ADAPTED PHYSICAL EDUCATION

BY

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Definition of Terms

- Physical education

  Physical education is an integral part of the total Educational Process in the field of endeavour which has its aim. The development of physically, mentally, emotionally and socially fit citizens through the medium of physical activities which has been selected with a view of realize these outcomes. By Bucher

Adapted Physical Education

- Adapted Physical Education is an attitude a way of teaching in both mainstream a segregated environments that is reflected in the beliefs and practice of teachers who adjust learning experiences to meet individual needs and assure optimal success in physical and motor functioning

Adapted physical education is also comprehensive service delivery system designed to indentify and ameliorate problems within the psycho motor domain

Adapted Physical education is the body of knowledge that focuses upon identification and remediation of problems within the psycho motor domain in individuals who need assistance in the mainstream and or specially designed physical education programme

Purpose and Goal of Adapted Physical Education

- Adapted physical education is the same as that of regular physical education to change psychomotor behaviours.

- Facilitating self actualization.
- To understanding and appreciation of the body and its capacity for movement.

Goals

Affective domain (emotion/feeling, opinions, attitudes beliefs, values, interests and desires)

To strengthen positive self concept and body image through involvement of physical activity

To increase understanding and appreciation of body and its capacity for movement.

psychomotor (physical/kinesthetic) (Motor and fitness performance)To learn fundamental motor skill and patterns.

To master the motor skills indigenous to games sports, dance and aquatics participation.

To improve fine and gross motor co-ordination for self care school, work and play activities

- Gross motor movement, which involves large muscles. Eg. Standing , walking Running etc.

- Fine motor movement, which involves relatively small group of muscles such as throwing picking etc.

- cognitive (thinking) (Intellectual skill) refers to the mental activities .
- To promote contact and interaction behaviors with toys, play apparatus and person.
- To learn basic game formations and mental operation needed to play.

Purpose of Physical Education the disabled children

- To develop the cardiovascular system.
- To promote ideal weight.
- To increase muscular strength endurance and flexibility.
- To improve posture.
- To learn to transfer physical education learning into habits of lifetime sports. Dance and acquatics.

Types of Disabilities

- Intellectual Disabilities
- Deafness or Other Hearing Impairment
- Speech or Language Impairment
- Blindness or Other Visual Impairment
- Serious Emotional Impairment
- Orthopaedic Impairment
- Autism
- Traumatic Brain Injury
- A Learning Disability
- Deaf Blindness or Multiple Disabilities

Intellectual Disabilities

- "Intellectual disability means significantly sub average general intellectual functioning existing concurrently with deficits in adaptive behaviour and manifested during the developmental period that adversely affects a child's educational performance.

Deafness or Other Hearing Impairment

- Hearing impairment or deafness refers to conditions in which individuals are fully or partially unable to detect or perceive at least some frequencies of sound which can typically be heard by members of their species.

Blindness or Other Visual Impairment

- Visual impairment (or vision impairment) is vision loss (of a person) to such a degree as to qualify as an additional support need through a significant limitation of visual capability resulting from either disease, trauma, or congenital or degenerative conditions that cannot be corrected by conventional means, such as refractive correction, medication, or surgery.

Orthopaedic Impairment

- Orthopaedic impairment is defined as diseases or disorders that are related to the bones, joints, and/or muscles. Orthopaedic impairment is defined as a severe orthopaedic impairment that adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures).

