
- to maintain good good atmosphere
- to create and maintain good public image

scope

- management principles and theories related to education
- roles and responsibilities of educational manager
- planning Educational Board, policies and procedures
- designing, planning implementing and evaluating curriculum
- providing human resources
- providing material equipment and sufficient teaching aids

- organising co curricular activities
- preparing time table
- maintenance of school record
- maintaining discipline
- motivating staff and students
- guidance and counselling
- providing services to students
- professional development of teacher
- community services

FUNCTIONS

- planning
- organising
- directing
- motivation
- evaluating
- decision making

1. planning

- process of setting objectives and determining what should be done to achieve them
- sketches a complete Mental picture of the organisational activities
- process of elected ahead
- process of Thinking before doing
- it helps to reduce uncertainty
- increase the efficiency of the organisation
- planning in educational and co curricular activities through suitable person and aspects

2. organising

- combining necessary human resources and material resources in a systematic and effective way to accomplish the objective
- process of identification and grouping of activities as well as training them to different departments
- establishes other responsibility relationship

3. Directing

- involves getting the work done through instructions and orders
- part of educational management which ensures the members of organisation to work efficiently and effectively
- involves supervision, communication and leadership

4. Motivating

- **AIMS at influencing and stimulating the human resources in the educational institution to do their job most efficiently**
- **plays a major role in the performance of the members of the organisation**
- **inducement to act more**

5. Evaluating

- process of measuring and assessing the achievement of objective
- evaluating whether School activities are done in accordance with the plants mode
- provide insight into trunk and weakness of the institution
- help to bring about improvements in educational institution
- controlling measure

6. Decision making

- it is a part of planning
- **it is the essence of management**
- key factor in educational management
- by considering various alternative causes and consequences of each course of action as suitable cause of action must be determined

Institutional climate

- institutional environment very from institution to institution
 - institutional climate influence the behaviour of members in the institution
- definition**
- **organisational climate is a set of characteristics that describe an organisation and that distinguishes an organisation from another organisation is relative permanent over time influences the behaviour of the people in the organisation**
 - **it is a multidimensional concept**
- 1. social dimension**
 - 2. physical dimension**
 - 3. academic dimension**

1. social dimension

- role of institution in the society
- quality of interpersonal relationship between and among students and teachers and other staff
- degree of competition and social comparison between students
- degree to which students teachers and staff contribute to decision making

2. Physical dimension

- appearance of school building and its classroom
- school size and student teacher ratio
- availability of resources
- safety and comfort
- order and Organisation of classroom

3. academic dimension

- quality of Institution
- teacher Expectations for student achievement
- monitoring student progress and promptly reporting each to parents and students

factors affecting institutional climate

1. external factors
 - government policies
 - changes in curriculum
 - time management
 - competition
 - political and economic scene
 - social and cultural interference

2. Internal factor

- organisational policies
- leadership styles
- economic conditions
- characteristics of staff
- compensation
- incentives
- salary of staff
- distribution of work
- managerial values
- relationship among members of the organisation

Types of institutional climate

1. Autocratic climate

- organisation is touch standard
- the head of the institution exercises if centralised control
- the head direct a actions
- planning is done by the administrator
- committees are nominated by the administrator
- administrators tells the teacher what to do
- the principal for headmaster embarrasses the staff before the students and parents
- principal take the credit of all success
-

- administrator does not give recognition to parents and other members of the society
- administrator dominates the school personal
- principal or head master gives direction in a firm and rigid manner
- administrator insist in a fixed programs and direct teacher
- the principal does not like to share responsibility with the students
- an environment of mutual distrust exists

democratic climate

- under democratic climate the institutional activities -social ,economic ,political etc are organised on democratic principle, values and ideal
- planning is done Cooperative by the school personal
- committees are chosen by members of the institution
- principal or head master respect the personality of this staff
- principal for headmaster give credit of success to his coworkers
- principal or headmaster and the faculty to make use of human and material resources of the community
- principal for headmaster allow the teachers and the students to make flexible program which suits the needs and the interest of the students
-

- School personnel is guided by the administrator
- students assist in Planning and organising of various School program s
- traitor adopt an empathetic and cooperative attitude
- an environment of mutual trust exist
- mutual feeling prevail in school environment

Organizational Process

1. Academic Planning
2. Resource Mobilization
3. Co-curricular Activities Planning
4. Time Allocation
5. Monitoring
6. Evaluating
7. Feedback

Academic planning

- **First and foremost process in school**
- **Planning of academic activities**
- **Planned according to the rules and regulations of higher bodies**
- **co-operatively (headmaster and members of school)**

Resource mobilization

- 1. Process of raising different types of support for an organization**
- 2. Physical resources, human resources and financial resources**
- 3. Aims at organizing various resources for the attainment of organizational goals and objectives**
- 4. Managing human resources is most important**

Co-curricular Activities

- 1.Co-curricular activities-companion activities of curricular activities**
- 2.Aims at total development of personality of an individual**
- 3.Carefully planned and organized by considering the curricular activities,**

Time Allocation

- 1. Constructing a comprehensive and effective work schedule on day- to-day basis**
- 2. Considering curricular and co-curricular activities**
- 3. Indicating daily engagement of teachers on academic and non- academic duties**

Monitoring

- 1. To maintain and control the school functioning**
- 2. To maintain discipline**
- 3. To facilitate smooth functioning of school**

Evaluating

- 1. Evaluate the functioning of curricular and co-curricular activities**
- 2. To find out the success of the planned activities**
- 3. To know the extent to which the objectives are attained**
- 4. To find out the reasons for failure and success of planned activities**

Feedback

- 1. Process of collecting responses to an action or statement from the interested parties-students, teachers, parents, community members etc.**
- 2. Used to make improvements in the activities**
- 3. Head of the institution should monitor the working of staff and students**
- 4. Provide feedback on strength and weakness for the development**

Headmaster/ Principal

- Key position in the school
- Director, coordinator, evaluator, organizer and administrator of school
- Central pivot around which the whole system of school revolves
- All related to school are affected by his/ her personality
- Possess certain qualities which might have positive influence on developing the personality of others

Qualities

- Personal Qualities
- Sound Educational Philosophy
- High scholarship and well-qualified
- Leadership qualities
- Professional Training
- Organizing ability
- Maintain good social relations
- Democratic Nature
- Physical Qualities
- Emotional qualities

Personal Qualities

1. Commonsense
2. Creative and constructive
3. Dependable
4. Devoted and dedicated
5. Impartial
6. Inspiring and encouraging
7. Just and fair
8. Open-minded
9. Punctual
10. Reliable
11. Self-confident •

Sound Educational Philosophy

- Sound philosophy of life
- Sound philosophy of education
- Knowledge of philosophical bases of education

Leadership Qualities

- Possess qualities of a leader
- Co-operation of his followers
- Good communication skill
- Foresight
- Decision making
- Inspiring
- Initiative
- Democratic
- Humanitarian etc.

High Scholarship and Well-Qualified

- Highly qualified
- Good academic background
- Knowledge and wisdom
- Able to handle both academic and administrative matters

Professional Training

- Apart from academic qualification
- Study education journals
- Update knowledge on education matters
- Participate in educational seminars and workshops
- Apply new methods of teaching, experimenting new procedures etc

Organizing Ability

- Organize various resources
- Human and material resources
- Run school without any confusion, wastage, duplication and discrimination

Maintain Good Social Relations

- Understand the feelings of others
- Respect others views
- Good relation with teacher students parents Higher authorities Community members etc

Democratic Nature •

- Maintain democratic atmosphere in school
- Consider views of students and subordinates
- Plan activities in co-operation
- Ensure participation of each member
- Delegate the authorities to others etc

Physical Qualities

- Good physical health
- Active
- Smart
- Attractive and clean in appearance
- Clear voice
- Good manners etc

Emotional Qualities

- Possess good mental health
- Emotionally stable
- Cheerful and pleasant
- Optimist
- Empathetic
- Sympathetic
- Patience etc

Duties and Responsibilities of Head Master/ Principal

Planning

- Plan each and every activity of the school
- Plan curriculum, timetable, allotment of duties, admissions, instructional work, co-curricular activities, examinations, income and expenditure, etc.
- Flexible and done in cooperation with the members of organization

Organizing and Administering

1. Arrange human and non-human resources
2. Arranging infrastructural facilities such as school building, classrooms, furniture for staff and students, arrangement of library and laboratory , equipments need for students etc.
3. Organizing curricular and co-curricular activities
4. Organizing office work such as official correspondence, maintenance of records, etc.

Teaching

- Engage classes in his/her specialized subject

Maintaining relations

- Success of school depends upon the relationship maintains with various members
- Relationship with staff: humanitarian, cordial, pleasant, sympathetic, cooperative, etc
- Relationship with students
- Relationship with parents
- Relationship with community
- Relationship with higher authorities

Supervision

- Supervise various activities for accomplishing objectives
- Supervise instructional work
- Supervise evaluation system
- Supervise curricular and co-curricular activities
- Supervision for discipline ◦
- Supervise office work

Guidance

- Guidance for teachers and students
- For teachers, guidance in teaching work and other activities, problems of discipline, backward students etc.
- For students, vocational and personal guidance
- Guidance to parents related to emotional and other problems of students

PERFORMANCE APPRAISAL

Meaning

Appraisal: estimate the value or quality.

Performance appraisal: the estimation of value or quality of the work done by members.

Importance

- It help to assist teachers in t their professional development and career planning.
- To ensure efficiency and effectiveness of work,realisation of organisational goals.
- Identify ways of improving the knowledge, skills and performance of teachers.
- To provide feedback regarding the behaviour, attitude, skills and subject expertise.
- To provide guidance and counselling, help promotion.

