

Manual and Patient Instructions to Accompany

See Sick Syndrome: Its Diagnosis and Treatment with Simple Home or Office Vision Therapy

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Introduction

Do many of your patients complain about headaches? How about photophobia and dizziness? Did you know that of your adult female patients one in seventeen (1 to 2% of males) has a constellation of visually-related motion sickness problems that includes dizziness, nausea, photophobia, headache, and fatigue? Most doctors miss this pattern.

An important reason why doctors usually miss this condition is that patients do not normally complain to their eye doctor about motion distress because they do not think it is related to their eyes or vision.

By taking this course, the practitioner will gain knowledge about sensory conflict and visually-related motion sickness. Specifically, See Sick Syndrome (SSS), also known as Neuro-Ocular-Vestibular Dysfunction (NOVD), is a combination of motion sickness and photophobia that negatively affects quality of life, but is almost always unrecognized by medical professionals and eye doctors. This course is designed to help the practitioner learn how to quickly diagnose, manage, and successfully treat this disorder, while ruling out and referring conditions that mimic SSS.

Course Overview

This portion of the course is based upon the work of Roderic W. Gillilan O.D. Starting in 1965, Dr. Gillilan has diagnosed and treated hundreds of patients with SSS in his Eugene, Oregon private practice. He first published his findings in 1979, and in 1984 wrote and published the SSS manual (Optometric Management of Motion Sickness).

This manual includes a step-by-step SSS therapy instructions for simple home- or office-based desensitizing dynamic adaptive vision therapy (DAVT). It also includes ready to print handouts and recording sheets describing the home therapy activities to be completed and forms for documenting compliance.

Information from the course will be valuable to all practitioners regardless of whether vision therapy is offered or not. For those who do not provide vision therapy services, the course will help to correctly identify and diagnose SSS, provide better patient education, and make appropriate referrals when necessary.

The typical SSS therapy program or DAVT is usually completed within a few weeks by most patients. Reduction of symptoms and improved quality of life is reported to occur for approximately 80% of patients completing DAVT. The results of a SSS program are illustrated in the following case presentation.

Case Presentation

SJE, a 42 year old Caucasian female, presented to the office for a routine eye exam. Her chief concern was occasional blur at near. Upon additional specific questioning, she described her life-long history of motion sickness and an unusual sensitivity to light in recent years.

Medical history was unremarkable and SJE was taking no medications. Ocular history was unremarkable except for a short period of lens wear as a child. She did use corrective lenses.

Pertinent tests revealed emetropia, early presbyopia, and normal binocularity. Anterior and posterior eye health findings were unremarkable. Saccadic tests and provocative testing with a swinging Marsden ball held at arms length for a few seconds produced nausea and headache.



Diagnosis: Severe See Sick Syndrome with functional tunnel vision (based solely on case history findings) and early presbyopia

Treatment and management plan: Dynamic Adaptive Vision Therapy performed daily at home for four weeks, with weekly office visits for evaluation and instruction. New Rx for near use.

Post therapy comments written by patient: "Before I did the exercises, I would have difficulty reading and losing my place after having read 3 lines or so. Consequently, I grew up with a not good image of myself because I thought I was dumb. My mother took me to optometrists and got conflicting opinions because I had 20/20 vision; one would want to put glasses on me and another would not. I would go on having these terrible headaches. After doing the exercises (SSS therapy), I can read without losing my place.

"It used to even make me sick to watch people eat. I'd have to get up and leave the table because the up and down motion of their hand and fork or spoon got me. Now I can sit and enjoy the fellowship and the food.



"When I would go to a movie, I would have to sit in the very back row and wish the wall was back a lot farther because the light on the screen hurt my eyes so terribly. I had glasses that were very dark to protect my eyes. My eyes are much less sensitive to light now, I go without my sunglasses and sometimes don't even realize I don't have them on until I reach up to adjust them.



"I would always be bumping into things like counter corners or door jams or other people, I thought I was klutzy. When in a strange place I would cling to my husband to guide me so I could look at the things around me without falling down. Now, I look at things and also walk around things that happen to be in my path without hardly blinking.



"I had developed such a pattern of living that I rarely moved my head or eyes any more than was necessary because it made me either nauseated or gave me a headache. In fact, I used to spend at least 75% of my time either nauseated or headachy and I can't begin to tell you how nice it feels to be free of that. I had given up hope of ever being able to travel comfortably and had

decided to give up trying. Now I use my eyes a lot more and see things that I never could look at before. I went for a ride with my husband and thoroughly enjoyed it as much as he did because I didn't get sick and I could look around and see all the things he was seeing. Now I can travel and enjoy it."



What is The See Sick Syndrome?

See Sick Syndrome (SSS) is the combination of motion sickness and photophobia. It is the visual sensitivity to motion combined with photophobia that elicits the SSS symptoms.



SSS is not well understood by professions and is not typically diagnosed during a standard eye or medical examination. It can, however, be self diagnosed rather accurately when the patient reads a list of common symptoms.

SSS patients often either go from doctor to doctor searching for an answer to their problems or don't tell anyone, even their family, about their bazaar symptoms for fear they would be considered "crazy" or labeled a "complainer."

Epidemiology: Based on clinical observations by Dr. Gillilan, SSS occurs in approximately 6% of the female population and 1% of the males, and it is usually familial.

Symptoms: The severity and frequency of various SSS symptoms can vary widely. Most SSS patients have at least two things in common: motion sickness (e.g., nausea, headache, dizziness, fatigue, malaise, drowsiness, depression, bodily warmth, pallor, and/or cold sweats) with repeated eye movement or when observing rapid motion, and unusual sensitivity to light.