Prenatal development of the child

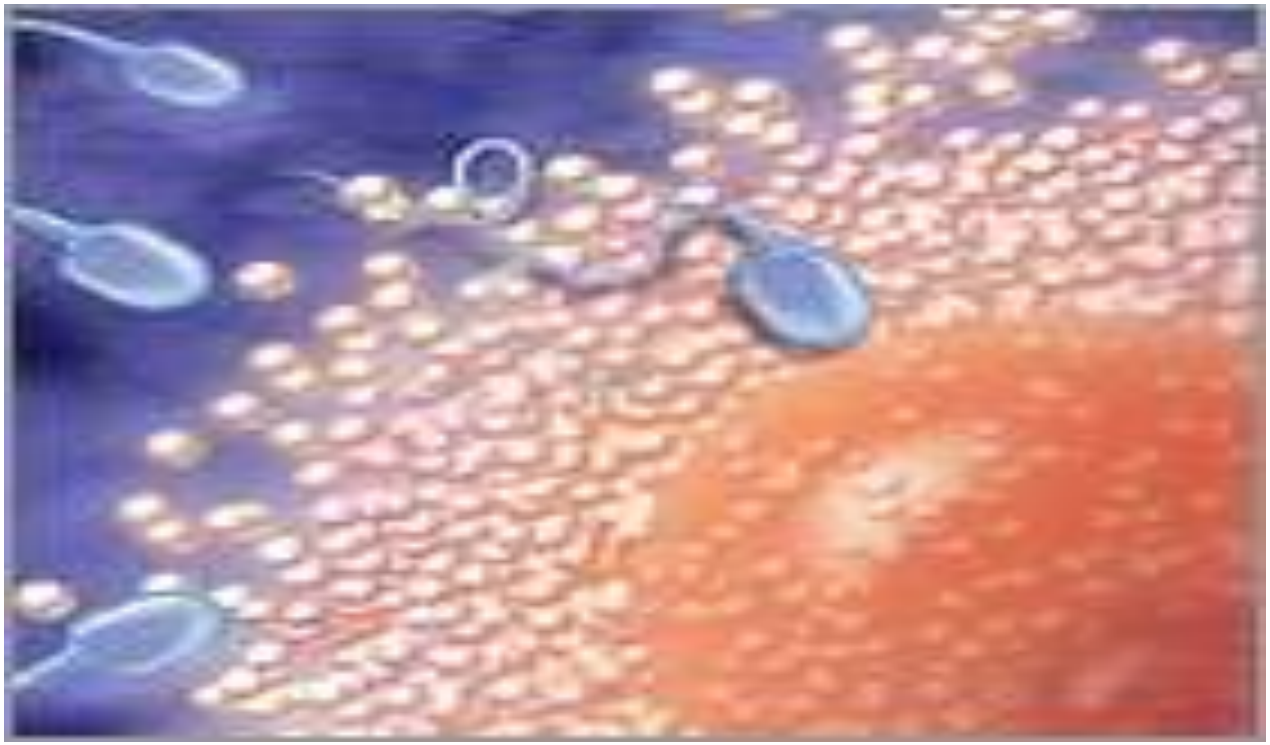
- First week. Fertilizes ovum descends through the fallopian tube towards the uterus.
- Conception occurs when a sperm from a male penetrates the cell wall of an ovum or egg from the female.
- The fertilized ovum is called a ‘Zygote’ which contain 23 chromosomes.

Conception of birth is divided into 3 phases

- Period of the ovum : fertilization until implantation.
- Period of the embryo :3 to 8 weeks.
- Period of the foetus : 9 weeks until delivery

Period of Embryo

- 2nd week: Embryo gets implanted in the uterus and develops rapidly.