- The teacher performance appraisal system provides teachers with meaningful appraisals that encourages professional learning and growth.
- The process is designed to Foster teacher development and identify opportunities for additional support worker required.
- It helps teachers achieve their full potential,with high levels of student

Criteria for performance appraisal of teachers

Plans instructions

- * follows prescribed curriculum
- * Uses available materials and resources
 - * Considers time available in planning
 - * plans students grouping according to instructional needs.
- * chooses activities, materials and resources appropriate for student with special needs

- **Implements the lesson**
- Focuses student attention
- Inform students of objective of the lesson
- Monitors student learning continuously
- Models, demonstrates and provides examples
- Presents new material clearly and logically

- **Motivates students**
- Shows concern for students
- Establishes feeling
- Establishes a level of difficulty which encourages success
- Uses student interest and background

- **Communicates lesson**
- Uses variability in presentation
- Speaks clearly
- Puts ideas across logically
- Demonstrates enthusiasm, vigor, involvement, and interest in lesson presentation

- **Demonstrates knowledge of the curriculum**
- Teaches accurate and up-to-date information
- Coordinates learning content with instructional objectives
- Uses effective examples and illustrations
- Presents learning content in a logical sequential order

- **Maximizes time on task**
- Begins class work promptly
- Minimizes management time
- Minimises transition time
- Makes effective use of academic learning time
- Gives clear and concise directions

- **Provides specific evaluative feedback**
- Provides feedback on assignments as quickly as possible
- Gives written and oral comments, as well as points or scores
- Makes opportunities for one-to-one conferences to discuss student progress
- Interprets test results to students and parents

- **Manages the classroom**
- Manages discipline problems in accordance with administrative regulations, School board policies, and legal requirements
- Establishes and clearly communicate parameters for student classroom behaviour
- Promotes self discipline
- Managers disruptive behaviour constructively
- Arranges the classroom for effective instruction

- **Is involved in professional growth activities**
- Is involved in professional associations
- Participate on district or State Committees, etc.
- Participates in professional workshops
- Attends professional meetings
- Keeps current in subject area

- **Interacts with parents and community**
- Encourages community involvement with the school
- Provides a climate which opens up communication between the teacher and parent
- Communicates with parents in the best interest of the students
- Supports parents /teacher activities
- Provides information related to support resources

- **Integrates materials and methodology**
- Demonstrates ability to conduct lessons using a variety of methods
- Organises materials, supplies and equipment prior to the lesson
- Integrates materials and resources smoothly into a lesson
- Identifies available supplemental resources

- **Interacts with students**
- Makes an effort to know each student as an individual
- Provides opportunities for each student to meet success regularly
- Promotes positive self - image in students
- Communicates with students accurately and with understanding
- Creates a climate in which students display initiative and assume a personal responsibility for learning

Importance of Essential Records

Admission Register

- Important and permanent record.
- Record the details of all students admitted to a school .
- Every admission and re –admission,at any time should be entered.
- It should contain;admission no,name of student , parent’s name and occupation,address phone no,religion,caste and sub caste,nationality,DoB,place of birth,date of admission ,standard into which admitted ,school last attended(re-admission),date of leaving the school ,standard from which left,reason for leaving ,remarks .
- Separate column for entering date of withdrawal or learning from school.

Attendance register of staff

- Duty of head master to monitor the regular attendance of the staff.
- Separate attendance register for teaching and non teaching staff .
- Placed in the school office or principal's room.
- The staff should note down the time of their arrival as well as departure every day.
- It includes records the attendance of the teachers,leave taken by them,late arrivals and early departures.

PURPOSE

- To maintain institutional discipline.
- To inculcate the values such as regularity and punctuality.
- To know leaves taken by staff members .
- To facilitate work allotment.

Attendance register of students

- Kept and maintained by the class teacher.
- It includes admission numbers ,roll numbers and name of the student .
- Attendance taken twice a day in morning and afternoon.
- Daily attendance is marked by using various symbols such as 'A' for Absent 'P' for Present and 'L' for leave .
- Continuous absent for 15 consecutive working days name of that student is struck off from the register .
- Attendance of each month should be counter signed by the Head master .

Stock register

- Details of all materials and equipments in the school .
- Furniture,stationery,laboratory equipments sports materials,books etc are main items.
- The name of the article, date of purchase,suppliers address and details ,quantity and price .
- Separate stock register for library and laboratory .
- Physical verification should be done at the end of every year .
- Counter signed by head master .

PURPOSE

- Gives an account of movable assets of school .
- Information of missing and worn out articles
- Basis for making new purchases.
- Facilitates verification of stock from time to time .

Acquittance roll

- Financial document.
- Salary register of school staff .
- The details of salary paid to the staff in the educational institution for their service in school .
- It includes the name, designation and signature of the claimant and the net amount payable.

Service book

- Official record of the government employee regarding their professional life in the institution .
- Kept under the custody of Head master /principal(aided school ,DEO (Govt.schools))
- Information about the official details of an employee .
- Name of employee ,designation ,date of appointment,DoB,qualification, transfers,identification marks,permanent address ,leave taken ,payscale,promotions,salary drawn,increments,suspension,memo, punishments,awards,rewards,nature of employment,signature of employee etc.

Teaching manual

- A sort of record of teacher's daily work .
- His/her plan of work with the students .
- That he/she has already done and what he/she intends to do during a particular period .

PURPOSE

- Teachers work systematic.
- Attain instructional objectives.
- Provide appropriate learning experience and learning activity.
- To select appropriate methods.
- Assess effectiveness to teaching .

Student profile

- A report written by the teacher on a pupil's academic and social progress .
- It includes the data submitted by the student as well as information which is added by staff members of an educational institution to provide complete picture of the student.
- It includes personal data, family back ground ,health information ,scholastic record,non scholastic record ,personality traits etc.

Cumulative record

- Detailed information about a child so as to reveal the growth and development of the child while in school in all aspects- personality, physical ,mental ,moral, social etc from the beginning to the end of his school career.
- Whole history of a child .
- A comprehensive picture .
- It includes :personal data of students ,socio-economic data ,attendance ,physical /mental report, scholastic achievements, interests and attitudes ,personality traits ,co-curricular activities, class teachers and head master's remarks etc.

PURPOSE

- Provide valid useful and authentic information of students .
- Reveals the interests of child .
- Provides basis for vocational and educational guidance.
- Provides complete picture of student's personality.
- Helps to identify abnormal child .
- Helps in solving problems of child .

UNIT II

INSTITUTIONAL PLANNING

INSTITUTIONAL PLANNING

- **MEANING**
- **A part of educational planning.**
- **Confined to a particular institution.**
- **A plan which is prepared by the institution on the basis of its felt need for its own development and**

A programme for improvement:-

- 1. Based on felt need of an institution.**
- 1. Considering the available resources.**
- 1. Based on the principle optimum utilization of available resources.**
- 1. May be for a shorter or longer period depending upon its nature.**

AREAS OF INSTITUTIONAL PLANNINGS.

- Academic activities.
- School infrastructure .
- Administrative matters.
teachers.
- Teaching -learning materials.
relations.
- Co-curricular activities.
- Disciplines
- professional growth of
- School and community

CHARACTERISTICS

- 1. Need based.**
- 2. Goal oriented.**
- 3. Specific plan**
- 4. Co-operative affair.**
- 5. Democratic outlook.**
- 6. Optimum utilization of resources.**
- 7. Collaboration with the community.**

8.Motivating.

9. Flexible.

10.Future oriented.

11.Eliminates wastage.

12. Helps in school development and improvement.

13. Basis for district plan.

IMPORTANCE

- ~ Proper direction to educational planning-bottom to top
- ~ Maximum utilization of resources.
- ~over all improvement of an institution.
- ~Encourages initiative of individual teacher.
- ~ Provides team work practice.
- ~ Democratic approach to planning.
- ~ Reduce wastage.
- ~ Planning both curricular and co-curricular activities of an institution.

Steps in institutional plannings.

- 1. Analysis of the existing condition-Analyze the needs and existing facilities of school.**
- 2. Planning for improvement of existing condition.**
- 3. Implementation of the plan.**
- 4. Evaluation and feedback.**

MERITS

- **Helps in achieving educational objectives.**
- **Reduce future uncertainties.**
- **Best possible use of available resources.**
- **Facilitates control.**
- **Encourages creativity.**
- **Effective co - ordination.**
- **Facilitates decision making**
- **Improves standard of institution.**
- **Helps to plan good curricular and co - curricular activities.**
- **Improve relation with members of the organization.**

SCHOOL MANAGEMENT COMMITTEE (SMC)

SMC

- *Section 21 of Right of children to free and compulsory education (RTE) 2009.**
- * Mandated formation of SMC in all government and aided schools.**
- *To ensure infrastructure needs, mid - meal programme and better learning environment.**
- * Encourage community and parental involvement in school activities**

Composition.

- Constituted in all schools except united schools - 6 months.

- 75 percent - parents of children - disadvantaged and weaker se

Sections - Mother PTA, Parents of SC/ST Students, Students with special needs.

- 25 Percent

50 - Percent - women

Total number of SMC -

*** Below 750 students : 16 excluding convener and joint convener.**

***Exceeds 750:20 excluding convener and joint convener.**

*** chairperson and vice chairperson elected from the parents**

*** Head teacher and senior most teacher as ex - officio - Head master and principal (plus two)**

*** Meet at least in two months.**

FUNCTIONS

- ~ Monitor working of school.
- ~ Prepare and recommend School Development plan (SDP).
- ~ Monitor utilization of grants received.

Other functions.

- * communicate rights of child.
- * Ensure regularity and punctuality of teachers.
- * Ensure teachers are not deployed for non - educational purpose other than population census, disaster relief, election duties.
- * Ensure no teacher is engaging in private tuition.
- * Ensure enrolment of students and monitor dropouts.
- * Monitor norms and standards prescribed in Kerala Education Act and Rules.
- * Monitor and report any deviation from rights of child.
- * Remedial teaching and enrichment programmes.
- * Monitor enrolment of disabled students.

School Development Plan **(SDP)**

- * Section 22 of Right of Children to Free and Compulsory Education (RTE) 2009.**
- * At I least 3 months before the end of financial year.**
- * Shall be a three year plan comprising 3 annual sub plans.**

SDP Includes

- * Class - Wise enrolment in each year.**
- * Existing infrastructural facilities.**
- * Prepare master plan for school.**
- * Requirement of teachers for 3 year period.**
- * Physical requirement.**
- * Financial requirement.**
- * Signed by chairperson and submitted to Additional Educational Officer**

Time-table

Principles and Types

Time-Table

- * School time-table is a mirror that reflects the entire educational programme followed in the school.
- Time-table is a pre-arranged and systematic scheme of studies and activities of an institution
- It is a plan showing the daily allotment of time among various subjects, topics, activities and classes.
- **It shows**
 - o The distribution of time for each teacher
 - o Teaching load of teachers
 - o The length of each period

- o Time and length of recess periods**
- o Time of beginning and end of school day**
- o In short, A time-table is the second clock of the institution on the face of which are shown the hours of work, intervals in between, the kind of activity in progress in each class, the recess and recreation as well as the time for assembly and dispersal.**
- o It also shows time for various co-curricular activities, art and craft, community work, social service. games and sports.**

Types of time-table

- **Master time-table:** It is also known as general time-table or consolidated time-table. It provides a complete picture of the entire school programme from day-to-day. It helps the headmaster to know at any time which teacher is engaged in which class and which subject is taken in each classroom. It also helps to know which teacher is free at any time.

- **Class time-table:** It gives the picture of class-wise programmes. It shows the distribution of subjects with teachers for each period for a particular class. It shows what a particular class or section will study in a particular period from a particular teacher. It is useful for the students to and come prepared for each period.

- **Teacher's time-table** : It is mainly meant for the teacher's. By looking at it the teacher can understand which class he/she should engage in each period. Every teacher will be aware of their own programme, showing the details of their academic and non-academic work. It helps the teacher to prepare the topic accordingly before going to the class.

- **Co-curricular Activities time-table:** It shows the time and place of co-curricular activities, the teacher in-charge, the place where students are to be held and the time when the activities are to be undertaken.

- **Vacant period time-table:** A special time-table should also be prepared showing the vacant periods of all teachers. It will be helpful in allotting work when a teacher is on leave. It shows the teachers vacant period in a particular period.

Principles of Time-table Construction

Types of school

The specific needs of the School for which it is meant, must be always kept in mind while constructing the time-table. There are various types of school namely., elementary, secondary, higher secondary, rural, urban, boys, girls, model, ordinary, single shift school, double shift school etc., in which the nature of curricular and co-curricular activities may differ

- **Department Rules and Regulations:**

Preparation

of time-table should be based on the rules and regulations on prescribed by the education department. The duration of the school day, the syllabus of different subjects for different classes, total number of periods per day, number of periods per week for each subject, number of periods to be allotted to each teacher etc. are prescribed by the education department.

