

WEBINAR ON Vision Rehabilitaton



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About the Webinar

“Vision Rehabilitation” includes a wide range of professional services that can restore functioning after vision loss, just as physical therapy restores function after a stroke or other injury. It is important to have an early visual rehabilitation to decrease the impairment associated with decreased visual output and to enhance their functioning. It allows people who have recently lost vision, are blind, or have low vision to continue to live independently and maintain their accustomed quality of life.

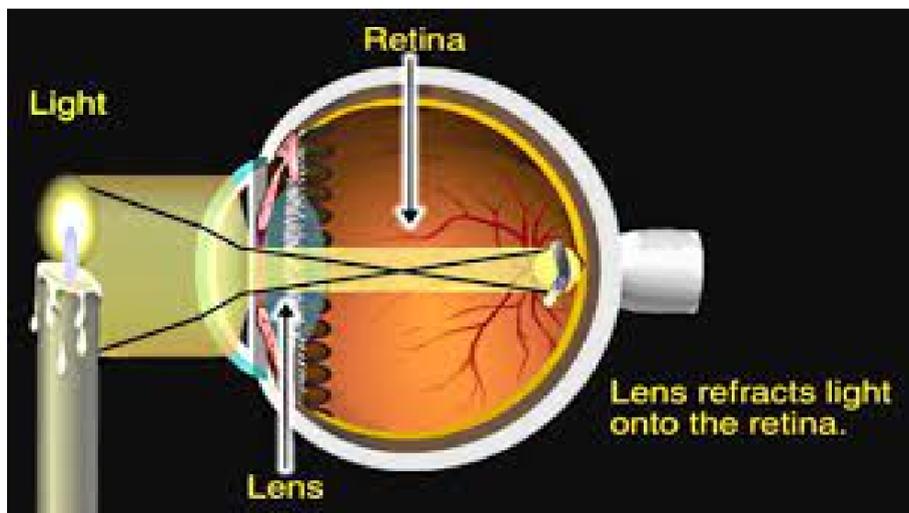
Prajaahita Foundation is organizing a webinar on the topic "Vision Rehabilitation" for Persons with Disabilities and caretakers as part of the Saukhyam Project.

WEBINAR ON VISION REHABILITATION

How does our eye work?

When you see an object, the object/light hits the **retina** at the back of the eye and travels to the brain in the form of signals. These electrical signals travel from the retina through the **optic nerve** to the brain. Then the brain turns the signals into the images you see and a command is released.

Eg. You are searching for a pen and you saw a pen on the table. The signal is sent to the brain. The direction of movement is sent back to the body part by the brain which helps us to take hold of the pen.



Visual Impairment includes

- Total blindness- there is no light perception (less than 1% of people are having this)
- Low vision
- Vision loss and additional problem- Many disabilities have visual impairment as an effect. There is a separate category itself for this. Eg. Deaf-Blindness, some children with Cerebral palsy have vision loss, etc.

Low Vision

It is vision loss that can't be corrected by treatment. There are different types of low vision and are discussed below.

- **Overall blurred vision**

As the name suggests, this type of vision gives the blurred images. That is, loss of visual activity or sharpness of details. If you have fog in the specs, the image is not clear and is shadowy.

- **Loss of visual activity or sharpness of details**

Behavioral manifestations

- Difficulty in reading and writing
 - Difficulty in recognizing details like facial features and facial expressions.
 - Difficulty in reading road signs
 - Difficulty in orientation and mobility
 - Difficulty in driving
 - Difficulty in grooming
 - Difficulty in using computers
 - Difficulty in singing
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- Impaired contrast sensitivity

Behavioral manifestations

- Bumping into objects like door frames or furniture.
- Seeing time in the watch.
- Identifying coin and currency notes.
- Difficulty in mobility
- Difficulty in walking down steps
- Difficulty in driving and mobility in the dim-lit area
- Difficulty in reading poor contrast materials

Central field loss

In this type of vision, the middle portion of the view is blurred. The images around it (on the periphery) are present. That is, a person with central field loss has impaired contrast sensitivity.

Partial perception of people and object (could be caused by scotomas)

Behavioral Manifestations

- Not talking directly to people.
- Unusual head position.
- Lack of eye contact.
- Diminishing ability to recognize the people in front of them.