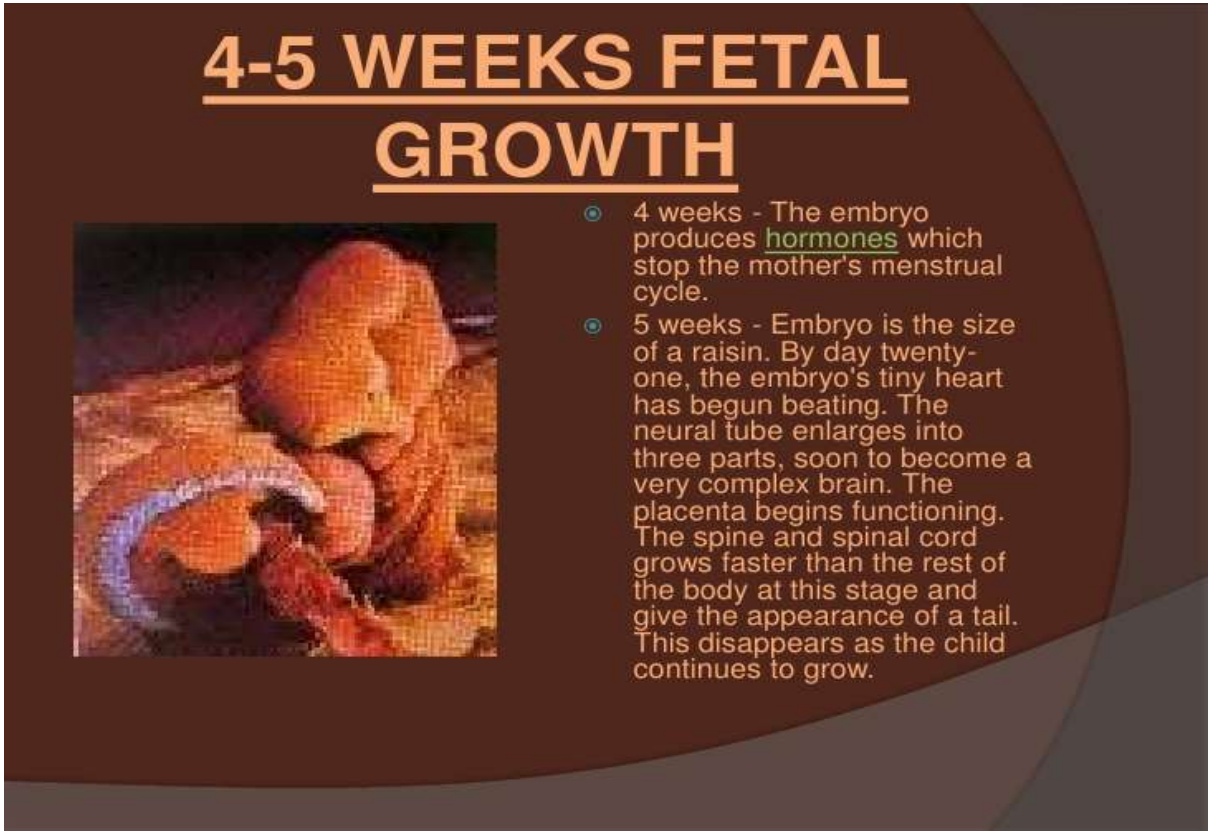
3rd Week

- Embryo begins to take some shape:

  head, tail and other different regions; primitive hart begins to beat.