- **Availability of Time:** The allotment of time for different subjects and activities is done on the basis of the amount of time available. The duration of period, time given to each subject, time allotted for recreation etc. are determined according to time available.

Principle of Fatigue: The subjects which are generally considered difficult or that need much mental effort by the learners are given more importance and fresh timings in the timetable are kept for such subjects. Easy subjects should not be kept in the morning hours of school, subjects like Mathematics, Science, English etc., should be allotted to that time. Music, drawing and painting can be adjusted in between two difficult subjects. Crafts and physical education should be given at the end of

the time-table. Subjects which create much mental fatigue should be kept in the most suitable periods (eg: third period in the morning and second in the afternoon).

- **Principle of Variety/ Diversity:** The same teacher and same subject should not be allotted to teaching the same class for two or three consecutive periods. There should be change of subjects, change of teachers and sometimes change of place after the period is over.

- **Principle of Flexibility:** The time-table should be flexible, so that modifications and improvements could be possible as and when the situation demands.
- **Principle of Justice:** The justice should be done to one and all concerned with the time-table i.e workload for teachers, time allotted for subjects etc..,

- **School Building and Equipment:** Timetable should be prepared by keeping in mind how much is the provision of school building and equipment available for a particular period. Eg: laboratory sessions.
- **Principle of Play and Recreation:** The games periods should fall in between the periods of heavy strain. Mini recess and recess for lunch must be provided.

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Title of the paper

Total Quality Management(TQM) – Concept &scope

- The concept of TQM was not developed by a single person.
- The concept was developed by Americans
- Quality improvement of an institution achieved by TQM
- **Total – Made up of whole**

Managing the whole organisation to achieve its maximum excellence

- **Quality**

Degree of excellence of a product or service that fulfils customer satisfaction

- **Management**

Art of planning,organizing,directing,controlling etc of an organization

le; it is the process of activating,inspiring,guiding the human resources to utilize material resources most efficiently.

In a TQM effort ,all members of an organization participate in improving processes, products , services and the culture in which they work

Scope of TQM

- **Create awareness for the need and opportunity for improvement**
- **Set explicit goals for improvement**
- **define vision and mission of the organization**
- **Creat an organizational structure to perform the activities for improvement**

- Provide appropriate training
- Plan to bring together human, physical and financial resources
- Adopt a project approach to problem solving
- Identify and report progress of the activities
- Communicate the results
- Keep records of change

- Develop an annual improvement cycle into all process of the institution
- make swot analysis

A structured planning method to evaluate the **strengths, weaknesses, opportunities and** threats involved in an organization

COMPONENTS

- **Curricular planning and management**
- **Planning and management of co-curricular activities**
- **Management of instruction, student assessment and admission procedure**

FUNCTIONS

- It is a massive challenge
- Quality in education has the following goals
 1. Excellence in education
 2. Value addition in education
 3. Fitness of educational outcome and experience for use
 4. Conformance of education output to planned goals, specification and requirements
 5. Avoidance of defects in education
 6. Meeting the expectations of the interested parties of education

7. Continuous improvement of the institution

8. Human resource development and development of leadership quality

UNIT 3 Organusing physical and health activities in school

CONCEPT OF PHYSICAL EDUCATION

Physical education covers the overall physical growth and development of the child, through various physical activities. The concept of physical education has been described by different educationalists. According to Mudaliar Commission, "Physical education is not mere drill or a series of regular exercises. It includes all forms of physical activities and games which promote the development of body and mind".

The aim of physical education include the aim of general education. According to Raymont , "Education is a process of development from infancy to maturity, the process by which he adopts himself gradually in various ways to his physical, social and spiritual environment".

Meaning and Definition

Physical education means an educational process that uses physical activity as a means to help acquire skills, fitness, knowledge and attitudes that contribute to their all-round development and well-being. Its purpose is generally to promote fitness and health, as well as the benefits of team building, team work, sportsmanship, and fair play.

Physical education is education for the holistic development of the personality of an individual through physical activity.

“Physical education is education through physical activities for the development of total personality of the child and its fulfillment and perfection in body, mind and spirit” -J.P.THOMAS

- “Physical education is the educational process through physical activities or human movements where many of educational objectives are achieved by means of big muscle activities involving- sports, games, gymnastic, dance and exercises” - ‘Barrow’
Thus, Physical education is the education of the body through physical activities and it also contributes to the mental, social, emotional and moral development of the individual.

Aims

- conversation of health
- Development of good physique
- Development of organic system of the body
- Developing good health habits and attitudes
- Moral and social development
- Development of qualities
- Providing proper outlet for pent-up feelings and surplus energy

- Preparing for leisure time
- Understanding and appreciation of sports

Objectives of Physical education

- To achieve the highest level of competency in movement skills
- To understand and apply movement concepts and principles to the learning and development of movement skills
- To understand the cost and benefits of participating regularly in health - enhancing physical activities
- To demonstrate responsible personal and social behaviour in physical activity settings
- To Understand and learn to respect differences among people in physical activity settings
- To understand that physical activity provides an opportunity for enjoyment, challenge, self-expression and social interaction.

Need of physical education

- Alertness of mind
- Knowledge of health and diseases
- Proper utilisation of leisure time
- Appreciation of beauty
- development of good human relations
- Emotional development
- creating discipline
- Tolerance
- All-round personality
- Character building
- Promotion of health

Importance of Physical education

- Physical education produces the health of the people
- Lifestyle disease management
- Promotion of international Brotherhood
- It gives spiritual harmony and prevents disease
- Recreational activity for the people who are indulged in serious occupation
- promote sportman spirit and hence create social adjustability in the practical life
- Provides Fitness and Sports are essential throughout life span as it promotes health

Concept of Health

Health is a state of body, mind and spirit. By health a layman understands a strong body which does not suffer from any disease.

According to the World Health Organisation(1947), "Health is a dynamic state of complete physical, mental and social well-being and not merely an absence of disease or infirmity.

Aims and objectives of health education in schools

1) To make the pupils health conscious:

Health education should make the pupils realise that health is valued as an asset in the community. It is the development of attitudes towards individual and community health. Importance of keeping good health should be brought home to the students.

2) To set up certain standards of health in the school:

Certain ideal standard and health should be established in the school. All the pupils and the teachers should try to maintain those standards. These may include adequate ventilation, good sanitation, correct lighting, regular cleanliness, proper temperature, regular system of physical activities, etc.

3) To provide information about health matter:

Health education should acquaint the pupils with the rule of health and hygiene. Such knowledge will help them to develop good health habits and practices. They will be able to take precautionary measures to ward off diseases.

4) To make preventive and precautionary measures against communicable diseases:

The pupils should be educated about the communicable diseases- how these spread and how precautionary measures can be taken.

5) To discover physical defects and abnormalities in children and adopt remedial measures:

These may be done by regular physical and medical check-ups. The services of a qualified doctor should be available in the school.

6) To influence the parents and other adults through the education programmes of the school:

The school should launch health drives for promotion of health in the community. Health education should try to ensure co-operation of school, home and community in health promotion.

Health instruction in school

- The teacher should provide directly and indirectly health instruction to the pupils.
- They should be taught how to acquire health attitudes, habits and skills.
- Health instruction can be provided in the following way:

1) Direct instruction:

Students should be taught about physiology and hygiene. They should learn about bodily systems, diet, fresh air, exercise, etc. They should be told about certain common diseases and the precaution against them.

2) Talks on health:

The teacher can arrange some talks by experts on important and useful information about health.

3) Use of film and film strips:

The teacher can arrange suitable films and strips for the benefit of students.

4) Printed materials in the library:

There should be magazines, booklets, posters, pamphlets, etc in the library. The students may also be asked to prepare charts and posters on health.

5) Health clubs:

The teacher should organise health clubs in the school. The health club should organise certain health programmes with the guidance of teacher.

6) Health weeks:

The school should organise various health programmes in the school during health week.

7) Pupils Diaries:

The pupils should be asked to write certain rules of health in their diaries. Let them paste pictures and cuttings concerning health rules, habits and diseases.

8) Radio Talks:

The can arrange certain radio talks about health during school hours, such talks can really enrich the experience and knowledge of pupils.

9) Field Trips and Experience:

The teacher can arrange field trips and excursions to good health centres, hospitals, Red Cross fairs, exhibitions, etc.

Importance of Health Education in teacher education Programme

- To create awareness about personal hygiene, food, clothing and posture.
- To create awareness about first aid and communicable diseases.
- To create awareness about the relationship between health education and physical education.
- To create awareness about adulteration in food
- To create awareness about drug abuse and alcohol addiction.
- To create awareness about environmental pollution (air, water and soil)
- To create awareness about the importance of health related physical fitness.

The purposes of health education in Teacher Education programme may be mentioned as under:

1) Health observation

The teacher has constant contact with pupils. He can easily detect defective cases, habits and postures in the students.

2) Providing healthy school environment

3) prevention of communicable diseases

4) Food and Nutrition

Good health is not possible without suitable food and nutrition. A teacher can instruct children about the type of food they should take.

5) Health Services

A teacher can organise health service for minor ailments. He can arrange regular medical examination of children by competent doctors.

Physical fitness

Physical fitness is a state of health and well-being, and more specifically, the ability to perform aspects sports, occupations and daily activities.

. According to [bucher](#) "fitness is the ability of an individual to live a full and balanced life.it includes physical, mental, emotional, social and spiritual factors and a capacity for their wholesome experience".

Wellness

Wellness generally to mean a healthy balance of the mind, body and spirit that results in an overall feeling of well-being.

wellness is an active process of increasing awareness and actively making choices towards a healthy and fulfilling life.

wellness in holistic sense means that a person must be a full of life, in good physical, mental, social and emotional state, and free from disease and tenderness, to the maximum extent possible.

Type and components of Physical fitness

Components of Physical fitness

* Speed

it is the Performance pre-requisite to do Motor actions Under given conditions in minimum of time.

* Strength

strength is the maximum force that Can be developed with in a muscle or a group of muscles during a maximal contraction.

*** Endurance**

According to hardayal Singh " endurance is the ability to do Sports movement ,with the desired quality and Speed,Under conditions of fatigue"

***Flexibility**

Flexibility Is the functional capacity of joints to move through a full range of motion(ACSM).

***Co-ordinative abilities**

According to hardayal singh "Co-ordinative abilities are understood as relatively stabilized and generalized pattern of motor control and regulation process".

Types of physical fitness

- *Health related physical fitness(HRPF)**
- *Performance or motor skill fitness(PRPF)**
- *cosmetic fitness(CF)**

1. Health related physical fitness

Health related physical fitness is the power or capacity to live full and efficient life that one is capable of being.

Health related physical fitness refers to the aspects of physiological and psychological functioning, which are believed to offer the individual some protection against degenerative disease such as coronary heart disease, obesity and various musculo-skeletal disorders.

The components and test items are,

***cardio respiratory fitness**

***Body composition**

*Abdominal strength endurance

*flexibility of low back and posterior thigh

*muscular strength

2.Performance related physical fitness

Performance or skill related physical fitness is associated with those qualities, which are conducive to better performance in sports and other physical activities requiring strength, endurance, Co-ordinative abilities and speed.