Inability to differentiate fine details

Poor color vision

Behavioral Manifestations

- Inability to identify the color of the object
- Uncoordinated clothing
- Difficulty in sorting fruits and vegetables
- Difficulty in identifying medicines

- **Impaired contrast sensitivity**

Behavioral Manifestations

- Bumping into objects
- Difficulty in seeing time in the watch
- Difficulty in identifying coins
- Difficulty in negotiating stairs

Glare

- Difficulty during sun lights and car lights

Peripheral field loss

Here the middle part is clear but the surrounding is blurred. In this case, it is very challenging and if the value is less than 20, legally it comes under completely blind.

Functional implication

Inability to perceive people /objects in the side

- Will have unusual head movements
- Difficulty in reading
- Uncertainty in mobility
- Inability to find lost objects

- **Partially blurred vision**

They have difficulty in all daily living activity., mobility to communication

Vision Rehabilitation Services

Vision rehabilitation services start at an early stage. It continues across all ages from birth. The ophthalmologist knows instantly the condition and visibility in many cases. Children are mostly referred even after a day of birth.

Sometimes early intervention can lead to the betterment of vision in children. At those time also, we intervene. This is very important for a child as the future development tasks won't be hampered after the intervention.

The goals of vision rehabilitation

- Maximize the use of residual vision- Helping the person to build the capacity to use the residual vision to the fullest.
- Increase the level of personal independence

- **Vision rehabilitation components**

Counseling- Any parent or caregiver will be in shock when they come to know about the disability. The counseling aims to support this. At the same time, making the family aware of the medical conditions and rehabilitation services available for the child.

Early Intervention - Detect the problem and proper therapy is assigned.

One example is vision stimulation therapy- If the child who is visually impaired is not given the therapy, the brain-eye signals won't be functioning. If not intervened early, this could be a permanent loss. This stimulates the vision. Functional vision assessment is done to identify how much vision capacity is utilized by the person. Concept training is also done for children. (Eg. the Time concept)

Different methods are used to assess the functionality.

Low vision rehabilitation- Based on the age and requirement, some people/children will be advised to have a low vision device. Either optical devices or non-optical devices. Training to use these devices are also given.

Environmental modification - This is a very important step in rehabilitation. Just assistive devices won't be that effective. Instead, small modifications in the environment can make a huge impact. Changes like using contrasting tapes, using HB pencils for writing, etc. Other methods like keeping markings on the switchboard, contrasting colored objects

Educational rehabilitation -Educational rehabilitation is done according to the child's condition and requirements. Different devices are used in activities to help them through education. Children and the family are prescribed different activities and modifications. Eg. Using darker pencils, using larger fonts, clocks with larger numbers, etc. Using black pens and darker pencils. A detailed report is also sent to the teacher on how the child will be performing in the beginning and after using the devices. Teachers also are periodically involved in the process

Vocational rehabilitation - The person is helped for the selection of job-based on residual vision, skill sets, and interest. At the same time, training is also given for the particular need. Employment opportunities are also discussed and guided through the process.

Special skill training

Support services - The existing support services are made available for the family. Proper training is also given to the family and child for effective rehabilitation. Proper checkups are done to see the effectiveness. Functional assessment is also taken. For some kids, devices are enough. Whereas otherwise, another modification is also given. Just like we discussed in education and environmental modification. Frequent training is also done.

Devices

- Glasses
- Low vision devices (optical and nonoptical)
- Large print
- Electronic devices
- Special software
 - Magnifying software- Magic helps in enlarging the texts on the computer. Color contrasts can also be changed.
 - JAWS- Job Access with Speech

This is mainly used by people with very low residual vision. Many activities in different fields of work are possible in this software. This software synthesizes speech and enables the person to do anything on the computer.

- Text to speech software- Read, magnify and type anything

Home Management

Many women approach saying they are not able to do their daily jobs because of either acquired or existing visual impairment. Teaching them to do their work and giving suggestions on modifying their houses is part of this. This makes them as independent as possible. Cutting vegetables, frying, etc. can also be done with ease.

Guidance to avail support benefits from government

Supportive benefits are

- **Travel**
- **Education**
- **Income Tax exemption**
- **Pension**
- **Bank loan/subsidy**
- **Postal**

Question and Answers

Q. Vision rehabilitation services in India

Ans. We have very few complete rehabilitation services in India. In Delhi, we have Sharif hospital. They provide full, tertiary care services. In Andhra Pradesh, we have an institution providing full-fledged services. In Bangalore, we have Sankara providing full services. In Kerala, we have started in Ahalia but the status of which I am not sure about. There are centers outside hospitals by different organizations or collectives.

Q. Are these software expensive?

The softwares are mostly available in the gadgets we buy these days. The paid version may have more functions. If it is a job-related one, normally the company provides these facilities.