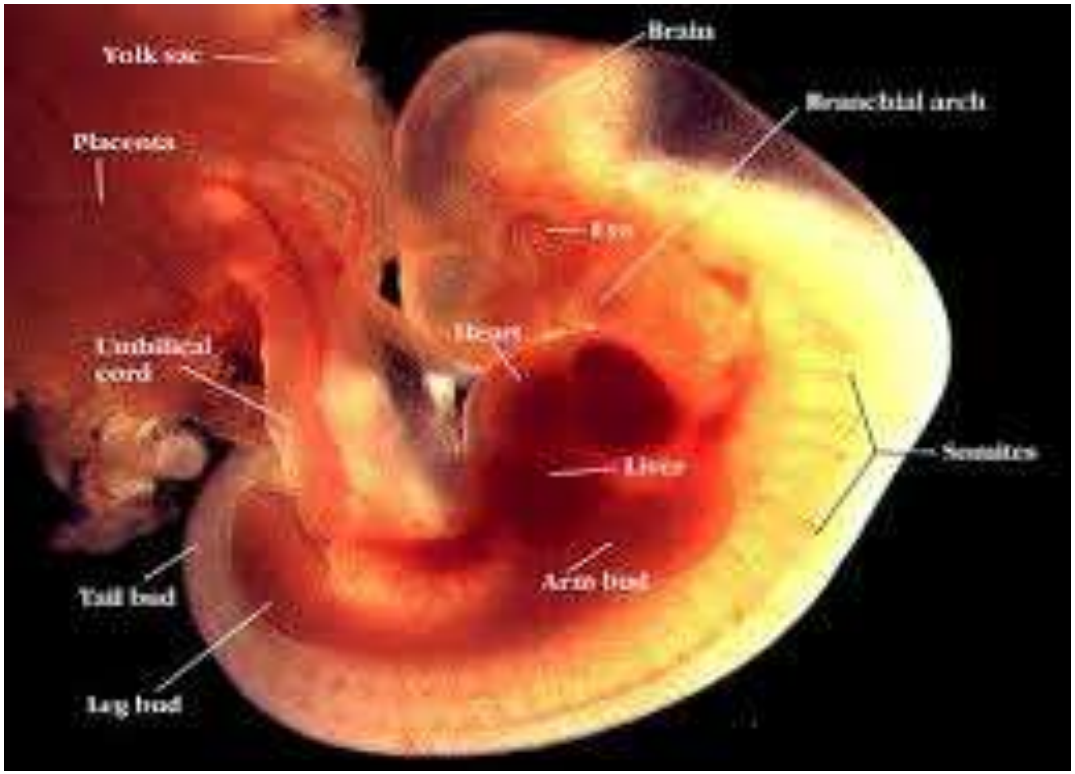
4th week

- Development of mouth region, gastrointestinal tract and liver



5th week

- Heart develops rapidly, head and brain regions become more clearly differentiated.

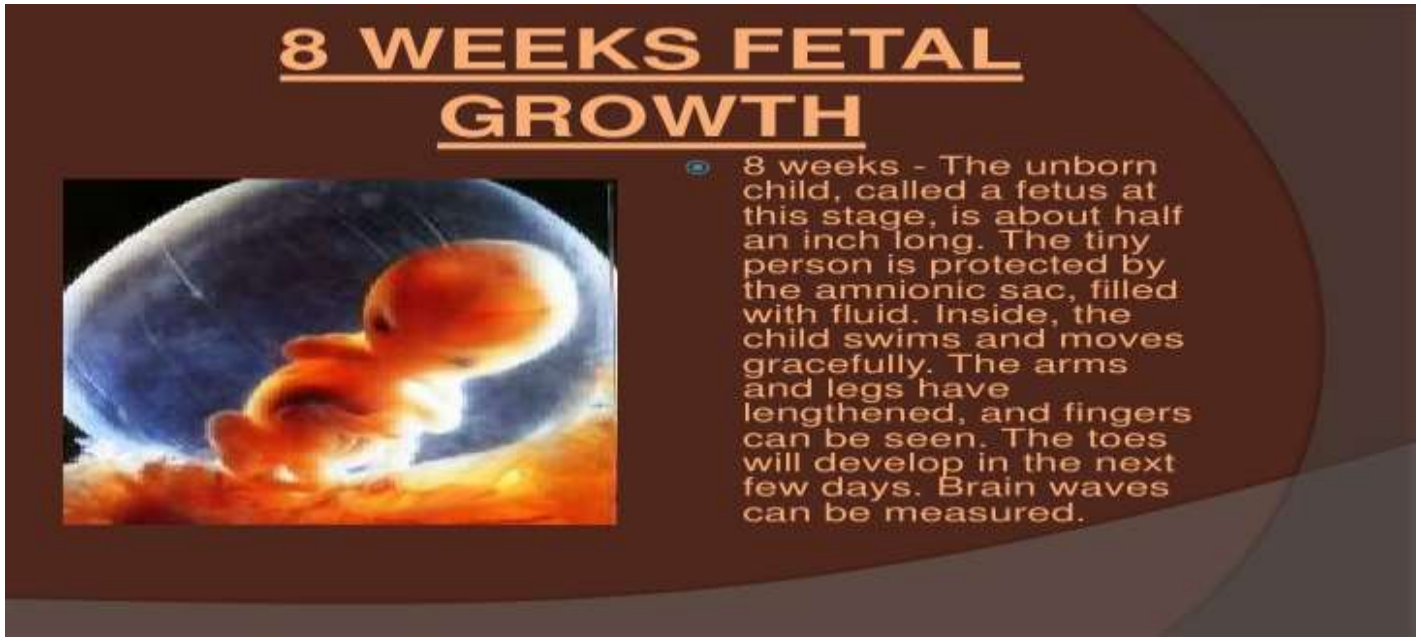


6th week

- Hands and feet begin to develop, liver now produces blood cells

8th week

- Embryo become about an inch long, face, mouth ,eyes and ears begin to take on a final defined form, development of muscles and cartilage takes place.



Period of the foetus

- 12^{th} week

  Foetus become 3inches long.

  It begins to resemble a human being-through the head is disproportionately large.

  Eyelids and nails begin to form and can be distinguished easily.

  nervous system is still very primitive.