3. Cosmetic fitness

cosmetic fitness is the capacity to have a beautiful physique with out giving importance to other physical fitness parameters.hence it is related with the physique such as muscles mass size and leanness for the sake of beauty.

Physical fitness test based on components

*Cardio respiratory fitness

one-mile run: students are instructed to run a mile in the fastest possible peace.

Harvard step test for man& women:A bench of 18/20 inch high and a tape recorder and stopwatch are required.

*Body composition

Methods for assessing body composition,

1. **Body mass index (BMI)**
- 2 . **Height weight ratio**
- 3 . **Waist to hip ratio(WHR)**
- 4 . **Body shape index (ABSI)**
- 5 . **Skin fold measurement**
- 6 . **Under water weighing**

Abdominal and low back- hamstring musculo-skeletal function

- 1 . Modified sit-ups**
- 2 . site and reach test**

PHYSICAL ACTIVITY AND EXERCISE

PHYSICAL ACTIVITY

Definition

"Any bodily movement produced by skeletal muscles that requires energy expenditure".

-WHO

- **Health Benefits Of Physical Activities**

- **Regular and moderate physical activities such as walking and cycling have significant health benefits.**
- **It can reduce the risk of cardiovascular diseases , obesity, hypertension, diabetes, depression, etc.**
- **Adequate levels of physical activity will decrease the risk of a hip or vertebral fracture and help to control weight.**

Walking

- ◆ **Walking strengthens the bones and reduces the incidence of osteoporosis.**
- ◆ **It is suitable for everybody; male, female, old, and young.**
- ◆ **It gives similar benefits as swimming, rowing , or aerobic dance.**

Activities for developing physical fitness components

- 1. Walking**
- 2. Jogging**
- 3. Running**
- 4. Weight training**
- 5. Stretching**

Jogging

- Jogging is running at a slow pace usually over a long distance as a part of fitness programme.
- It is one of the safe and popular forms of fitness activity worldwide.
- Jogging is not the same as walking.
- Jogging requires more muscle for the added speed, up-and-down bouncing, deeper breathing, and balancing.

Running

- **Regular running is a sound insurance against ill health.**
- **Running is used in cardiac rehabilitation to repair the damaged heart, by creating new capillaries that enhances the coronary circulation.**
- **Running utilizes the cholesterol in the blood stream as energy thereby reducing the total cholesterol.**
- **Running and Jogging are aerobic exercises which strengthen the heart, lungs, muscles, and bones.**

Weight training

- **Weight training is strength training for developing the strength and size of skeletal muscles.**
- **It uses the force of gravity to oppose the force generated by muscle through concentric or eccentric contraction.**
- **Weight training is often a part of the athlete's regimen.**

Stretching

- **Stretching is non competitive and can be done and it will help to relief from long journey and hard work .**
- **Stretching should be done before and after workout.**

PHYSICAL EXERCISE

- **Physical exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness.**
- **Excercise is performed for various reasons including the strengthening of muscles and the cardiovascular system, sharpening athletic skills, losing or maintaining of weight, and for enjoyment.**
- **Frequent and regular physical exercise boosts the immune system, and helps prevent the 'diseases of affluence' such as heart disease, cardiovascular disease, diabetes and obesity.**

Basic Principles Of Exercise

Frequency

Adequate frequency of exercise should be ensured as per the requirement.

Intensity

Intensity of the workout may be as per the specific goal.

Volume (duration)

Duration of the programme may be fixed as per the requirement.

Load

Load should be increased progressively.

Maintenance and continuity

To maintain physical fitness continuity is very essential.

Personalized training

Personal differences like age ,sex , ailments,etc.have to be taken into consideration.

Climate

Workout should be planned as per the climatic conditions.

Technical expertise

Physical exercises should be practiced under the supervision of a professional expert.

EXERCISE AND SAFE HEART RATE

- **Excercise should be based on both quality and quantity.**
- **It should be purpose oriented.**
- **Effective and scientific excercise programme should be planned to keep the heart rate between 50% to 80%of maximum heart rate during the excercise.**

- **Target heart rate can be found out by the following formula.**

- **$THR = [(MHR - RHR) \times IP] + RHR$**

- **THR(Target Heart Rate) = 50% to 85%**

- **$MHR(\text{Maximum Heart Rate}) = 220 - \text{Age}$**

- **RHR(Resting Heart Rate) = 72 Beats/Min**

- **IP(Intensity Percentage) = 0.50 to 0.85**

- **Maximum heart can be found out by reducing the age from the constant number 220.**
- **Resting heart rate of an adult is 72 beats per minute.**
- **Resting heart rate means heart rate at rest.It will change according to. Posture , time, emotions, weather, health conditions,etc.**

- **Basal Metabolic Rate (BMR)**
- **BMR is the minimum caloric requirement to sustain life at rest in a day.**
- **It is the amount of calorie required to maintain life at rest per day.**
- **It is the energy required for functioning the vital organs like heart, lungs,liver, kidney,skin ,etc.**

- BMR is calculated by oxygen uptake.
- It is an indirect method of assessing the BMR through oxygen consumption.
- BMR is determined by genetic and environment factors.

Factors determining BMR

- 1.Age
- 2.Body weight
- 3.Surface area of the body
- 4.Posture
- 5.Heridity

6.sex

7.Activity

8.Body Temperature

9.External Temperature

10.Fat percentage

11.Diet

12. Mental conditions

- **Calculating BMR**

- There are two methods for calculating the BMR. They are Indirect Calorimetry and Equation method.

- ◆ **Indirect calorimetry**

- This is the accurate method of calculating the BMR.
- A specially designed laboratory is used for assessing the oxygen intake of the individuals for calculating the BMR.

◆ **Equation method**

- This is the formula method for calculating the BMR.
- Values of height, weight, age, and sex of the individual have to be taken for assessing the BMR.
- Separate formula are used for men and women.

Harris Benedict formula for assessing the BMR is given below.

MEN BMR

$$66 + (13.7 \times \text{wt in KG}) + (5 \times \text{Ht in cm}) - (6.8 \times \text{Age in yrs})$$

WOMEN BMR

$$655 + (9.6 \times \text{wt in KG}) + (1.8 \times \text{Ht in cm}) - (4.7 \times \text{Age in yrs})$$

Title of the paper

Hypokinetic diseases

- Hypokinetic diseases are the Lifestyle diseases due to sedentary lifestyle

1. obesity

- **20 percentage more than ideal body weight**
- **over weight of the body due to excessive accumulation of fat**
- **2 types**

Apple type or central type

pear type or feminine type

Title

- **Causes of obesity**
 1. **genetic 42 – 80 %**
 2. **food habits**
 3. **age lowered metabolic rate**
 4. **sedentary Lifestyle**
 5. **glandular functioning**
 6. **hypothalamus gland**

consequences of obesity

1. excess body weight
2. feeling conditionally sluggish and fatigued
3. putting on extra burden on the back and the left, increasing degenerative diseases such as Arthritis and low back pain
4. strains the heart and circulatory system, increases pressure and vastly increases the risk of stroke and heart attack
5. increases the risk of diabetes coma gas turns and probably some cancers including prostate, breast and colon cancers
6. life become burden

management

- Lifestyle modification
- healthy diet
- physical activity
- medication
- starving
- surgery

method for assessing body composition and obesity

- 1. BMI**
- 2. skin fold measurement**
- 3. waist hip ratio**
- 4. height weight ratio**

- diabetes

Diabetes mellitus or chronic hyperglycemia

- High blood glucose concentration
- pancreas – leaf like organ in the abdomen with a number of cell s

beta cell produce insulin

Alpha cells produce glucagon

- if there is a deficiency in the insulin or its action is defective blood glucose level goes up

- Type 1 –IDDM
- total destruction of Beta cells
- occurs before childhood so it is known as Juvenile diabetes

TYPE II –NIDDM

pancreatic Beta cells are able to produce insulin but the body's cells are unresponsive to insulin

this is termed insulin resistance

also known as maturity on set diabetes

double diabetes

symptoms

- frequent urination
- unquenchable thirst
- Blurred vision
- constant hunger
- fatigue
- red swollen and tender gums
- weight loss
- high BP
- frequent infections
- excess sweating

consequences

- Arteriosclerosis in blood vessels
- hypertension
- kidney problems
- nerve problems
- eye problems
- heart problems

low glycemic foods

- milk and Milk products
- pulses
- nuts
- whole grains
- fruits like apple, Orange , Chiku
- vegetables except potato

management

- Lifestyle modification
- appropriate diet
- physical activity
- medication
- maintenance body weight
- avoid exercise If the blood glucose level is above 250 mg / dl or below 70 mg/dl
- 15 minutes walk an hour after every meal will sleep sugar level lower

hypertension

- pressure exerted by the heart to the arteries BP
- pressure increases more than 140 /90mm Hg

systolic pressure

pressure recorded when the heart is contracting less than 140

diastolic pressure

when heart is relaxing 90 mm of Mercury

symptoms

muscle cramps

weakness

frequent urination

irregular heart rate

- **consequences**
- atherosclerosis
- arteriosclerosis
- blocked vessels in brain and kidney
- thickening heart chamber, and vessels in eye

causes

- sedentary Lifestyle
- obesity
- tobacco and alcohol
- genetic

- **management**
- lose weight
- life style modification
- sufficient sleep
- diet control
- medication
- physical activity

osteoporosis

- reduction of Bone strength due to spongy bone mass
- mineral is lost too quickly and replacement occurs too slowly
- common area for hip, wrist and spine
- estrogen hormone level and after Menopause
- method to find out osteoporosis **densitometry**

causes

- genetic factors
women are more prone to osteoporosis
- body size
small, Bond women are at greater risk
- race
Caucasion and Asian women are at high risk
- lack of appropriate exercise
- sedentary life
- lack of calcium and Vitamin D
- smoking decreases oestrogen level

- excessive alcohol
- low body weight
- increasing age
- sex hormones

infrequent menstrual cycle and oestrogen loss , testosterone in men

consequences

- **responsible for 70% of fracture in adults above 45**
- **postural deformities - kyphosis, scoliosis, lordosis**
- **chronic back pain**
- **decrease the ability of land to expand**

management

- medication
- advocate and regular exercises
- calcium supplementation
- vitamin D plays an important role in calcium absorption
- strength
- avoid smoking
- avoid alcohol
- improve nutrition
- hormone replacement therapy

coronary heart diseases

- failure of coronary circulation to supply adequate circulation to cardiac muscle and surrounding tissues
- atherosclerosis and arteriosclerosis
- lead to Collateral circulation

Consequences

- Angina
- acute coronary syndrome due to sudden blockage

- symptoms

chest pain

paining of the arm , shoulders,elbows,jaws or back

shortness of breath ,nausea

cold sweat

back pain

- pain usually originates from the muscles, Nerves, bones, joints or other structures in the spine

herniated discs

- **bulging disc is also called protruding, herniated or ruptured Disc**
- herniated disc develop as the final discs degenerate or grow thinner
- **sciatica** is a condition in which a herniated for ruptured Disc presses on the sciatic nerve
- the largest nerve that extends down the spinal column to its exit point in the pelvis and carries nerve fibres to the leg

