PHYSICAL DISABILITIES AND IMPAIRMENT OF SENSES
VISUAL IMPAIRMENTS

Partial or complete inability to see

- Blindness
- Blurred vision
- Halos
- Blind spots
- Floaters
Blindness is the lack of vision or loss of vision that cannot be corrected with glasses or contact lenses.

Blindness may be partial (very limited vision) or complete (no perception of light).

Vision worse than 20/200 or a field of vision less than 20 degrees in the better eye is legally blind in most states.
VISUAL IMPAIRMENTS

- Most persons with some visual impairment have some useful sight and may recognize perception of form, movement, or light.
- 5% of the persons who are legally blind have no vision or light perception.
- Visual impairments are often present at birth, but those who acquired their impairment after birth will generally be able to create mental images of unseen objects based upon prior sight.
VISUAL IMPAIRMENTS:
Leading causes of blindness

- Diabetes
- Glaucoma
- Macular degeneration
- Accidents such as chemical burns, injuries from bungie cords, fishing hooks, fireworks, racket balls and similar objects
HEARING IMPAIRMENTS

- Partial or complete inability to hear
- Although only a small percentage of persons with hearing impairments have extreme hearing loss (greater than 90 decibels in the better ear), those who do are unable to understand amplified speech.
- Preventing hearing loss is more effective than treating it after damage has occurred.
Inability to hear may be caused by:

- injury
- infection
- tumors
- anomalies at birth
- degeneration due to aging, arteriosclerosis, and diabetes
- Occupational or recreational exposure to loud noises
HEARING IMPAIRMENTS

- Hearing impairments occurring at birth often result in delayed language development and difficulty with conceptual thinking
IMPAIRMENT OF SENSES

- Persons with impaired senses often feel isolated.
- Life is “full of surprises” for things often happen suddenly and without warning.
- Physical ability is usually normal.
- Intellectual ability is usually normal, but without the lack of usual sensory stimulation, they may seem below average.
- Emotional characteristics may include feelings of fearfulness, anxiety, and depression.
- Social maturity of children maybe delayed, especially as this relates to the response of their families toward their disability.
- Persons who are deaf are highly visual oriented.
- Persons who are blind have increased sense of touch and hearing.
IMPAIRMENT OF SENSES

- The degree of impairment and the age at which it was experienced has a lot to do with the adaptations of the individual and his/her ability to receive instruction in alternative ways.
- Persons who are visually or hearing impaired have often experienced much frustration and projects should be planned so that they do not increase frustration.
- Persons who are visually or hearing impaired may seem to lack initiative and may require additional instruction.
IMPAIRMENT OF SENSES

- Projects for persons who are visually impaired should include high contrast lettering, large lettering and contrasting colors.
- Recording instructions material would also be helpful.
- All directions should be clear and concise and include physical demonstrations.
- Enable visually impaired persons to touch demonstrations and be close enough to see demonstrations if some sight is possible.
- Orientation to the work area is very important; persons with visual impairments should be encouraged to walk around and explore the environment before beginning the task.
IMPAIRMENT OF SENSES

- To gain the attention of a person with severe hearing impairment, tap the person on the arm or wave your hand near his or her visual field.
- When using speech, always face the person with a hearing impairment and do not slow or exaggerate your speech.
- Written instructions should be expressed in short, clear sentences and difficult vocabulary words should be avoided.
- Children with hearing impairments often appear to be hyperactive, but their behavior frequently results from difficulty communicating without the hearing world.
PHYSICAL DISABILITIES

Physical disabilities include those conditions related to:

- heart
- vascular system
- lungs
- skeletal systems
- muscular systems
PHYSICAL DISABILITIES:

Amputation and Orthopedic Rehabilitation

- earlier in life the more common causes of amputation are accidents usually involving automobiles or other heavy machinery
- later in life causes such as poor circulation to extremities are an additional cause
- Physical strength and ability is reduced even with orthotic and prosthetic devices
- Psychologically the individual may not reel like a whole person, impacting their self-image, self-esteem and ability to return to activities enjoyed before the loss
- Increased self-consciousness may lead to social withdrawal and depression, motivation and readjustment to a fulfilling lifestyle
PHYSICAL DISABILITIES: ARTHRITIS

- Inflammation of one or more joints and breakdown of cartilage which normally protects the joint, reduces wear and prevents pain when the joint is impacted

- Many forms of arthritis

- Osteoarthritis is the most common form
PHYSICAL DISABILITIES:

CEREBROVASCULAR ACCIDENT (stroke)