The symptoms of SSS and the ability to manage motion often varies from day to day. One reason is that motion effects can be cumulative. An exposure to motion can make one less able to handle a new exposure for up to three days later.

SSS symptoms are normally mild in children but gradually become more severe over a period of years. This is probably caused by an avoidance of symptom producing activities by adults and the resulting loss of adaptation and coping strategies.

History: Almost all SSS patients have life-long histories of carsickness, which occurs almost exclusively in the daytime. The reason for this is that less peripheral motion is observed night. According to Gillilan, reduced awareness of objects in the periphery (functional tunnel vision) also occurs but is seldom recognized by patients. However, they often report a history of "klutziness."



Confounding conditions: Conditions such as fatigue, pre-menstrual syndrome (PMS), and hypoglycemia can also make SSS worse. If a patient develops an inner ear condition in addition to the SSS, the combined condition can be disabling. This complicates matters and the results of DAVT may not be complete, but the training is still usually successful in multi-condition cases.



Summary of SSS Symptoms

A summary of SSS symptoms is shown below. The chart is just a general guide and does not include all symptoms. Many variations between cases and categories can occur. In some categories, the moderate or severe SSS symptoms are in addition to the mild or moderate.

SEE SICK SYNDROME SYMPTOMS

	Mild	Moderate	Severe
Car Sickness	Mild car sickness. Cannot read (look down) in a car more than a few seconds without nausea, HA, and/or dizziness.	Necessity to be the driver to avoid nausea while traveling in a car, even on a straight road. Inability to look backwards in a car without nausea. Nausea when driving on tree lined roads when the sun casts shadows across the road.	Riding in or even driving a car for more than a few minutes may result in severe HA, fatigue, and/or nausea.
Photophobia	Unusual sensitivity to light to a moderate degree. Must wear sunglasses outdoors, even on cloudy days. Feels uncomfortable in brightly lit buildings or places with shiny floors such as grocery stores, classrooms, offices, or malls.	Eye pain or HA when exposed to a “flash of light” or being outside without sunglasses, even on cloudy days, or being in a brightly lit place. Unusually long after images after looking at most sources of light (several minutes). Computer screen brightness causes discomfort. Sensation of being “blinded” when looking at oncoming headlights.	Severe sensitivity to light both indoors and out. They are the type of person to turn off lights and pull down shades. May say things like "light is my worst enemy."
Visual	Inability to sit close to a movie screen or watch movement of a train or a carnival ride without nausea, HA, and/ or dizziness.	Inability to look at stripes or watch rapid movement on television or a moving belt without nausea, headache, or dizziness.	Inability to watch more than minimal motion without dizziness or nausea, such as watching ones own hand while eating.
Headache	Frequent and sometimes daily “dull” or “pressure” headaches.	Exposure to any activities which involve observations of movement or eye movement for more than a few minutes can cause	Constant or very frequent nausea, HA, or dizziness which can range from mild to severe.

Diagnosing SSS Based on Symptoms

SSS is most commonly diagnosed on the basis of patient history because no other test will guarantee as successful a diagnosis. SSS is easiest for the patient to self diagnose when they review the long list of symptoms.

No diagnosis can or should be made by evaluating only one or two symptoms. On the other hand, if the patient has most of the major symptoms, has an equilibrium problem, and has difficulty looking at motion, he or she probably has SSS.

Answers to the following key questions can assist in the diagnosis of SSS.

1. CAN YOU READ IN A CAR WITHOUT NAUSEA, HEADACHE, OR DIZZINESS?

- If the answer is YES, even if the patient can read for only several minutes, ask no more questions. The patient does NOT have SSS or typical motion sickness.
- If the answer is NO, or if the patient can read only for a few seconds, or can't look down at all proceed to question 2.



2. DO YOU BECOME NAUSEATED ,OR GET HEADACHES, OR DIZZY WHEN RIDING IN THE BACK SEAT OF A CAR ON A *STRAIGHT* ROAD?

- If the answer is “NO”, ask no more questions. The patient does NOT have SSS.
- Use the above specific words instead of asking, “Do you ever get car sick?” Many patients consciously or unconsciously avoid carsickness

by only looking straight ahead. Some just go to sleep to avoid symptoms. Also, carsickness at night is rare.

- If the answer is Yes, go on to question 3.



3. CAN YOU SIT CLOSE TO A MOVIE SCREEN OR WATCH A TRAIN GO BY WITHOUT NAUSEA, HEADACHE, OR DIZZINESS?

- If the answer is NO, but the answers to questions 1 and 2 were yes, the patient might have *at least* a moderate degree of visually induced motion sickness, but not necessarily SSS. Those considered to have SSS symptoms must also have photophobia as a symptom.

4. ARE YOU SUPER-SENSITIVE TO LIGHT? DO STORE LIGHTS SEEM TOO BRIGHT? DO YOU HAVE TO WEAR SUNGLASSES EVEN ON CLOUDY DAYS?

- If you have gotten this far and answers to all of these questions are yes, you can make a tentative diagnosis of SSS.

Additional questions to which most patients with SSS will answer yes:

5. DO YOU HAVE FREQUENT, SOMETIMES DAILY HEADACHES OR “PRESSURE” IN YOUR HEAD?



6. DO YOU HAVE NAUSEA, HEADACHES, DIZZINESS OR A SPACEY FEELING WHEN SHOPPING OR MOVING THROUGH CROWDS OF PEOPLE?
7. DO YOU HAVE AN UNUSUAL FEAR OF HEIGHTS?
8. DO YOU FEEL AS IF THERE IS *SOMETHING* CONSTANTLY IN MOTION INSIDE OF YOU?
9. ARE YOU KLUTZY? DO YOU LOSE YOUR PLACE EASILY WHEN READING?