- Spondylitis

chronic back pain and stiffness caused by a severe infection or inflammation of the spinal joints

causes

- accident
- lifting heavy objects ,improper bending
- stress, over stretching
- sudden jerk
- improper warm up
- constipation
- periods

- difference in leg length
- poor sitting and laying
- excess body weight
- picture of a herniated lumbar disc
- diseases
- continuous work
- age

management

- walk 30 minutes daily
- simple for exercises to 2-3 times per week
- avoid excessive forward bend
- apply heat for 15 minutes in the morning and ice for 15 minutes in the evening
- you good ergonomically designed chair
- get up from the chair every 30 minutes
- shed extra kilos if any

importance of good posture

- The general characteristics of a good posture are erectness ,balance, alignment and ease
- in good postural body alignment the centre of gravity of all segments such as Head neck and trunk will fall as possible in a straight vertical line
- Static and dynamic posture

causes for Poor posture

- heredity
- injury
- habit
- improper clothing

- mental attitude
- overload
- imitation
- obesity
- occupation
- sedentary life
- lack of awareness

common postural deformities

- spinal curvature
- flat foot
- knock knees
- bow leg
- round Shoulders

kyphosis

- an increase in the amount of the normal convexity of the thoracic region of spine
- individuals with typhosus should not perform push up s

winged scapula

- medical condition in which the shoulder blade or shoulder girdle protrudes from a person's back in an abnormal position
- a winged scapula is considered normal faster in young children but in children and adults
- it is a postural deviation of one or both the shoulder blades

LORDOSIS

- it is an exaggeration or increase in the amount of normal curvature of the lumbar region of the spine protruding abdomen resulting in a hollow back

- the muscles of the lower back are shortened and the abdomen muscles are elongated

SCOLIOSIS

- known as a C curve or a reverse C curve
causes
 1. hereditary
 2. one side paralysis of spinal muscles
 3. short leg of one side
 4. one side flat foot

FLAT FOOT

- **flat foot is congenital or acquired condition in which the longitudinal arch is lower than the normal**
- if the arch of an individual's foot rests on the supporting surface the foot is classified as a flat foot

KNOCK KNEES

- knock knees occurred when the knees are medially to the or even overlap
- is treated at a young age
- knock knees which tends to be most obvious at around the age of 4

BOWLEGS

- when the knees are laterally separated while the feet are together the individual has bow legs
- fault caused due to rotation of the leg is usually the cause of bowlegs in children

ROUND SHOULDER

- the shoulder become round and sometimes they seem to be in bend forwards

Causes

1. heredity

- sitting,standing, walking in bend position
- wearing very tight cloth
- sitting on improper furniture
- lack of proper exercise
- to become habitual to press the chest

UNIT-IV

**First aid , nutrition and yoga
education in schools....**

❖ Food and nutrition:-

➤ Food:-

Food is the most essential needs in each human being

it provides energy needs like vitamins and nutrients such as carbohydrates, fats, proteins, vitamins, or minerals.to the body and gain proper health.

Functions of food as follows:

- Growth of human body
- Energy to do various human activities
- To regulate activities of the body
- Repair health issues

➤ Nutrients:-

Nutrients are the compounds in foods essential to the life and health, and it provide energy to human body. The different foods are made a lot of nutrition.

The Example of nutrients as follows...

- Carbohydrates
- Proteins
- Fats
- Minerals
- Vitamins
- Water

To keep healthy life nutrients from food is essential to human body. The functions of all the nutrients are closely related to cellular metabolism.

NUTRITIONAL BALANCE:

nutritional balance is called it consumes the right amount of calories macro & micro nutrients from the diet.

It helps to maintain stable healthy weights, having low blood cholesterol and healthy blood pressure level following details are the sign of being nutritionally balanced.

- Macro Nutrients need nutrients by each organisms through out life in small quantities for human body functions.
- As per the diet trace minerals want the amount less than hundred milligrams per day

The main ingredients of micro minerals are iron , cobalt ,chromium, copper, iodine, manganese, selenium, zinc and molybdenum

The Requirements of Nutrients in micro minerals as follows,

- ❖ Carbohydrates - 50-55%
- ❖ Proteins – 15 – 20%
- ❖ Fats – 25 -30%

Carbohydrates

Mostly calories from human body is getting from carbohydrates, For a normal person 120 gram of carbohydrates is needed daily.

Carbohydrates contain carbon, hydrogen and oxygen.

Source

As our daily food habit 50-55% carbohydrates will get from potato, rice, noodles , bread ,sugar and cereals. This carbohydrates is used as a source of energy. The main primary functions are growth, repair and healing of the body.

FATS :

For functioning the body activities the body needs FAT.

It helps to regulate blood pressure, heart rate, blood vessel constriction, blood clotting, and nervous system.

And main advantages of FAT is it also help to maintain healthy hair, and skin ,protects vital organs, keeps the body insulated and provides a sense of fullness after the meals.

Fats are divided to four as follows :

A. Saturated Fat

A. Polyunsaturated Fat

A. Mono unsaturated Fat

A. Trans Fat

➤ **Saturated Fat**

Saturated Fat we can get it from red meat , poultry ,butter ,whole milk ,coconut ,palm , and other tropical oils.

➤ Trans Fat :

Trans fat may rise the blood cholesterol levels and increase the risk of heart disease.

➤ Poly Unsaturated Fat :

Poly unsaturated fats are usually liquid in room temperature and in the refrigerator. It helps to lower blood cholesterol levels. In addition, they may help to reduce the amount of cholesterol deposit in the arteries.

➤ Mono Unsaturated Fat:

Usually liquid in room temperature but may start to solidify in the refrigerator.

PROTEINS

Proteins are made by amino acids. Out of 23 amino acids, eight are essential which cannot be manufactured in our body and it will be supplied from outside.

Proteins are present in all living tissues in both plants and animals and also it is a very large organic compound, which can contain carbon, hydrogen, oxygen, nitrogen etc....

The Function of Proteins are follows:

- Building new tissues
- Maintenance of tissues already built and replacement of regular losses
- For Lactation
- For energy

Vitamins :

Vitamin is very essential in human body, It is necessary for normal growth and development of human health.

Vitamins are grouped in to two as follows

1. Fat-Soluble vitamins and K – A,D,E
1. water soluble vitamins – B & C

Vitamin-A: It is necessary for normal growth and development. Vitamin –A deficiency may sometimes causes degeneration of nervous tissue without causing bone malformation.

Vitamin-B-Complex: The main substances are Thiamin's , Riboflavin and niacin

Vitamin-C: It closely resembles glucose in structure, The vitamin C is white crystal line odorless compound readily soluble in water.

Vitamin-D: It is sometimes called the sunshine vitamin because the body is able to convert a precursor present in the skin to vitamin-D in the presence of sunlight.

Vitamin E:The main deficiency of Vitamin E is not common in human beings. Source most plant seed oils, Fortified milk, soy ,eggs and milk

Vitamin K : It helps for clotting of blood on contact with air water-soluble vitamins.

Thiamin : It helps in the normal functioning of the nervous system and the heart.

Riboflavin : It is essential for the growth of all animals and plants.

Niacin : It is two important co-enzymes involved in respiration

Fibre : Hemi cellulose , Cellulose and peptins , are the main components of the skins of fruits covering of seeds and structural parts of edible plants , are usually referred as fibre.

Minerals: Minerals provide material for the growth and the development of teeth.

Calcium: It is needed for muscle contraction , blood vessel contraction and expansion.

Calcium Requirement as follows

Girls = 14-18 Years = 1300 mg

Pregnant women = 1300 mg

Women=15-50 Years = 1000 mg

Free Radicals : Free radicals are atoms or groups of atom an unpaired of electrons and can be formed when oxygen interacts with certain molecules.



NUTRIENTS

A Substance that provides nourishment essential for the maintenance of life and for growth

CARBOHYDRATES

Carbohydrates are the main source of energy for the body. They are the sugars, starches, and dietary fiber that occur in plant foods and dairy products. It is used for energy resources of bodies also called calories.

Functions as follows:

Provide energy and also store energy in human body, build macro molecules and spare protein fat for the use.

Sources:

The carbohydrates will get from various fruits and vegetables , Cereals ,Pulses , Sugars

FATS

The molecules consist of primarily carbon and hydrogen atoms and are therefore hydrophobic and are soluble in organic solvents and insoluble in water. The calories it gives 9Kcal/g

Functions as follows:

Store energy, insulate us and protect our vital organs

Sources:

Olive oils , nuts , seeds ,avocado , fatty fish , butter , ghee , peanut , vegetable oils , meat and milk

PROTEIN

Protein is called it is substance that amino acids, compounds and carbon , hydrogen , oxygen , nitrogen and sometimes sulfur.it gives 4 Kcal/g

Functions as follows:

Growth and repair of body cells, Formation of enzymes and hormones

Sources:

Diary , fish , Meat , beans , Nuts , Lentils

VITAMINS

Vitamin is called a organic molecule that is essential micronutrient which an organism needs in small quantities for the proper functioning of its metabolism.

Functions as follows:

Energy metabolism Assistance ,Coenzyme, Antioxidants

Sources:

Fruits , Nuts , Seeds , Vegetable , Meat , and Milk

WATER

- Water is the most essential nutrient , As we know with out water we cant live
- It is the one other nutrient that we must have in large quantities: water
- Water does not contain carbon, but is composed of two hydrogens and one oxygen per molecule of water.
- More than 60 percent of your total body weight is water.

Functions as follows:

Solvent and lubricants, transport of nutrients , temperature regulation.

**FAT SOLUBLE
VITAMINS**



VITAMIN A

(RETINOL)

Functions as follows:

Promotes strong bones and teeth, good eyesight and health skin

Sources:

Green leafy vegetables, oranges, tomatoes, liver , fish oil.

Deficiencies affects:

Spots , acne and itching , poor night vision

VITAMIN D

(CALCIFEROL)

Functions as follows:

Regulates calcium being used for bone growth

Sources:

It can be made by the action of sunlight on skin , Fish oils ,egg yolk ,liver and butter

Deficiencies affects:

Rickets , Liver and kidney problems , possible osteoporosis

VITAMIN K

(PHYLLOQUINONE)

Functions as follows:

Complete synthesis of certain proteins that are needed for blood coagulation or for controlling binding of calcium in bones and other tissues

Sources:

Green leafy vegetables , kiwi , avocado

Deficiencies affects:

Weaken bones, Potentially leading to osteoporosis, calcification of arteries and other soft tissues.