16^{th} week

- Foetus is about 4½ inches.
- Mother may able to feel the movement
- Extremities (limbs) head and internal organs develop rapidly

20^{th} week

- Foetus grows to about 6 inches (shape of hands and feet are complete) and response to environment moves about quite freely

24^{th} week

- Foetus grows about 10 inches long Eyes completely formed, taste buds appear on the tongue. Inhales and exhales and make a thin crying noise.

28^{th} week

- An important phase. The foetus growth reaches the zone of viability (having a chance to live if born prematurely). Foetus exhibits responses to basic tastes and smell. Pain sensitivity appears to be absent. Breathing , still shallow and irregular. Sucking and swallowing actions weak.

32^{nd} week

- Foetus become increasingly ready for independent life. Foetal movement become sustained and positive. Breathing ,swallowing and hunger cry all become strong visual and auditory reactions are firmly established.

Sequence of motor development

- 1st month sucks thumbs try to holds the head up in prone position.

2nd month

- Turns head from side to side

3rd month

- Smiles on response to mother smile

4th month

- Sit on mother's lap, head-neck to control turn head from side to side. Raises self when pulled to sitting position . Attempts to grasp objects

5th month

- Grasps and attempts to objects

6th month

- Sit with support

9th month

- Sit without support

9th month

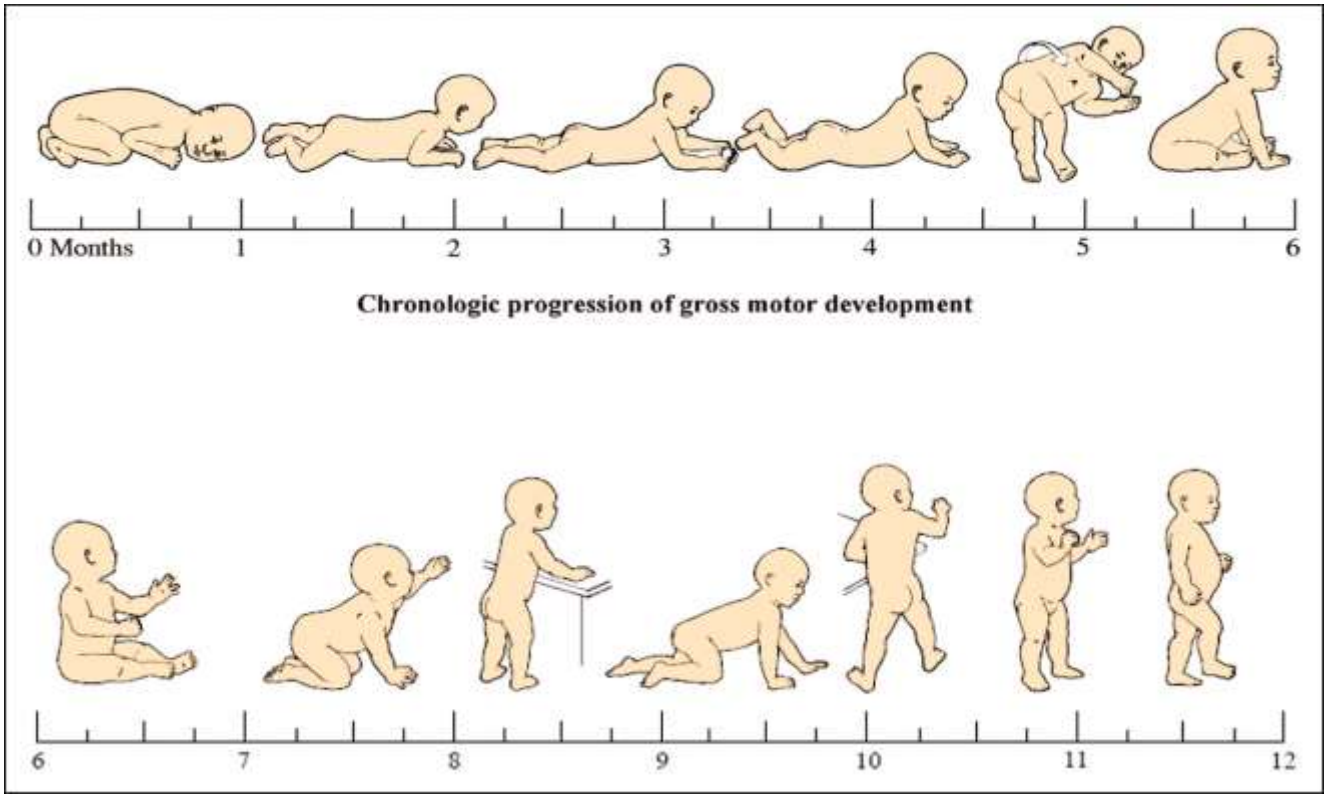
- Stand with support

11^{th} month

- Stand without support ,try to take a step or two step

12th month

- Walk without support



Define mental Retardation

As mental retardation is not a disease but only a condition persons with mental retardation cannot be treated become normal. They can however be trained to become more and more self-dependant in the performance of tasks of daily living skills.

Pre-Natal causes of mental Retardation

- Very high fever in the pregnant mother
- Sexually transmitted disease through father or mother
- Hypertension, diabetes or any other chronic illness in the mother.
- Exposure to X-rays in the early stages of pregnancy.

- Severe breathing trouble in the mother, asthma.
- Mother’s and child’s blood group Rh factor, may not agree with each other.
- Un-prescribed or harmful drugs taken by the mother and too much of drugs taken by mother.
- Malnutrition.

Natal causes

- If the baby is born before 250 day (Pre-maturity less than 37 weeks).