10. DOES ANYONE IN YOUR FAMILY SHARE THE SAME SYMPTOMS AS YOU?

Provocative Testing to Confirm a Diagnosis of SSS

In most cases, the primary symptoms of SSS can be reproduced within ten to twenty seconds by exposing the patient to visual motion such as watching a Marsden ball swing, making saccadic eye movements with the head still, or simply rolling the eyes around.



Some patients will develop these symptoms during the regular eye exam as well. A few SSS patients are delayed reactors and do not develop symptoms until up to one hour after exposure to motion. This reaction to "eye movement only" activity can serve as a positive demonstration to the patient and be reassuring to the doctor that the eyes are a factor contributing to the SSS symptoms.

Possibility of Non-Visual Motion Sickness Causes

Many severe SSS patients have made the rounds of neurological, ear-nose-throat (ENT), and other medical offices because are concerned about a brain tumor or an inner ear problem. Usually they have had extensive medical testing but often are diagnosed with vague inner ear dysfunction, or they are told “there is nothing wrong with you,” or “you have a mental condition.” Some have been prescribed medications for dizziness, nausea, and/or depression.

When there has been a previous medical evaluation and/or treatment for the patient's condition, there is less concern about the need to refer to another medical specialist for evaluation (but it does not rule it out).



If differential diagnosis indicates a possibility of a primary or overlapping pathological condition, a referral to rule out a health or life threatening conditions should be made. In addition, if after two weeks of therapy the patient does not notice some improvements in the ability to do the therapy, a referral to another specialist is recommended.

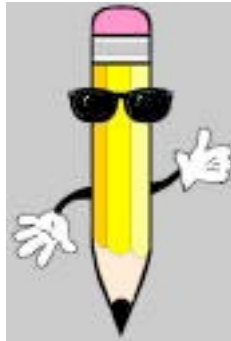
Furthermore, the patient should be able to tell within a week or two that the therapy is working. This adds confirmation to the diagnosis of SSS. However, it is always wise, when making a positive or probable diagnosis of SSS, to also state, “You most likely have SSS, but I cannot tell with absolute certainty that you do not also have some other condition.” Finally, and most importantly, when in doubt, refer it out.

Dynamic Adaptive Vision Therapy

Within a period of four to eight weeks, most SSS patients and simple motion sickness sufferers will experience a significant improvement in their symptoms by doing Dynamic Adaptive Vision Therapy procedures at home. The only equipment required is a Marsden ball and two pencils. Procedures are shown in detail on the DVD, which is a part of this course.

The therapy requires motivation and commitment by the sufferer to complete a series of sequential training activities. Initial patient motivation to complete the program is an absolute prerequisite to successful completion of the sometimes challenging therapy.

The prescribed DAVT therapy activities should only be completed with careful regular guidance from a qualified therapist.



How DAVT Works

The SSS patient is essentially “allergic to visual motion.” DVAT training desensitizes and reprograms them so they do not then react adversely to moving their eyes and/or seeing or feeling motion. The therapy could be considered physical therapy for the eyes. With careful guidance, the patient learns to adjust his or her own level of training to get the best effect and minimize discomfort.

The DAVT training effect is similar to riding a bike in that it involves mostly “the learning and knowing how,” not brute strength. Once

reprogrammed, most patients remain symptom free for many years, if not forever. A few do regress to a degree after time. When this happens, they find it quite easy to retrain themselves on their own with much less effort the second time around.

Most of the patients that have done the therapy have been middle aged but the youngest was nine and the oldest was eighty-two.



Forms Than Can be Reproduced and Used for Patient Care

1. Symptom Checklist
2. Pre-Therapy Goals and Post-Therapy Comments

Exercise Instructions – Beginning Series

- A. Dynamic Adaptive Mobility Therapy - Roving Eyes
- B. Dynamic Adaptive Saccadic and Convergence Therapy – Pencil Exercises

Exercise Instructions – Intermediate Series

- A. Dynamic Adaptive Mobility Therapy – Topsy Turvy
- B. Dynamic Adaptive Saccadic and Convergence Therapy – Pencil Exercises

Exercise Instructions – Advanced Series

- A. Dynamic Adaptive Mobility Therapy – Merry go Round
- B. Dynamic Adaptive Saccadic and Convergence Therapy – Pencil Exercises

After You have Completed Your Formal Vision Therapy Patient Handout

How to Fabricate Marsden Balls

PRE-THERAPY GOALS AND POST-THERAPY COMMENTS

- To be filled out prior to and after your vision therapy.
- Write down in the order of their importance to you, the goals that you plan to achieve as a result of doing your therapy.

Pre-therapy Goals

1. _____
2. _____
3. _____
4. _____

Post-therapy Achievement Comments

1. _____
2. _____
3. _____
4. _____

Goal And Achievement Checklist

In addition to the above, check the goals below that apply to you prior to your therapy. During the therapy you will discover new possible goals. Add them as you go. Make an effort to test yourself in as many areas as possible. After the therapy, check those goals that you have achieved and return this form to our office.