WHAT ARE CARBS ? (CARBOHYDRATES)



CARBOHYDRATES

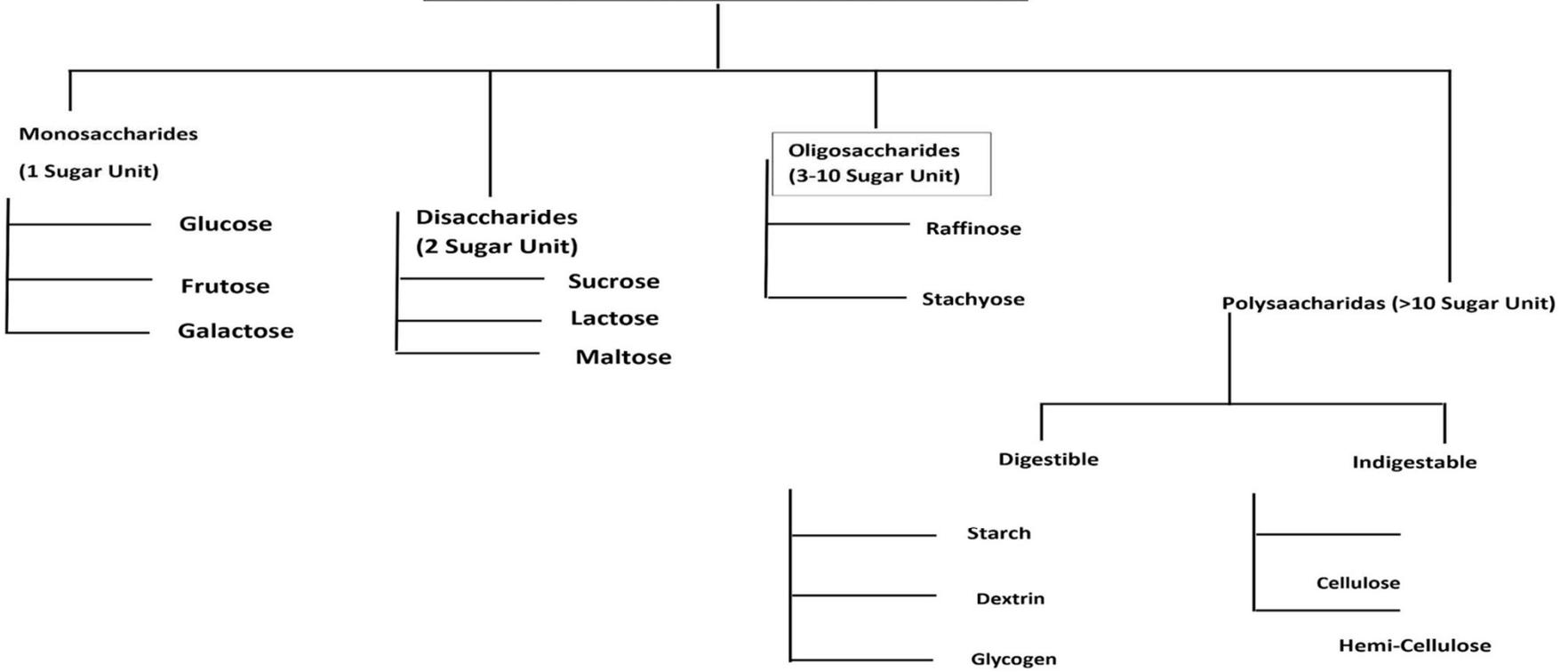
A CHEMICAL COMPOUND MADE UP OF

C= CARBON , H=HYDROGEN ,O=OXYGEN



Carbon atoms hydrated with "n" number of water molecules

Classification of Carbs as per Nutrition



FUNCTIONS OF CARBS :

- ❖ Slows onset of fatigue
- ❖ Helps to maintain gut health
- ❖ Provides Energy to the body
- ❖ Regulates Blood Glucose
- ❖ Saves muscles by using carbs
- ❖ Helps to regulated body weight
- ❖ Promotes good digestion

WHAT ARE
FACTS



FATS

FATS IS A COMPLEX MOLECULE CONTAINING MIXTURE OF

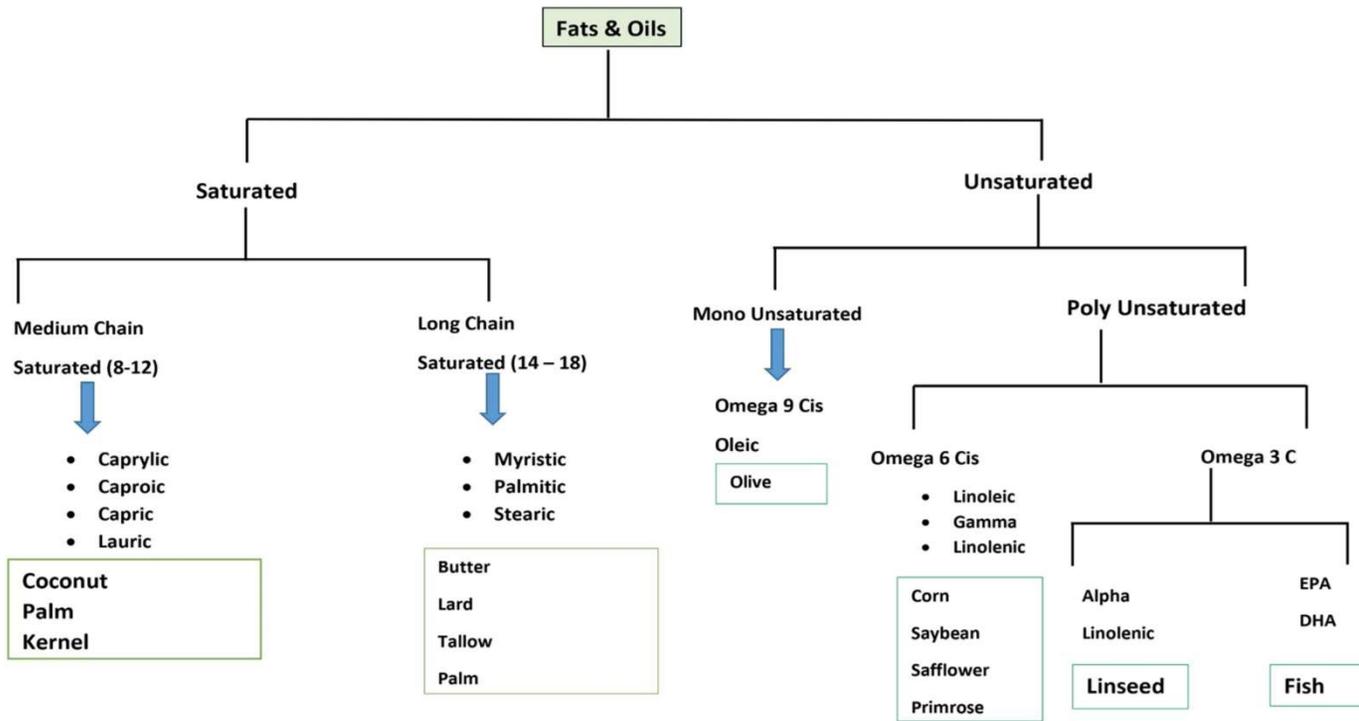
Fatty acid + Alcohol (Glycerol)

In Simple Fats Provide Energy & helps to maintain body functions

Like Carbs It has
C=Carbon
H=Hydrogen
O=Oxygen

But, Fats Contain

More Carbon &
Hydrogen and less
Oxygen



FUNCTIONS OF FATS :

- ❖ Adds flavor to foods
- ❖ Absorption of vitamins like A,D,E & K
- ❖ Helps hormone regulation
- ❖ Vital Part of cell membrane
- ❖ Adds flavor to foods
- ❖ Gives a feeling fullness
- ❖ Helps retain body heat

Classification of Protein as per Nutrition.

Complete Protein.

- All essential amino acids are present adequately.
- Required for good health and balanced growth
- Egg protein, Milk , protein , Fish , Meet , Cheese

In Complete Protein.

- Lack one or more essential amino acids.
- Can't support expected growth and health completely
- Proteins from plants and cereals , beans , nuts , gelatin

Partially Incomplete Protein

❑ Protein lacks adequate amount of amino acids.

❑ Proteins From Wheat, Rice & Corn

ESSENTIAL AMINO ACID	NON-ESSENTIAL AMINO ACID
leucine	Alanine
Isoleucine	Asparagine
Valine	Aspartate
Histidine	Cysteine
Lysine	Glutamate
Methionine	Glycine
Phenylalanine	Proline
Threonine	Serine
Tryptophan	Tyrosine

FUNCTIONS OF PROTEINS

- ❖ Initiates many vital reaction
- ❖ Growth & Maintenance of tissues
- ❖ Helps in communication between cells
- ❖ Forms anti-bodies or fight infections
- ❖ Transports & stores nutrients
- ❖ Provides energy if needed
- ❖ Maintain PH & Fluid balance

CALORIES

REQUIREMENT ENERGY

CALORIES

- ❖ Calories is the process called the heat can be needed to raise the temperature of one gram of water to one degree centigrade.
- ❖ Calorie = Unit of Heat.
- ❖ Caloric requirement is one to one and half calories per hour per kilogram of body weight (Body Weight X 24 X 1 to 1.5)

CALORIC VAIUES

Caloric value of certain food items

ITEM	QUANTITY	KCAL
Biriyani	1	1500
Meal	1	600-800
Chicken curry	100 gram	120
Chicken fry	100 gram	400
Chicken with skin	85 gram	167
Chicken without skin	85 gram	140
Boiled egg	1	80
Egg	1	80
Mutton	60 gram	70
Fish	60 gram	70
Chicken	60 gram	70

Egg fried	1	110
Omelet	1	120
Bread slice	1	45
Bread with butter	1	90
Chapathi	1	60
Puri	1	75
Paratta	1	150
Idly	1	100
Plain dosa	1	120
Masala dosa	1	250
Rice plain	1 cup	120
Fried rice	1	150
Chapatti	1	60
Nan	1	150
Curd	1	100
Curry Veggie	1	150
Curry meat	1	150
Soup	1	150

Soup	1	150
Tea	1	45
Milk without sugar	1	60
Juice	1	120
Soft drinks	1 bottle	90
Soda	1	10
Beer	1	200
Jam	1tsp	30
Butter	1	30
Ghee	1	30
Sugar	1	20
Biscuit plain	1	20
Fried nuts	1 cup	300
Pudding	1 cup	200
Ice cream	1	200
Somoza	1	100
Kabab	1 plate	150
Almond	30gms	160

Cashew	30gms	164
Walnut	30gms	185
Banana	1	90
Chocolate	One ounce	135
Beer	360ml	130
Whisky	45 ml	100
Brandy	30 ml	75
Wine	120 ml	80
Champagne	120 ml	100
Apple	100grm	59
Banana	100grm	116
Grapes	100grm	71
Guava	100grm	51
Water melon	100grm	16
Orange	100grm	10.9
Pomegranate	100grm	65
Pineapple	100grm	46

Caloric value per ounce	
Milk	20
Potato	20
Jam	80
Bread	65
Meat	100
Sugar	100
Cheese	100
Butter	200

Caloric Requirements

Energy requirement = basic energy requirements + extra energy requirements

Basic energy requirements include basal metabolic rate and general daily activities for every kg of body weight 1.3 calories is required every hours

EXTRA ENERGY REQUIREMENT (EER)

- For each hours training one require an additional 8.5 calories for each kg of body weight
- the energy yield gram is as follows
 - carbo hydrate = 4 calories**
 - fats = 9 calories**
 - protein = 4 calories**

ENERGY EXPENDITURE

It is the amount of energy for a person needs to carry out a physical function
Such as breathing circulating blood .digesting food or physical movement
To prevent weight gain energy can in take or systematically calorie in take
It must be balanced with energy expenditure

Exercise and energy expenditure

Exercise	Calories/ minute	Calories / hour
Walking	3.6 - 8.6	216 - 516
Climbing stairs	6.2 - 8.6	372 - 516
Cycling (8kph- 15kph)	4.5 - 7.0	270 - 420
Cross- country	10.6	636
Swimming	5 -11	330 - 660
Jogging	5 - 5.8	300 - 350
Tennis	4.4 - 5.6	270 - 400
Gardening	4.5 - 6.6	264 - 336

BASAL METABOLIC RATE (BMR)

- It is the amount of energy expressed in calories that a person needs to keep the body functioning at rest including breathing, blood circulation, controlling body temperature, cell growth, brain and nerve function, and contraction of muscles.
- The basal metabolic rate accounts for about 60 to 75% of the daily calorie expenditure by individuals.