- If the period of birth is delayed by more than 10 months.
- If the child is delivered with difficulty and the time of delivery is prolonged.
- If the child is delivered with head in a wrong position at the time of birth.

- If the umbilical cord coils around the neck of the child tightly.
- If un- sterilised or crude instruments are used at delivery.
- If there is bleeding in the brain of the child due to injury.
- If the birth cry is delayed and the takes time to breathe.

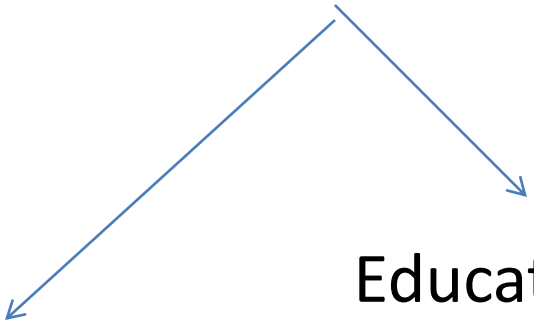
Post natal causes

- High fever like meningitis, encephalitis in the young child may damage the brain.
- Severe and incompletely treated Tuberculosis, Primary Complex may damage the brain.
- Lead and other poisonous materials taken even in small quantities while handling toys and so on.

- In some children, the protein, fat or carbohydrates is not used properly by the body and this affects the brain function.

- Mal-nutrition will affect the brain

Classification of Mental Retardation



Psychological

A) Educable IQ 50-70

B) Trainable IQ 35-49

C) Custodial IQ 0-34

Educational

A) Mild 52-69

B) Moderate 36-51

C) Severe 20-35

D) Profound Below 19

Characteristics Educable Group

- Usually speech is sufficient.
- Capable of learning, personal and social skills.
- Academic achievement may be upto the 4^{th} grade level.
- With proper training can mix well with others.
- Can usually take care of themselves from dangers.

Trainable

- Usually limited speech, but trainable to communicate needs.
- Usually trainable to dress, attend to toilet needs, eat and adjust socially.
- Maximum academic achievement may be upto second grade level.
- Usually co-operates with people.
- Has additional handicaps

Custodial

- Poor speech, usually using single words in communication.
- Usually the adult needs help in dressing, toileting, eating . And social adjustment.
- Not capable of learning academic.
- Poor social development.
- Usually co0operates with people.
- Usually has multiple handicaps.

Down's syndrome

- Every living cell in the human body has 23 pairs, that is, 46 chromosomes, of these the matured ovum or female cell has 23 chromosomes and the matured sperm or male cells has 23 chromosomes.

- When fertilization takes place with the fusion of these two cell, the resulting cell called zygote has 46 chromosomes arranged in 23 pairs.

- When there is an extra chromosome in the 21^{st} pair , the resulting chromosomal abnormality is called, Down's syndrome.