-
- To be able to read in a car without nausea or headache
- To be able to ride in a car without nausea, unusual fatigue, or anxiety even when looking out the side window or towards the back of the car
- To eliminate air sickness
- To eliminate running into curbs when driving
- To make my night driving easier
- To reduce my indoor or outdoor sensitivity to light to a normal level
- To reduce or eliminate the frequent headaches that I am having
- To be able to turn around or bend down without dizziness or nausea
- To be able to walk up “see through” stairs without nausea
- To be able to go on carnival and playground rides without dizziness or nausea

- To eliminate the feeling of “motion within me”
- To eliminate my unusual klutziness (running into, reaching for and missing, or tripping over things)
- To improve to a normal level my ability to watch, catch, or hit a ball. The sport that I am most interested in improving in is _____.
- To improve my balance and equilibrium to a normal level
- To eliminate my spells of dizziness that occur without apparent cause
- To be able to walk on uneven ground or stairs without having to look down excessively
- To be able to be in crowds of people or go shopping without nausea, dizziness, or anxiety
- To be able to read print or music without losing my place frequently –not to have to use my finger or a marker to keep my place when reading, typing, doing bookkeeping, or working with a computer
- To reduce or eliminate headaches, fatigue, nausea, or dizziness while reading, writing, doing bookwork, typing, using a computer or microfiche (circle most prominent symptom)
- To be able to watch any motion without nausea, dizziness, or anxiety (such as chase scenes or rolling credits on TV and movies, trains going by, carnival rides, rivers, ocean surf, etc.)
- To be able to ride a bicycle or motorcycle without an unusual fear of falling
- To improve my peripheral awareness to a normal level
- To reduce my fear of heights to a normal level

Additional post-therapy comments (such as comparing feelings and ability to do specific things before and after training):

Authorization

I authorize do not authorize the use in part or of all the clinical information regarding my case for scientific research, publication, education, or promotion. Furthermore, I authorize do not authorize that my name be used in the above activities.

Name _____ Date _____

PATIENT INTRODUCTION TO DYNAMIC ADAPTIVE VISION THERAPY

For: _____

Date: _____

The following recommendations and comments will make your vision therapy easier and give you a better understanding of what to do and what to expect. Read them twice prior to your therapy and at least once or twice during the training period.

What To Expect

Your therapy will enable you to learn new eye and motion related skills. As is the case in learning other new skills, such as swimming, water skiing and snow skiing, you will probably feel, as you start each new exercise, that it takes a lot of effort and causes fatigue. Dizziness or slight nausea may come easily; however, as you progress, much less effort will be required to perform each procedure, and you will no longer experience fatigue or other symptoms. There are several reasons for the disappearance of symptoms. First, you will be “programming” your brain. This “programming” will enable you to achieve an automatic, coordinated, efficient, effortless skill level. (It’s easy when you know how). Second, you will be improving the flexibility of the muscles that move your eyes. Whenever anyone starts doing any kind of stretching exercises after a long period of relative inactivity, it can be difficult and uncomfortable, and the muscles being stretched may feel stiff and sore for a few days. You will also, during your therapy, adapt to seeing and feeling motion so that neither will bother you. That may seem impossible to you now, but it is important to realize that your previous avoidance of motion has tended to make the condition worse and that this prescribed exposure to it will enable your eyes, mind and body to adapt to it so that it doesn’t bother you in any way.

This therapy is essentially a desensitization process which could be compared to giving shots for allergies. When confronted with a strong dose of the offensive substance (motion) the body adapts in order that the next confrontation will be more tolerable.

Family Understanding

Reread the paper explaining motion sickness or the See Sick Syndrome and have other family members read it also. It is very helpful to have people at home who understand your condition and who are supportive and encouraging during your training. If you are married, we strongly urge you to bring your husband or wife to at least the first training appointment at our office. It will be a real “eye opener” for your spouse.

Goals

It is important that you have strong motivation and specific goals for your training. Fill out your “Goals” form now if you have not already done so. As you progress with your training, you will most likely become aware of additional goals that are achievable. Add them to your list as you go along. When people live with this condition for many years and have adapted to it, they sometimes don’t realize how much of a problem they actually have, since they have no basis for comparison.

When to Train

Choose a time for your therapy when you will be able to do the exercises on consecutive days if possible. Do your therapy at a regularly scheduled time each day when you are not overly tired and will have minimal interruptions. Try to do all of your therapy at one daily session if possible. If that is not possible because of discomfort, fatigue or your schedule, divide your therapy into 2 or 3 sessions each day. If you have a severe condition, it is best to start your training on a two or three day period when you have as few responsibilities as possible. An adequate amount of rest prior to and during your training period is very important.

(Swinging Alphabet Ball Exercises) —“Roving Eyes”

Purpose

To help you eliminate your motion sickness and/or See Sick Syndrome symptoms by improving the speed, accuracy, and efficiency of your eye tracking skills. To enhance your adaptation to moving your eyes, seeing, and feeling motion without discomfort.

Equipment

Marsden ball (alphabet ball on cord) with a button bracket for height adjustment.

Equipment Set Up

In a room with at least 8 feet of open lateral space, attach an eye screw, bent nail, or wire loop to the ceiling, ceiling beam, or light fixture. Hang the Marsden ball from the loop.

Primary Therapy Procedures

With the ball hanging slightly below eye level and about arms length in front of your, look at only one letter. As the ball rotates, find new letters to look at.



Instructions:

1. Swing the ball laterally from side to side
2. Use minimal head turning initially only if needed to keep the letters relatively clear. Attempt to look at one letter at a time during all procedures and follow it as smoothly as possible.
3. Swing the ball forward and backward by holding the ball close to the nose, then releasing it.
4. Swing the ball in a 45° diagonal direction so that it passes behind the line of sight –first on one side, then the other. Start the swing by holding the ball behind the ear and releasing it.
5. With the ball in front, swing it in a circle. Change the direction of the swing after a few revolutions.
6. When #1 thru #5 can be performed without nausea or undue discomfort, increase the difficulty level by hanging the ball approximately 5” to 8” above eye level, standing closer to the ball, swinging it farther, and/or doing the exercises longer without rest.

Training schedule: Train a total of at least 15-18 minutes per day on these Marsden ball exercises.

