

VISION THERAPY TECHNIQUES

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Abstract

This paper describes about Introduction to Vision Therapy and its Procedures.

Introduction

Binocular Vision Therapy is sub divided into two main categories. They are:

- First category
- Second category

Before prescribing Vision Therapy, Amblyopia should be treated first.

First Category:

This category is less natural and more artificial compared to other procedures. Here, patient is instructed to look at the instrument. Here, only patient's eye is seen, and no body movement occurs. Eg. Stereoscopic devices.

Second Category:

Here, "Free Space Training" is the proper example. Here, there is no restriction on body movements. i.e. body movements are possible.

During Vision Therapy always practitioner should be acknowledged and conscious regarding following feedbacks:

- Diplopia
- Blur
- Suppression
- Luster
- Kinesthetic awareness
- Small in Large Out (SILO)
- Float
- Localization

Diplopia: During Vision Therapy if patient will complain of Diplopia, it means improper alignment and it should be solved.

Blur: During Vision Therapy, if patient will complain of Blur sensation, it means there is focusing problem. Either over focusing or under focusing. For this, Accommodation is the concerned factor.

Suppression: During Vision Therapy, if some word/letter is missing, it indicates Suppression.

Luster: Here, patient is indicated to identify colours among mixed colour. Because mostly, in Vision Therapy Instruments, Red Green colour combination is present.

Kinesthetic Awareness: It means that patient must be acknowledged regarding Accommodative Stimulus and Accommodative Relax. Patient must be able to differentiate between it. During Accommodative Stimulus and Accommodative Relax, if eye is being crossed, then it is called Kinesthetic Awareness.

Small in Large Out (SILO): During Vision Therapy, patient is asked to maintain fusion while Convergence and Divergence demand is varied. In this case, if convergence demand is increased, then the image appears small to the patient and in case, Divergence demand is increased, then object appears larger to the patient. Convergence demand is increased due to Exophoria and Divergence demand is increases due to Esophoria.

Float: During Vision Therapy, here, patient feels that object appears floater and closer and further away from him/her. It is also like SILO phenomenon.

Localization: During Vision Therapy, patient will be asked to locate the object exactly.

****During Vision Therapy, it is very important that with Convergence, Accommodation will also be changed. ****

Vision Therapy Instruments

Anaglyphs and Polaroid:

Anaglyphs and Polaroid is a part of Vision Therapy. By this instrument, we can increase the Convergence and Divergence demand by Horizontal separation of the slide. It is very important to remember that in case of Accommodation, two colored slides will be used, but slides will be identical except Colour or Disparity. Here, patient is asked to wear Red/Green goggles. In case of Vectogram (Polaroid), Polaroid material is used, and patient is instructed to wear Polaroid sunglasses. By, these instruments, we can expand the Positive Fusional Vergence and Negative Fusional Vergence systems by Horizontal separation of the slides. Vectogram system is more acceptable than Anaglyphs in cases of colour deficient patients.

Aperture Ruler:

By this instrument we can increase the Amplitude value of Positive Fusional Vergence and Negative Fusional Vergence. In Aperture Ruler, there may be one or two Aperture. When it has only one Aperture, then it creates “Chiastopic effect” and

when it has two apertures, then it creates “Orthopic effect.”

In case of Convergence, Chiastopic effect occurs and in case of Divergence, Orthopic effect occurs.

Cheiroscope:

By this instrument, we can improve Binocular Instability and Suppression. Here, one side paper of target is attached and at another side blank paper is attached. In front of dominant eye, blank paper is placed. In this instrument, septum is used. It is 70-80 mm .to separate the two eyes. Binocular Instability is diagnosed when patient is trying to trace the object and his/ her hand is shifted during the procedure of Cheiroscope. If some part of the object is missing, then Suppression is diagnosed.

Brock string:

By this instrument, we can normalize the patient’s Near point of Convergence, Negative Fusional Vergence and Positive Fusional Vergence and ability of the Voluntary Convergence.

Procedure:

Step 1: A bead should be slid in front of the patient’s eye approximately at 15 cm. The patient is instructed to converge to look at the bead. With this procedure, string should be seen as two and bead should be seen as one.

Step 2: If patient is able to complete the Step 1, then is followed for Step 2. Here, only string is present, not beads. It is called Bug on String. The main motto of this method is to increase the ability of convergence.

Step 3: Here, the string is eliminated, and patient is asked to converge the eyes voluntarily without the string.

Barrel Card:

It can increase the patient’s Near Point of Convergence and patient is able to do Voluntary Convergence. It is a white card and it consists of three dots. This card is placed against the Nose bridge and patient is asked to look at the dot. At first, patient is asked to look at the farthest dot, then near dot appears double and then to look at middle dot and then to look at near dot. Thus, patient’s convergence insufficiency is being treated.

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