CALORIES BURNED PER MINUTE

Low intensity	Walking , cricket	4-6 cal if physically fit
		6-8 calories if physically not
Moderate intensity	Jogging , rowing	8-10 cal if physically fit
		10-12 calories if physically not
High intensity		12-15 cal if physically fit
		15-20 calories if physically not

CHOLESTEROL CONTENTS IN CERTAIN FOOD ITEMS

Material	Quantity	Cholesterol Milligram/100g rm
Butter	100 gram	280
Ghee	100 gram	310
Milk	100 gram	11
Egg	100 gram	498
Egg yolk	100 gram	1330
Egg white	100 gram	0
Chicken	100 gram	90
Beef	100 gram	95
Duck	100 gram	70
Pork	100 gram	60
Goat liver	100 gram	610
Brain	100 gram	2000
Heart	100 gram	150

SOURCES OF VITAMINS

A	All yellow fruit (papaya, mango) vegetables (carrot) and milk , yogurt ,egg, cheese oily fish such as mackerel
B	Yeast, unpolished rice, egg
B ₁₂	Meat, fish and yeast
C	Citrus fruit, tomato, potato, green leafy veg., gooseberry
D	Milk, eggs, liver, skin makes it tuner sun light
E	Wheat germinated, milk, vegetable oil, fish, meat
K	Green leafy vegetables (cabbage, spinach) soya bean

ADDITIONAL VITAMINS

B1, B2, B3, B6	pulses , nuts, whole grains cereals, green leafy veg, animal foods, milk and milk products
Folic acid	Greens , (spinach , mint) pulses , egg and liver
Iron	Sheep liver , mutton , greens, pulses , whole grain cereals, nuts and oil seeds
Zinc	Ground nuts , chicken , egg, oatmeal, whole grain cereals
Selenium	Fish, chicken , egg, oatmeal, whole grain cereals
Chromium	Bajira, ragi, Peas, Kabuli Channa, Soya beans , almonds walnut
Omega 3 (500	Seeds flax , methi , mustard fatty fish :

MINERAL SOURCES

Minerals	Source
Macro nutrients	
Calcium (1000mg daily)	Almonds, broccoli, cabbage, cheese, dairy foods, green leafy vegetables, milk, Oats, sea food, shrimp, soybeans,
Phosphorous	Milk, meat, nuts, beans, and grains
Iron	Beans , beef, broccoli, cashews, egg yolk, green leafy vegetables, spinach, potatoes, poultry, rice, Soya beans , whole grains
Sodium (1500mg /day)	Table salt and sea food
Iodine	Iodized salt and sea food
Potassium	Banana, potato, Citrus foods, milk, vegetables and meat

SELECTED CALCIUM-RICH FOODS

Food	Calcium (mg)
Fortified oatmeal, 1 packet	350
Yogurt 200 gm	300 mg
Sardines, canned in oil, with edible bones, 3 oz.	324
Cheddar cheese, 1½ oz. shredded	306
Milk, nonfat, 1 cup	302
Milkshake, 1 cup	300
Yogurt, plain, low-fat, 1 cup	300
Soybeans, cooked, 1 cup	261
Tofu, firm, with calcium, ½ cup	204
Orange juice, fortified with calcium, 6 oz.	200-260
Salmon, canned, with edible bones, 3 oz.	181

Girls	14-18 years	1300 mg
Pregnant women		1300 mg
Women/ Men	15-50 year s	1000 mg

FIRST AID

- **First Aid is the temporary and immediate treatment given to a person who is injured or is suddenly ill, by using facilities or materials available at that time before regular medical help is imparted.**
- **First aid is the very first assistance given to an injured person correctly, quickly and gently to save the life and make the patient comfortable until professional care is reached.**

- **Here are a few principles that anyone attempting to help out in an emergency must be aware of:**
 - a. Do not delay in calling for emergency help (Call 108 for ambulance services in Kerala)**
 - b. Do not put yourself in danger – if you get hurt, you won't be helping any one.**
 - c. Remember that you may make matters worse if you act too impulsively**

First aid is provided

- **To preserve life**
- **To prevent further injury and deterioration of the condition.**
- **To promote faster recovery**
- **To prevent complications**

Principles of first aid

- **Do first thing first, quickly and quietly without panic**
- Arrange for the safe removal of the casualty to the hospital.
- **Re-assure the casualty and his relatives sympathetically.**
- If there is any failure of breathing, give artificial respiration.
- **If there is any failure of circulation, start external cardiac massage.**
- If there is severe bleeding, stop bleeding by pressing on the pressure point. Press firmly on the bleeding area with a clean pad for at least a few minutes.
- **Avoid handling the casualty unnecessarily.**

CPR (Cardio Pulmonary Resuscitation)

- **CPR is an emergency procedure that combines chest compression often with artificial ventilation in an effort to manually preserve intact brain function until further measures are taken to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest.**
- **before start CPR, check:**
 - ◆ **Is the environment safe for the person?**
 - ◆ **Is the person conscious or unconscious?**

- ◆ **If the person appears unconscious, tap or shake his or her shoulder and ask loudly, "are you ok?"**
- ◆ **If the person doesn't respond and two people are available, one should call 911 or the local emergency number and one should begin CPR. If you are alone and have immediate access to a telephone, call 911 before beginning CPR.**
- ◆ **If an AED is immediately available, deliver one shock if instructed by the device, then begin CPR.**

First aid and emergency care in various situations

- **Electric shock**
 - Every second of contact with the source of electricity lessens the victim's chance of survival.
 - Break the victim's contact with the source of current in the quickest safe way possible.
 - If indoors, disconnect the plug of the offending appliance, or pull the main switch at the fuse box.
 - If outdoors, use a dry, non-metallic pole or branch.
 - Don't touch the victim until contact with the current has been broken.

- Check to see if the victim is breathing and has a pulse.**
- If necessary, administer artificial respiration.**
- Send for medical aid at once.**
- Check for burns or wounds at current's entry and exit points.**
- If it is necessary to move the victim again, check to be sure the accident has not caused bone fractures or internal injuries.**

- **Burns**

- **A child gets burns by fire, hot metal, electric current, acids, and alkalis. These things give dry heat. He gets scalds when he gets indirect contact with steam, coal tar, hot water, and hot oil.**
- **In both cases the results are the same. Hence the treatments are also similar.**
- **If the child is burnt by fire and his clothes have caught fire, wrap him up with a blanket, sheet, or some other clothes and ask him to lie down on the earth. Fire will get extinguished. If the child is alone, he should roll down on the floor, but should never run here and there for help.**

- **The following first aid should be given :**
- ◆ **Remove the burnt clothes carefully, do not remove clothes from above vesicles.**
- ◆ **Don't disturb vesicles.**
- ◆ **Cover the burned part of the body with clean cloth.**
- ◆ **Keep the patient warm with blanket.**
- ◆ **Use splints and slings to support the burnt part of the body.**
- ◆ **Give hot milk or tea to drink.**
- ◆ **Treat the shock.**
- ◆ **Call for the doctor.**

- ◆ **If the child is burned with acid, wash the burned part with water or water mixed with soda.**
- ◆ **If he is burned by alkali (lime) clean the burnt part, wash it with water mixed with lemon, or with warm water.**

Drowning

- ◆ **When people take bath in tanks, canals, rivers, ponds, etc. there is possibility of slipping into the water.**
- ◆ **One who does not know swimming, gets drowned.**
- ◆ **The possibility of drowning is common among children.**
- ◆ **When a person gets drowned, the water is filled in the stomach and lungs and breathing stops if first aid is not available, the affected person may die.**

- **First aid measures:**
- **The drowning person should be brought out of water.**
- **To take out water from his stomach, his feet should be raised and head lowered.**
- **The victim should be laid on the ground with the face downward and his waist should be pressed with both hands.**
- **Clean the mouth of the person and remove mud, etc. if any**
- **If the respiration of the person stops, restore it by artificial respiration**
- **After restoring normal breathing the wet clothes should be removed and wrap the person with warm clothes, blanket, etc. The body should be kept warm.**

- **If the person can drink, give him warm milk, tea or coffee**
- **If there is difficulty in breathing the person should be rushed to the hospital.**
- **Accident**
- **An unintentional injury**
- **The patient should be transported on a stretcher or a stiff board. This is important as reducing the amount of movement the person experiences is essential to avoid his /her injuries from becoming worse.**
- **Keep the person's neck and back straight. You could place a rolled up towel or thick cloth under the neck for better support.**

- **Ensure that the person is lying down flat.**
- **If there is only a limb injury, lift the injured part above the person's body level and apply pressure on the region. Keep applying pressure till you reach the hospital. This helps control and eventually stop the bleeding.**
- **Make sure the person has a pulse and is breathing on the way to the hospital. If he /she stops breathing, be prepared to start CPR or EAR in the vehicle.**

- **Poisoning**

- A poison is a substance which when taken in sufficient quantity, is capable of destroying life.

- *Two types of poisoning*

1. Corrosive poisons

2. Non -Corrosive poisons

Corrosive poisons

-It burns the normal body tissues with intense pain

-Acids like sulfuric acid, Nitric acid, and alkalis like ammonia or caustic soda are corrosive poisons.

Symptoms :-

- The lips and tongue are charred.**
- Breathing becomes difficult.**
- Mouth and face becomes swollen.**
- Eyes become red.**
- There are blisters inside and outside the mouth.**

Treatment:-

- *Call the doctor immediately, stating the symptoms and the poison taken if known.**
- *Give some antidote to neutralize the effect of the poison.**

***If some acid has been taken, give lime water in large quantities, one teaspoon full of washing soda or carbonate soda mixed with water.**

***If some alkali is taken, give vinegar or lemon juice diluted with equal quantity of water.**

***If these antidotes are not available, give freely milk, water, strong tea, raw egg beaten with milk or water.**

Non-Corrosive poison :-

-The poison which do not burn the tissues .

-All poisons except acids and alkalis

Symptoms :-

***Patient feels drowsy**

- *There is irregular breathing**
- *There is intense headache**
- *Contracted or dilated eye pupils**
- *There is de-colourisation of face**

Treatment :-

- *Send for the doctor immediately, telling him the symptoms and the poison taken**
- *If the patient stops breathing give artificial respiration**
- *Induce vomiting giving two tablespoon full of salt or one tablespoon full of mustard powder, mixed with water. Back of the throat may be tickled with fingers. Repeat the process after every five minutes till the patient vomits.**

***Large quantities of water, milk or tea should be given to dilute the poison**

***The patient should not be allowed to sleep in case of hypnotic poison**

***In the serious cases the patient should be rushed to the hospital**

Heart attack

-It occurs when the flow of blood to the heart is blocked ,most often by a build up of fat ,cholesterol and other substances

-It result in pain in the centre or left side of the chest and lasts for more than a few minutes.