If you feel nauseous while performing the Marsden ball procedures:

- back away from the ball (up to 12 feet or more, if necessary)
- increase rest periods
- reduce the amount of lateral swing to about 6 inches, then gradually increase the swing to about 3 feet while standing at arms length from the ball
- it may be necessary to begin by sitting on a chair or even lying on the back and looking up at the ball, in severe cases

How to tell if you are over trained: If you feel much worse 30 minutes past the finish of the training session compared to you began, you may have over trained and should reduce the intensity of the next session.

Note: Make sure the letters on the ball are relatively clear to ensure proper tracking.

Goals

To be able to perform the beginning series of the Dynamic Adaptive Motility Therapy without any symptoms.

Dynamic Adaptive Saccadic & Convergence Therapy (Pencil Exercises)

Purpose:

To help you eliminate your motion sickness and/or SSS symptoms by improving your eye comfort, speed, accuracy, and efficiency when looking from one point to another and to improve your peripheral awareness.

Equipment

Two pencils with lettering on them.

Therapy Procedures/Patient Instructions

Do all procedures while standing, but if that is not possible, do them while sitting at first.

I. Convergence Rock:

1. Hold one pencil at arm's length and the other about 12" closer, both straight out from the nose.
2. Focus on the far pencil. As soon as it is clear and single, change focus to the near pencil. As quickly and accurately as possible, keep alternately looking from one pencil to the other.
3. When looking from one pencil to the other, hold the far pencil in place, and slowly move the near pencil closer towards the nose. When the near pencil is so close that it no longer appears single, or it is about 2" from the nose, move it out to the original position and begin again.
4. Repeat the procedures while holding pencils in a variety of positions –left, right, up and down. Remember to hold the far pencil stationary during each set.



II. Convergence Push Up

1. Using only one pencil, hold it at a normal reading distance and position.
2. While looking at the pencil move it slowly towards the eyes.
3. Try to get the pencil as close to the eyes as possible while maintaining single vision.
4. If the pencil is within about 1" of the nose, or begins to double, move it out to the beginning position and repeat the procedure moving the pencil in and out as quickly as possible and still keep it single.
5. Repeat the above while moving the pencil in from different positions –left, right, up and down.



III. Fixation:

1. Hold one pencil in each hand side by side, about 6" apart at eye level and at a normal reading distance.
2. Alternate looking from a letter on one pencil to the next letter on the other pencil as quickly and accurately as possible.
3. While looking from one pencil to the other, slowly move both pencils further apart laterally, until the separation of the pencils limit the fixation ability. Then, repeat the procedure from the beginning.
4. Repeat the above procedures while holding the pencils above and below eye level and in diagonal and vertical positions to increase the level of difficulty.



IV. Far/Near Rock:

1. Hold one pencil straight ahead at a normal reading distance and align it with a small distant target that is at least 11 feet away.
2. Alternate looking from the pencil to the distant target and back again as quickly as possible, while slowly moving the pencil closer to the eyes. When the pencil is within about 1” of the nose, or begins to double, move it out to a normal reading distance again and repeat the procedure.
3. Repeat the above procedure moving the pencil in from different directions –left, right, up, and down, while using different distance targets at various heights.



Training schedule: Train a total of at least 15-18 minutes per day on these combined pencil exercises.

You should spend an equal amount of time on each individual exercise the first four days, then more time should be devoted to the procedures that are most difficult. After the first 5 days, make an effort to see more objects with your peripheral vision during the training and in your everyday living. Do all the exercises in one session if you can. Appropriate rest periods may be taken if fatigue or discomfort makes it necessary. However, longer training periods without rest are desirable.

The degree of difficulty of each procedure can be increased by: moving the eyes faster, moving the pencils to more extreme positions, doing the exercises longer without rest

Goals

To be able to perform the beginning series of the Dynamic Adaptive Saccadic and Convergence Therapy without any symptoms.

***When all of the above Pursuits, Saccadic, and Convergence therapy procedures can be performed without any symptoms, then you are ready to proceed to the intermediate series.**

Motility Therapy **(Swinging Alphabet Ball Exercises) —“Topsy Turvey”**

Therapy Procedures/ Instructions

1. Place feet in a wide stance and ball at eye level.
2. Swing ball side to side. Rock body from side to side about 2 feet, opposite the direction of the ball.
3. Swing the ball in a circle in front of the body. Rock back and forth from side to side.
4. Swing ball in diagonal direction—rock back and forth about two feet, opposite direction of the ball.
5. Repeat #1 thru #4 with ball above eye level.



6. Add “head on shoulders” motion to #1 and #4. Tip head towards right shoulder when moving right, then towards left shoulder when moving left.

7. Standing directly under the hook the cord is attached to, swing the ball in a circle around the body at eye level. Try to find as many letters as possible. Repeat this step with the ball above eye level. If necessary, use the minimum amount of head rotation that is needed to see a letter or two.

8. Swing the ball in a circle. Walk around the outside of the swinging ball with a shoulder towards the center of the circle while looking at the ball. Walk with and then against the motion of the swinging ball. Change the direction of the ball swing and repeat.

9. Repeat all of the above procedures with the ball approximately 5" to 8" above eye level.

10. Be visually aware of surroundings throughout all procedures. The degree of difficulty can be regulated by adjusting the amount of ball swing, the amount of head and body motion, the walking speed, and the diameter of the circle that you are walking in.

Training schedule: Train a total of at least 15-18 minutes per day on these intermediate Marsden ball exercises.

Dynamic Adaptive Saccadic & Convergence Therapy (Pencil Exercises)

Therapy Procedures

From here on, you do not need to look at the individual letters, you can just look at the pencils or erasers.