Characteristics of Down's Syndrome

- Lethargic and sluggish movement, walking imbalance.
- Skin loose and wrinkled especially over the forehead.
- Bulging abdomen with umbilical hernia.
- Peculiar breathing, with snores and sound producing, crying sound, mournful and weak.
- Delayed milestone.

CEREBRAL PALSY

Brain paralysis, a disability that affect movement and body position, occurs in the pre-natal, natal or post-natal period. It is not a progressive disorder.

Causes for C.P

Pre-Natal

- Infection, such as German Measles or Rubella.
- Foetal stresses due to trauma, toxemia, radiation and blood incompatibilites.
- Faulty implantation of the ovum.
- Any maternal condition, such diabetes, epilesy and hypertension.
- Multiple pregnancies

Natal causes for C.P

- Lack of oxygen at birth.
- Birth injuries from difficult birth,
- Pre-maturity at birth, born before 9^{th} month and weight less than 2 kg.
- Suffocation due to tightening of the umblical cord around the neck at the time of birth.
- Cerebral hemorrhage.

Post natal causes forC.P

Very high fever due to infection or dehydration.

Jaundice just after birth.

Brain infection ,meningitis, encephalitis, malaria and tuberculosis.

Head injuries.

Anoxia or lack of oxygen.

Poisoning from lead pesticides and so on.

- Bleeding or blood clots in the brain due to some unknown causes
- Brain tumors.

Autism

- Speturm Disorder.

Causes

Brain abnormality before during or after birth.

Untreated PKU, Rubella, stomach diseases.

Chemical exposures during pregnancy.

Biochemical imbalance and Genetic factors.

Characteristics

- Problem in motor control
- Abnormal response to sensory experience, either indifferent or over-reactive.
- Inappropriate emotional reaction, laughing, crying for no apparent reason.
- Problem in self-help skills, weak concentration, easily distractable.

- Prone to convulsions, some of the affected persons.
- Exhibit confusion over which is left hand and which is right hand.
- Have no fear or realistic dangers, height, fire and so on.
- Toileting problem, usual.

- Autistic aloneness, severe social isolation, unable to relate people as people.
- Eye contact for short duration
- .Delayed or abnormal development or speech.

Types of visual impairment

- Glaucoma (12.3%),
- Age-related macular degeneration (AMD) (8.7%),
- Corneal opacities (5.1%),
- Diabetic retinopathy (4.8%), Childhood **blindness** (3.9%),
- Trachoma (3.6%), and
- Onchocerciasis (0.8%).

Causes of visual impairment

GLAUCOMA

- **Glaucoma** is a complex disease in which damage to the optic nerve leads to progressive, irreversible vision loss.
- The increased pressure, called intraocular pressure
- which transmits images to your brain
- If the damage continues, **glaucoma** can lead to permanent vision loss.

CORNEAL OPACITY

- **Corneal opacity** is a disorder of the **cornea**. The **cornea** is the transparent structure on the front of the eyeball.
- **Corneal opacity** occurs when the **cornea** becomes scarred.
- This stops light from passing through the **cornea** to the retina and may cause the **cornea** to appear white or clouded over.

Diabetic retinopathy

- Diabetic retinopathy is caused by damage to the blood vessels in the tissue at the back of the eye (retina). Poorly controlled blood sugar is a risk factor.

Trachoma

- **Trachoma** is an infectious disease caused by bacterium Chlamydia trachomatis
- . ... Untreated, repeated **trachoma** infections can result in a form of permanent blindness
- when the eyelids turn inward.
- The bacteria that cause the disease can be spread by both direct and indirect contact with an affected person's eyes or nose.
- **Symptoms**: Eye pain, blindness

Onchocerciasis

- **Onchocerciasis**, also known as **river blindness**, is a **disease** caused by infection with the parasitic worm **Onchocerca** volvulus.
- Symptoms include severe itching, bumps under the skin, and blindness.
- It is the second-most common cause of blindness due to infection, after trachoma.

Orthopaedic or physical impairment

- Cerebral Palsy
- Polio

walking with Crutches

Walking with callipers

Walking with sticks

Amputation

What is polio

- Polio, or poliomyelitis, is a disabling and life-threatening disease caused by the **poliovirus**.
- The virus **spreads from person to person** and can infect a person's spinal cord, causing paralysis (can't move parts of the body).