- interruption of blood flow to a portion of the brain due to blockage or occlusion
- thrombosis is a clot that originates at a certain point and prevents oxygenated blood from proceeding further down the artery
- embolism is a clot that originates somewhere else in the body, breaks loose and travels to a point where it gets stuck and prevents blood from flowing further
- hemorrhagic stroke occurs where a blood vessel pops, typically due to an aneurysm. An aneurysm occurs when there is a weakness in a portion of a blood vessel and pressure causes this weak area to balloon out, leaking blood into the brain cavity instead of supplying it to the brain cells.
- Roughly 500,000 people each year have strokes in the U.S.
PHYSICAL DISABILITIES: CEREBROVASCULAR ACCIDENT (stroke)

- Contributing factors may include
- Hypertension
- Arteriosclerosis
- Congenital vascular weakness
- Disruption of blood flow to a part of the brain results in death of the cells and loss of the functions that they controlled.
- Paralysis or weakening results in the side of the body opposite the side of the brain that has been affected.
PHYSICAL DISABILITIES:
CEREBROVASCULAR ACCIDENT (stroke)

- Due to the vast complexity of human nature and notably the human brain, the consequences of a cerebrovascular accident on the functional ability of an individual vary greatly.
- The effects of the lesion depend on the functional responsibilities of the part of the brain damaged.
- Since control centers in the brain are usually interrelated and changes in function affect many faculties, this dramatically increases the complexity of the rehabilitative process.
- Since the right and left sides of the brain control different psychological functions, stroke victims often have very different changes in their mental abilities.
PHYSICAL DISABILITIES: MULTIPLE SCLEROSIS

- progressive disease of the nervous system
- It is characterized by a slow decomposition of the integrity of the myelin sheath insulating the nerve fibers which short circuits nerve signals and results in fatigue.
- This degeneration results in plaques, which affect the brain and spinal cord.
- Physical symptoms depend on the location of the plaques and can include motor weakness, sensory loss, visual difficulties, tremors and ataxia. Progression of the disease causes loss of range of motion, paraparesis and eventually paraplegia.
- Cognitive function, memory, and abstract reasoning decline. Attention span and judgement may also be affected.
- Social skills decline with loss of physical abilities.
- Persons with multiple sclerosis may have mood swings, low self-esteem and lack of motivation for therapy.
PHYSICAL DISABILITIES:

MYOCARDIAL INFARCTION (heart attack)

- Most commonly caused by a clogging of the arteries which cuts off blood supply to a portion of the heart muscle, killing the affected cells
- Pumping efficiency is reduced and the individual must make adjustments to their lifestyle and rebuild their strength and endurance
- Chances of a heart attack increase with age, improper diet, degree of obesity and type-A behavior
- Psychological effects often include depression due to tension and anxiety.
- Fears concerning death, reoccurrence and lost abilities.
- Self-esteem may be affected and lack of motivation
- Activities requiring a degree of physical stress may have to be redefined and this may lead to...
PHYSICAL DISABILITIES: PARKINSON’S DISEASE

- Slowly progressing neurological condition caused by degeneration of neurons in the regions of the brain
- It may be caused by carbon monoxide and manganese poisoning, encephalitis, senile brain changes, and arteriosclerosis
- It usually occurs between the ages of 40 and 80
- Physical symptoms include a gradual increase of muscular rigidity and weakness, slowing of response to voluntary movements and characteristic shuffling gait
- General reduction of range of motion and tremors reduce fine motor skills
- Psychological effects usually center around loss of functional ability.
- The outlook for the future may seem hopeless and this may affect motivation toward therapy and life in general; depression and withdrawal may occur
PHYSICAL DISABILITIES: SPINAL CORD TRAUMA

- Occurs when the spinal cord is traumatized or severed, usually in an accident, fall or by tumors, disease or congenital abnormalities
- Weakness and loss of physical function occurs in all areas below the point of injury
- Loss of mobility, extended length of rehabilitation and permanent loss of function cause anxiety, fear and depressions
- Hopelessness and lack of motivation can have strong effects on an individual’s attitude toward rehabilitation and the future quality of life.
PHYSICAL DISABILITIES

- Knowledge of their expected capabilities provided by a physician should be an important part of developing a treatment program.
- Discussing their abilities with them can be reassuring to them and help the therapist plan activities.
- If the therapist feels that the individual is being overly protective, discussion with physical therapists of other participants with similar disabilities may also be helpful.
Adapting the environment to meet the restrictions of the disability is of considerable importance.

Similarly, adapting the environment to meet their physical stamina or ability to do strenuous activities is important.

Adaptive tools and techniques are often essential if they are to acquire gardening as a hobby or to continue it as a hobby that they participated in before their disability.

Fine and gross motor coordination physical strength, balance, etc. all must be considered in adapting the environments, task or tools.