Instructions

1. Do procedures I, II, III, and IV from the beginning series while walking straight ahead. If there are minimal or no symptoms, proceed immediately to #2.
2. Now walking in a large circle, perform the same procedures. Gradually proceed towards as small a circle as possible. Change the direction periodically.

Note: Walk as quickly as possible with minimal nausea and dizziness. Also notice the eyes will not move quickly and easily as when you were standing still. The degree of difficulty can be adjusted by adjusting the walking speed and the diameter of the circular walking pattern.



Training schedule: Have the patient train a total of at least 15-18 minutes per day on these intermediate pencil exercises.

A. Dynamic Adaptive Motility Therapy (Swinging Alphabet Ball Exercises) —“Merry Go Round”

Therapy Procedures/Instructions

1. Swing the ball in a circle around body at eye level. Then turn in place in circles, first in the same direction that the ball is swinging, then in the opposite direction. Swing the ball in the opposite direction and repeat. Turn very slowly at first (not nearly as fast as the ball is swinging) then gradually increase in speed. Turn at the rate that enables 6 or 7 revolutions comfortably without stopping. When dizziness occurs, reverse direction of turn. If nausea occurs begin with turning in place without the ball. Then when this is performed without nausea, add the swinging ball.



2. Repeat all of the above procedures with the ball approximately 5” to 8” above eye level.

Training schedule: Train a total of at least 15-18 minutes per day on these advanced Marsden ball exercises.

B. Dynamic Adaptive Saccadic & Convergence Therapy (Pencil Exercises)

Therapy Procedures/Instructions

1. While holding pencils at eye level, do procedures I, II, III, and IV from the beginning series, while walking in a small circle about 3' to 4' in diameter, then progress to turning in one place as quickly as possible. Turn slowly for longer periods and occasionally turn quickly for short periods. Change direction of rotation as needed. Reduce turning speed if any nausea occurs.
2. Turn in place with both pencils held above and below eye level while looking laterally and diagonally from one to the other (III, Fixation).
3. To increase the degree of difficulty even further, add your own innovations. The higher degree of difficulty you can achieve, the more "bullet proof" you will be.







Training schedule: Train a total of at least 15-18 minutes per day on these advanced pencil exercise procedures.

Note: Many times during the day, outside of the regular training period, and without pencils, you could turn in circles in one place. Perform one to five revolutions at a comfortable speed. If dizziness occurs, immediately start turning in the opposite direction. This repeated direction of rotation change should help control dizziness.

You should not become so dizzy that it may cause danger of falling and hurting yourself. These procedures should be performed in a large, open, and safe place if possible.

At the conclusion of the beginning, intermediate, and advanced series, all procedures should be performed with improved accuracy, minimal discomfort, reduced dizziness and no nausea.

***When all of the above pursuit, saccadic and convergence therapy procedures can be performed without symptoms, you can be considered cured of See Sick Syndrome.**

After You Have Completed Your Formal Vision Therapy

- Go over your pre-therapy goals list and evaluate your progress by testing yourself on each point. In fact, go beyond “normal” activities by riding on playground equipment (you may be surprised at how much fun it is), looking off of a very high place, playing catch, riding a bicycle, reading in a car, and trying things that would have been difficult or impossible previously. Your tests may cause momentary anxiety because of previous experience, but once you have done them you will find relief in knowing that you won’t be trapped in the future in these situations that used to embarrass you or were impossible to handle.
- Complete your goals list and return it to our office if you have not already done so.
- Please write an informal report comparing your symptoms and skills prior to and after you completed your training. Also, please complete filling out your Post Therapy form. Both of these documents may be very helpful to others who have the conditions similar to yours.
- Continue to do informal “maintenance” training periodically forever. This includes engaging in physical exercise and spinning in circles regularly. Just moving your eyes more than you have done in the past is also helpful. If this is done, you probably will never need to go into formal therapy again. You can monitor your own skill level by occasionally doing the advanced training procedures and by staying aware of symptoms in your everyday life.
- Be on the lookout for others with severe motion sickness or See Sick Syndrome (SSS). Sometimes it takes one to know one, so you will find several others like yourself. Tell them of your success and inform your medical doctor about SSS. He or she has probably never heard of it before. You will be doing them and their patients a great favor. Remember also that SSS tends to run in families. Ask family members if they have any symptoms that you had and go from there. We can supply more literature if needed.
- A few patients have regressed back to the old conditions a few years after completing the therapy. If that happens to you, just re-do your exercises in an informal way for a few days and the symptoms should go away. If needed, elimination of the symptoms normally comes much easier the second time around.

Congratulations! You deserve a pat on the back.

HOW TO FABRICATE MARSDEN BALLS

Materials-

- Small rubber sponge balls (about 2" to 2 ½" is best). Can be found in toy stores or on the Web
- Vinyl stick-on letters. Available in 8 ½ x 9" sheets at office supply stores. One brand is EZ letters Quick Stick, ¼" vinyl, set No. 401.
- Standard metal paper clips
- Small diameter nylon cord. Available in hardware stores.
- 1" plastic "discs" or buttons with two drilled holes or similar products.

Discs available from: Multi-Craft Plastics, Inc.
225 Madison St.
Eugene, OR 97402
(541) 485-1727

Making the Marsden balls –

First, straighten out all but one end of a metal paper clip into a "J" shape. Push the straightened end of the paper clip through the center of the ball. Clip off the excess on the opposite end and curve to make a loop back into the ball to be use to tie the cord to.

Stick many letters on the ball at random to be used as small visual targets.

Cut off about 8' of nylon chord and burn each end to prevent unraveling.

Drill two small holes at opposites of the plastic disc.

Attach cord to ball and thread through height control button.

WHAT TO DO AT WEEKLY PROGRESS REPORT APPOINTMENTS

Have the patient bring their instruction manual and daily log to all VT sessions. Each office progress report appointment normally takes 20 to 30 minutes.