Symptoms

- **pain spreading beyond the chest to the shoulders ,arm, back ,neck Jaw ,teeth or occasionally upper abdomen.**
- **Squeezing pain in the centre of the chest**
- **shortness of breath, fainting, nausea, a cold sweat or feeling tired.**

First aid for heart attack

- **Never neglect the heart attack**
- **Administrate CPR**
- **Make the person sit in a slightly reclined position**
- **Move the person to a more ventilated area**

- **Ask the person to cough**
- **Get medical support as soon as possible**

Epilepsy

***Epilepsy is a group of neurological disorders characterized by epileptic seizures.**

***Epileptic seizures are episodes that can vary from brief and nearly undetectable to long periods of vigorous shaking.**

***These episodes can result in physical injuries including occasionally broken bones.**

***Epilepsy has many possible causes, including illness, brain injury and abnormal brain development. In many cases, the cause is unknown.**

Symptoms

- Seizures are the main symptom of epilepsy.**
- Alteration to sense of taste, smell, sight, hearing, or touch.**
- Dizziness.**
- Tingling and twitching of limbs.**
- Staring blankly**
- Unresponsiveness**
- Performing repetitive movements.**

First aid

- Stay with the person until the seizure is over.**
- Prevent injury by moving nearby objects.**
- Make the person as comfortable as possible.**
- Do not put anything in the persons mouth.**
- Make sure the breathing of the patient.**

wounds

Open wounds
Or
Exposed injuries

Abrasions
Laceration
Incisions
Puncture wound
Blisters

Closed wounds
Or
Unexposed injuries

Contusion or bruise

Open wounds

An open wound is a break in the skin's surface results in external bleeding. It may allow bacteria to enter the body, causing infection. There are several types of open wounds.

The top layer of the skin is removed, with little or no blood loss

First aid

Clean properly with soap and water.

Clean with anti bacterial scrub.

Clean all foreign materials.

Apply antiseptic to the area

LACERATION

Types of wound is this usually caused by a forceful tearing away of skin tissue. A laceration is a cut skin with jagged, irregular edges.

First aid

- *Clean properly with soap and water.*
 - *Clean with anti bacterial scrub.*
 - *Clean all foreign materials.*
 - *Apply antiseptic to the area.*

If the wound is too deep go for sutures for adequate procedures.

INCISIONS

An incision tends to have smooth edges and resembles a surgical or knife cut. It may damage tendon, muscles and blood vessels. The amount of bleeding depends on the depth, the location and the size of the wound.

First aid

Clean properly with soap and water.

Clean with anti bacterial scrub.

Clean all foreign materials.

Apply antiseptic to the area.

If the wound is too deep go for sutures for adequate procedures

Once bleeding has been controlled carefully clean and inspect the wound.

PUNCTURE WOUND

Puncture wound are usually deep, narrow wound in the skin and underlying organs such as a stab wound from a nail or a knife, the entrance is usually small, and the risk of infection is high. The object causing the injury may remain in the wound.

First aid

In simple wound, clean the wound and observe for foreign bodies. Immediately seek medical aid.

CLOSED WOUNDS
OR
UNEXPOSED
INJURIES

In closed wounds, the skin is not broken, but tissue and blood vessels beneath the skins are damaged or crushed, causing bleeding within the area.

CONTUSION OR BRUISE

Results from direct blow or impact delivered to some part of the body, which causes damage to underlying blood vessels – discolourisation. Finally it causes a black and blue discolouration.

First aid

PRICE procedures.

P – Protection – helps to prevent further injury

R – Rest (immobilise the area)

I – Ice – apply ice pack it will help to decrease pain, swelling and inflammation

C – Compression- gently apply to pressure

E – Elevation – raise the injury part above the heart, it will help to reduce the blood supply to the affected area.

Strain

A strain is also known as a pulled muscle or torn muscle is an acute or chronic soft tissue injury that occurs to a muscle, tendon, or both

SYMPTOMS

- *Swelling may develop at the site of injury.*
- *Sudden sharp pain or tenderness at the injury site, which may radiate with subsequent stiffness.*
- *Weakness and loss of function.*

First aid

Apply PRICE procedure

SPRAINS

When a joint is sprained, the ligaments are either partially or completely torn. There are different degrees of sprains (mild, moderate and severe), but it is difficult for a first aider to classify the degree of a sprain. Sprains most often occur in the knee and the ankle, but can occur in any joint.

Symptoms

- **Severe pain**
- **Pain prevents the victim from moving or using the joint**
- **Swelling**
- **Skin around the joint may be discoloured**

First aid

- **Follow the PRICE procedure**
- **Apply an ice pack for 20 minutes**
- **apply compression with an elastic bandage for 3 to 4 hours**
- **repeat the cycles of an ice pack for 20 minutes and 3 hours of compression**
- **Raise the injured part to reduce the flow of blood to the area.**

DISLOCATION

A dislocation occurs when a joint comes apart and stays apart with the bone ends no longer in contact. The shoulder, elbows, fingers, hips, kneecaps (patellas), and the ankles are the joints most frequently affected.

Symptoms of the dislocations are deformity, severe pain, swelling and Inability of victim to move the injured joint

First aid

If the end of the dislocated bone is pressing on nerves or blood vessels, numbness or paralysis may exist below the dislocation. Always check the pulses. If there is no pulse in the injured extremity, transport the victim to a medical facility. Use the RICE (rest, ice, compression, elevation) procedures. Use a splint to stabilize the joint in the position in which it was found. Do not try to manipulate the joint because nerve and blood vessel damage could result. Seek medical care to reduce the dislocation.

FRACTURES

A fracture is the separation of an object or material into two, or more, pieces under the actions of stress. A bone fracture is a medical condition in which there is a break in the continuity of the bone as a result of high force impact or stress.

Types of fracture

- *Simple (closed) fracture. In this fracture the skin surface around the damaged bone is not broken.*
- *Compound (open) fracture: When the wound leads from the surface of the skin to the fracture or if a broken bone penetrates the surface of the skin the fracture is called open fracture.*
- *Complicated Fracture: Closed or open fractures are said to be complicated when it is associated to blood vessels, nerve.*

Symptoms and signs

- *Pain at or near the site of injury, which increases by movements.*
 - *Difficulty in movement.*
 - *Swelling of the area and discoloration.*
 - *Deformity*
 - *Tenderness*

In case of fractures, lay the victim comfortably and loosen or remove the clothes from the affected parts. Do not move the parts fractured. Treat for difficulty in breathing, bleeding and unconsciousness before attending the fracture. Immobilize and support the fractured limb using bandages or splints.

YOGA MEANING

- Yoga is essentially a spiritual discipline based on extremely subtle science, which focuses on bringing harmony between mind & body . It is an art and science of healthy living.
- The word "yoga" derived from the Sanskrit root - "Yun" meaning "to join" or "to yoke" or "to unite" .

Defintion

1.yogaga is universal in its application leading to an all-round development of body mind and soul"- swami sivanatha

2." Yoga is ultimate practice for body mind and being"-Nithyananda

* Yoga has been Practiced 10000 year ago

*First known Text ' the yoga sutras' was written more than 20000 year ago

History of yoga

- The practice of yoga has been thought to date back to pre-vedic indian traditions , possibly in the indus valley civilization around 3000 BCE...
- _ Hatha yoga texts began to emerge some time between the 9th and 11th century with origins in Tantra

Types of yoga

1. Bhakthi yoga : discipline or emotions
 1. Attachment and love for god
2. Karma yoga: discipline of actions
 1. by practicing this type people try to do those actions that most amounts of good
3. Raja Yoga: (patanjalis Astanga yoga)
 - * Discipline of mind
 - * its perfection through meditation

- * Helps to higher state of consciousness
- * It stresses on the purification of mind
- * Includes Self control ,thoughts , posture
Breath control, concentration , meditation
And samadhi

4. Jnaana yoga: Focuses On knowledge

5. Hatha yoga :

- * Postures or asanas, conditioning

Benefits of yoga

- yoga increases your flexibility
 - helps you to build strength
 - It improves your posture
 - It helps to keep your joints healthy
- Yoga is powerful mindfulness practice
- it reduces stress
 - It lowers blood pressure

GENERAL GUIDELINES FOR YOGIC PRACTICE

Before the practice

- ❖ Should be performed in a calm and quiet atmosphere
- ❖ Should be done on an empty stomach or light stomach
- ❖ Bladder and bowels should be empty before starting yogic practice
- ❖ Should be use a mattress, yoga mat or folded blanket
- ❖ Light and comfortable cotton clothes are preferred
- ❖ Should not be performed in a state of illness, in a hurry, in accute stress, exhaustion.
- ❖ Should be consulted yoga experts during pregnancy and menstruation

During the practice

- ❖ Shall be performed slowly in a relaxed manner
- ❖ Do not hold body tightly
- ❖ Performed the practice according to your own capacity
- ❖ Yoga session should end with meditation

After practice

- ❖ Food may be consumed only after 20-30 minutes of practice

MISCONCEPTION ABOUT YOGA

- ❖ You have to be flexible
- ❖ Yoga is too slow
- ❖ Yoga is for women
- ❖ Yoga is a religion
- ❖ Older people can't do yoga
- ❖ Yoga is too expensive

IMPORTANCE OF ASANAS AND PRAYANAS

- ❖ Asanas — holding the body in a particular posture
- ❖ Prayanas – conscious and deliberate control and regulation of breath

ASANAS

- ❖ Flexibility of the spine is increased
- ❖ The joints become more mobile
- ❖ The muscles are relaxed, toned and receive a plentiful supply of blood

- ❖ Organ and glandular activity is stimulated and regulated
- ❖ The lymphatic system and metabolism are stimulated
- ❖ The immune system is strengthened
- ❖ Circulation and blood pressure normalized and stabilized
- ❖ The nervous system is calmed and strengthened
- ❖ The skin becomes clear and fresh

Deferent types of asanas

Asanas derived from the natural movements and position of animals

- ❖ Marjari- the cat
- ❖ Bhujangasana- the cobra
- ❖ Shalabhasana –the hare
- ❖ Shirshasana
- ❖ Padmasana-lotus

PRAYANAS

Physical effects

- ❖ Preservation of the body's health
- ❖ Purification of the blood
- ❖ Improvement in the absorption of oxygen
- ❖ Strengthening the lungs and heart
- ❖ Regulation of blood pressure
- ❖ Regulation of the nervous system

Mental effects

- ❖ Elimination of stress, nervousness and depression
- ❖ Quietening of thoughts and emotions
- ❖ Inner balance

Release of energy blockages

Spiritual effects

- ❖ Deepening of meditation
- ❖ Expansion of consciousness

YOGA AND STRESS MANAGEMENT

Many of the popular techniques found to reduce stress derive from yoga

- ❖ Controlled breathing
- ❖ Meditation
- ❖ Physical movement
- ❖ Mental imagery
- ❖ Stretching

Yoga as a stress reducer

- ❖ Reduce stress and anxiety
- ❖ Sound sleep
- ❖ Reduced cortisol level
- ❖ Lower blood pressure
- ❖ Lower heart rate
- ❖ Reduce muscle tension
- ❖ Slowed aging process
- ❖ Spiritual growth