Symptoms

- Sore throat
- Fever
- Tiredness
- Nausea
- Headache
- Stomach pain
- These symptoms usually last 2 to 5 days, then go away on their own.
- **A smaller proportion of people** with poliovirus infection **will develop other, more serious symptoms** that affect the brain and spinal cord:

- **Paresthesia** (feeling of pins and needles in the legs)
- **Meningitis** (infection of the covering of the spinal cord and/or brain) occurs in about 1 out of 25 people with poliovirus infection
- **Paralysis** (can't move parts of the body) or weakness in the arms, legs, or both, occurs in about 1 out of 200 people with poliovirus infection
- Paralysis is the most severe symptom associated with polio, because it can lead to permanent disability and death. Between 2 and 10 out of 100 people

PROF. S. JAIMITRA AND HIS CONTRIBUTION

- Y.M.C.A college of physical education chennai- is not only pioneer in the field of physical Education in India But also a pioneer in the a field of Adapted Physical Education for the Visually challenged in India.!

- Well it all started, when Christoffel blindenmission, a world renowned institution West Germany, having project all over the world exclusively for visually challenged, posed a challenged to the YMCA College of Physical Education in India in the mid 1970s

- . The challenge was to work out a comprehensive Physical Education programme for visually challenged and to implement it in schools for the visually challenged.

- The YMCA College of Physical Education willingly accepted the challenge and the lot fell on **Prof S. Jaimitra** who was as Asst Professor in YMCA College of Physical Education for 22 years .

- When **Prof S. Jaimitra** was appointed as**, Project Director for the Blind** in the year 1978, it was a real challenge for him as it was a new field . He had the least idea of the potentials and problems the visually challenged could faced.

- This means endowed with great enthusiasm and to experiment with new avenues teamed with his dedicated staff and equally concerned as he was, toiled together wholeheartedly. Of course their labour was not in vain!

- Prof S. Jaimitra and his project project staff work together and experimented the various methods for the adapted games for visually challenged. Little flower convent and St Louis School for the blind were the two research centres to tryout and all their experimenting and findings!

- After their great toil and unflagging efforts, they were able to fortify the visually challenged with physical fitness components like Strength, power, speed, Agility, Flexibility and Balance which are the basic criteria to play any game confidently.

- More than that their contribution to the visually challenged is to enable them to play tough game like Volleyball Kabaddi, kho-kho,Tennis, Table Tennis and track and field events using the same court and same track with small changes in the rules and by formulating small auditory clues.

- The **impossible** once upon a time in the fragile lives of visually challenged is made **possible** today by the dedication, determination clubbed with concern for the visually challenged, by the tireless effort of Prof. S. Jaimitra and his team. Can you visualize the joy and happiness written on the faces of visually challenged people, playing these games? It is a long cherished dream comes true

Inclusive education

- Inclusive education – also called inclusion – is education that includes everyone, with non-disabled and Disabled people (including those with “special educational needs”) learning together in mainstream schools, colleges and universities.
- This means the system must adapt to include Disabled people – they should not have to adapt to the system (see models of disability). The education system must recognise that it creates barriers for Disabled learners, for instance if parts of the school are inaccessible. Disabled pupils and students may require adaptations and support to access the curriculum.

- some examples:
- Faisal is a wheelchair user. So that he can go to the debating society after school, the accessible minibus collects him at a later time.
- Jenny has dyslexia. So that she can study a book along with the class, the teacher asks her to listen to the audio book rather than reading the text.
- James is Deaf and communicates using sign language. Instead of taking him out of his lessons to have a separate lesson with a sign language teacher, his teachers, teaching assistants and the pupils learn to sign too in order to communicate with him.

Integrated Education

- **Definition**. • **Integrated Education** is the **educational** programme in which exceptional children attend classes with normal children on either a part or full time basis. • It is placement of the disabled children in ordinary schools with some specialised **educational** help and services.

special education

- The **definition of special education** is a form of learning provided to students with exceptional **needs**, such as students with learning disabilities or mental challenges.

Movement education

- **Movement education** is a focus on **teaching** students to develop motor skills through physical **movement**. ... "**Movement** skills are core to the physical, cognitive and social development of a child"