1. Review the log and ask for an oral report of their progress with the training. Ask patients if there are any symptoms when they are not training.
2. Have the patient briefly demonstrate each procedure performed at home. Ask for any subjective reactions during the procedures.
3. Determine with the patient if they have reached the goals set for the past week.
4. If the weekly goals have been achieved, prescribe and demonstrate the next and more advanced set of procedures. Praise and congratulate the patient on his or her progress. If the goals have not been fully achieved, try to determine the reason and adjust the therapy accordingly (some patients tend to over train in the beginning and need to reduce the level of difficulty).
5. Remind the patient to spend the most time on procedures that are most difficult. Find out what bothers them, then work on it until it doesn't.
6. Help determine when most or all of the patient's goals have been achieved.
7. Once the Advanced Series is completed, discontinue the formal progress reports and advise the patient of ways to maintain their current functional level.



FAQ's by patients about Dynamic Adaptive Vision Therapy For NOVD

The following recommendations and comments will make your therapy easier and more effective and will give you a better understanding of what to do and what to expect. Read them twice prior to beginning your therapy and at least once or twice during the training period. You will learn something new each time.

How does the training work and what can I expect?

It is similar to physical therapy, in some ways. As is the case in learning other new skills, such as swimming or skiing for instance, you will normally feel, as you start each new exercise, that it takes great effort and causes some discomfort. Dizziness, fatigue, nausea, or headaches may occur, especially if you are over worked. However, as you progress, much less effort will be required to perform each procedure, and you will no longer experience discomfort.

There are several reasons for the disappearance of symptoms. First, you will be “programming” your brain. The programming will enable you to achieve an automatic, coordinated, efficient, effortless skill. (Most things are easy, when you know how). Second, you will be improving the flexibility and range of motion of the muscles that move your eyes.

Whenever anyone starts doing any kind of stretching exercises after a long period of relative inactivity, it can be difficult and uncomfortable, and the muscles being stretched may feel stiff and sore for a few days. During your therapy you will adapt to seeing and feeling motion so that neither will bother you. That may seem impossible to you now, but it is important to realize that your previous avoidance of motion has tended to make the condition worse and this prescribed exposure to it will enable your eyes, mind, and body to adapt to it so that the seeing motion and moving your eyes doesn't bother you in any way.

This therapy is essentially a process of desensitization which could be compared to homeopathic medications or giving shots for allergies. When confronted with a dose of the offensive substance (motion) the body adapts in order that the next confrontation will be more tolerable. The therapy could also be considered “physical therapy for the eyes,” in some ways.

Why is it important for my family to understand NOVD and its treatment?

It is very helpful to have the people around you understand your condition and be supportive and encouraging during your training. Have your family and friends read the explanation of NOVD. In most self improvement programs, one needs all the help one can get, and this is no exception. The explanation will also help explain to others why you do some of the things you do at times, and that it is a fairly common condition which has a name and is treatable, with their support.

Why should I have training goals?

It is important that you have strong motivation and specific goals for your training. Fill out your “goals” form now, if you have not already done so. As you progress with our training, you will most likely become aware of additional goals that are achievable. Add them to your list as you go along. When people live with this condition for many years and have adapted to it, they sometimes don’t realize how much of a problem they actually have as they have no basis for comparison.

How do I know if I have NOVD?

A few local M.D.s and some optometric physicians around the country and others who are familiar with NOVD, can make an accurate diagnosis. Fortunately, most NOVD patients can accurately self diagnose themselves after reading the descriptive literature. More than one condition can be present at the same time, but the syndrome of NOVD symptoms is often amazingly similar among individuals.

When should I do my training?

Choose a time for your therapy when you will be able to do the exercises on consecutive days, if possible. It is acceptable to take a day off every few days, but try to complete it as quickly as you can. Do your therapy at a regularly scheduled time each day when you are not overly tired and will have minimal interruptions. Try to do all of your therapy at one daily session if possible. If that is not possible, because of discomfort or your schedule, divide your therapy into one to three sessions each day. If you have a severe condition, it is best to start your training on a two or three day period when you have few responsibilities.

An adequate amount of sleep prior to and during your training period is important. It is also important to avoid starting the training during your premenstrual cycle.

In addition, NOVD apparently produces a body chemistry change in some patients called hypoglycemia (low blood sugar). If you have this condition, you should limit your consumption of alcohol, sugar, and caffeine and eat frequent meals and snacks. Standard blood tests will not detect this condition. However, you may have it if you have lightheadedness, headache, or depression when you haven’t eaten on time. Sugar may give short-term relief but the blood sugar can then go crashing down to produce even more severe symptoms than before. Reasonable comfort can usually be achieved with a proper diet. Information on this subject can be obtained at most health food stores.

How long should I train each day?

The normal total daily training time is from 25 to 5 minutes a day. However, in the beginning, some can only train for a few minutes at a time. So in these cases, the patient must do up to three or four separate mini sessions per day then change to longer and fewer sessions as they progress.

What are my chances of getting a really good training result?

Very good. Approximately 80% of those that do the therapy consider the therapy a success.

Is it possible that the therapy will make my condition worse?

Yes, but only temporarily. In rare cases, the newly increased side vision awareness caused a greater sensitivity to motion and light. This goes away in a few days, however.

Should I wear my glasses or contact lenses when doing the exercises?

Adults who need reading glasses or bifocals will notice that the letters on the ball and pencils are blurred when they are very close to the ball or pencils. This is to be expected and does not alter the positive effect of the training. If you question whether to wear your corrective lenses during the training, experiment by doing it with and then without correction. Then select the way that seems easiest for you. Accurate eye tracking is much more important than seeing the target clearly.

Are there any additional helpful hints?

Yes. They are as follows:

- Expect good days and bad days. You will improve, reach a plateau, especially when you do more advanced procedures, then improve again.
- Most patients find it easier to move their eyes in one direction than the other.
- Some prefer to use a kitchen timer to time the procedures.
- Some prefer listening to music during the sessions to reduce the boredom.
- Remember, some of the basic symptoms of motion sickness can be: fatigue, cold sweats, pallor, nausea, a hot feeling, headache, and dizziness. Won't it be nice not to experience these things in the future?
- If major symptoms develop during or shortly after (delayed reaction) the training sessions, and you can't seem to reduce the severity by lowering the level of difficulty, consider trying "Sea Bands." They are wrist bands with a "button" that presses on nerves in the wrist. They work on the acupressure principle and may help some people. They can be purchased at most drug or travel stores. If these offer no relief, consider using the "ReliefBand" which is a battery powered electronic anti-nausea wrist band device. It works well for some people and can be found at www.reliefband.com or www.carefreetravel.com.
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Dynamic Saccadic and Convergence Therapy (Alphabet Pencils) Daily Progress Log

OBSERVATIONS

- Answer each question each day. If you are not sure of the answer, enter a question mark.
- When appropriate you may use a 1 to 10 designation to denote the degree of difficulty, discomfort and progress—with 10 being the most difficult.
- Use an extra plain sheet for additional notes and observations of progress during and between therapy sessions.

Evaluate eye comfort, amount of effort, and speed.

Any dizziness, nausea, headaches during or after?

Evaluate changes in light sensitivity.

Pencil how close without doubling?

Evaluate changes in side vision.

Overall evaluation of progress.

Practiced how long?

Date

SESSION NUMBER

1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			

Dynamic Adaptive Eye Motility Therapy (Alphabet Ball) Daily Progress Log

OBSERVATIONS

- Answer each question each day. If you are not sure of the answer, enter a question mark.
- When appropriate you may use a 1 to 10 designation to denote the degree of difficulty, discomfort and progress—with 10 being the most difficult.
- Use an extra plain sheet for additional notes and observations of progress during and between therapy sessions.

Evaluate eye comfort and degree of effort.

Any dizziness, nausea, headaches during or after?

Which swing is most difficult?

Letters clear most of the time?

Overall evaluation of progress.

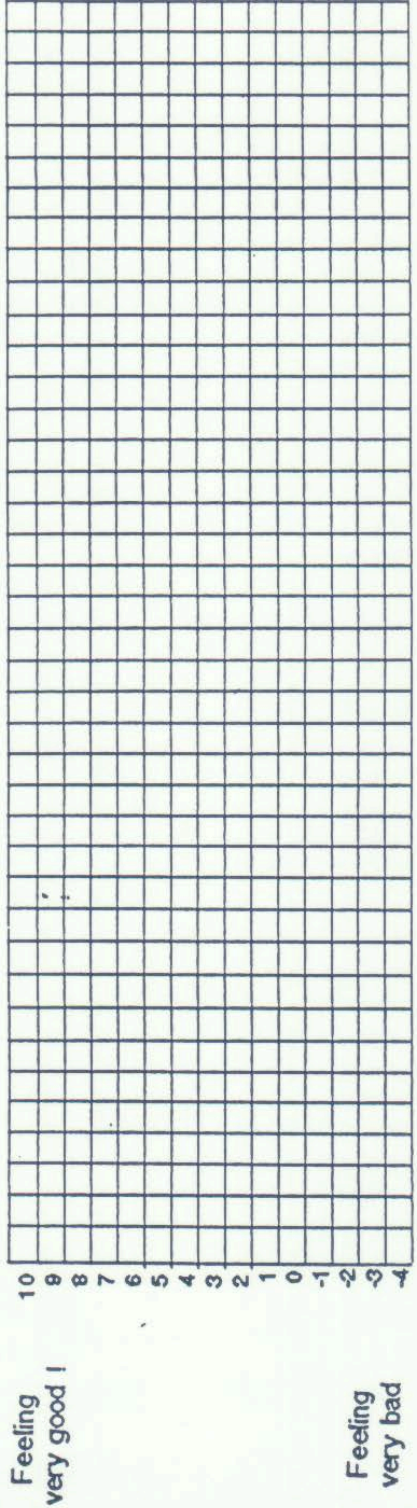
Practiced how long?

Date

SESSION NUMBER

1																			
2																			
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Dynamic Adaptive Vision Therapy Progress Evaluation Log



Use circles (o) to indicate the progress that you are making with the therapy

Use dots (.) to indicate the progress that you are making in the way you are feeling when you are not doing your therapy

Notes:

NOTE: ADDITIONAL MATERIAL ON CASE REPORTS AND MANAGEMENT PROCEDURES WITH FORMS AND OTHER MATERIALS CAN BE OBTAINED BY CONTACTING DR. GILLILAN DIRECTLY AT gillilan@comcast.net.

Disclaimer: "As with any therapy procedure, care must be taken to ensure that the patient does not have an acute disease that should be treated by direct intervention, e.g., medication or surgery. For this reason, all patients should be examined and given a clean bill of health by a competent health care provider prior to NOVD training. During training, some procedures are designed to make the patient slightly dizzy and/or disoriented. Extreme care must be taken protect the patient from falling. Patients should not drive a car or operate machinery while they are dizzy or disoriented. No guarantee or warrantee is made that this training will be helpful for all patients. Each health care provider using NOVD therapy must evaluate all patient variables and decide for him- or herself whether the therapy is appropriate for any given patient. The authors of this course assume no liability for the use or misuse of NOVD therapy."