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SYNTONICS IN MYOPIA

SEARCHING FOR INFORMATIVE DATA ON MYOPIA IN OPTOMETRIC AND OPHTHALMOLOGIC LITERATURE, ONE IS IMPRESSED WITH THE MULTITUDE OF THEORIES ADVANCED AS CAUSATIVE FACTORS AND METHODS EMPLOYED TO CONTROL OR REDUCE MYOPIA, BOTH THROUGH MEDICAL AND OPTOMETRIC PROCEDURES.

THE CONTRASTING TRENDS OF THOUGHT AT DEFINITE PERIODS, TO QUOTE DR. AVERY DE H. PRANGEN, M.D. OF MAYO CLINIC, ROCHESTER, MINNESOTA--IN ARCHIVES OF OPHTHALMOLOGY OF DECEMBER 1939. "THERE SEEMS TO HAVE OCCURRED A DEFINITE EVOLUTION FROM THE OLDER MECHANISTIC THEORY OF MYOPIA (ELONGATED GLOBE) TOWARD THE MORE RECENT BIOLOGIC VARIANT POINT OF VIEW."

DR. PRANGEN CITES MACKENZIE (1833) DONDERS (1864) LANDOLT (1886) AND BEER WHO WAS THE FIRST PROFESSOR OF OPHTHALMOLOGY AT THE UNIVERSITY OF VIENNA. ALL FELT THAT THE PRESCRIBING OF MINUS LENSES FOR MYOPIA WAS WRONG. THEY BELIEVED MYOPIA WAS AN EVOLUTIONARY ADJUSTMENT TO ENVIRONMENT. STILLING AND OTHERS VIEWED EVEN HIGH DEGREES OF MYOPIA AS EVIDENCE OF EVOLUTION INTO SPECIAL FITNESS FOR HIGHEST CIVILIZATION.

IN CONTRAST TO THIS OPINION, HYPEROPIA WAS THOUGHT TO BE A CONDITION OF UNDERDEVELOPMENT OF LOWER FORMS OF MANKIND. DR. PRANGEN'S CONCLUSIONS, TO MENTION A FEW, ARE:

- (A) THE MECHANICAL THEORY OF MYOPIA (ELONGATED GLOBE) IS UNTENABLE.
- (B) MYOPIA IS A BIOLOGIC TENDENCY TO REDUCE THE HYPEROPIC RESERVE USUALLY SEEN IN CHILDHOOD.
- (C) THIS MAY BECOME ARRESTED AT ANY STAGE OR CONTINUE UNCHANGED.
- (D) AN ADEQUATE HYPEROPIC RESERVE IN YOUNG PERSONS SEEMS ESSENTIAL AS A PROTECTION AGAINST THE DEVELOPMENT OF MYOPIA.
- (E) CHILDREN WHO HAVE LOW HYPEROPIA SHOULD BE WATCHED. THEY MAY NOT BE AS NORMAL AS THEY COMMONLY ARE CONSIDERED TO BE.
- (F) A HEREDITARY TENDENCY, TOGETHER WITH AGE, RACE AND SEX IS THE CHIEF ETIOLOGICAL FACTOR. THE IMPORTANCE OF ALL OTHER FACTORS IS DEBATABLE; BUT THOSE CONTRIBUTING TO EXCESSIVE CONVERGENCE MUST BE CONSIDERED SERIOUSLY.

WITH THESE CONCLUSIONS, I AM IN FULL AGREEMENT.

DR. EMANUEL M. JOSEPHSON, IN HIS BOOK "NEAR SIGHTEDNESS IS PREVENTABLE" PUBLISHED IN 1936, STATES AMONG OTHER THINGS - "A DIET WHICH IS HIGH IN CARBOHYDRATES, STARCHES AND SUGAR AND LOW IN PROTEIN AND FATS, FAVORS THE DEVELOPMENT OF NEARSIGHTEDNESS. THE REASON BEING THAT SUCH A DIET IS APT TO BE DEFICIENT IN VITAMINS, AND VITAMIN DEFICIENCY AGGRAVATES THE EFFECTS". QUOTING DR. JOSEPHSON FURTHER - "SEX DEVELOPMENT, PUBERTY AND NEARSIGHTEDNESS". IN MOST CASES, NEARSIGHTEDNESS BEGINS DURING THE AGE OF MOST RAPID BODY GROWTH--LATE CHILDHOOD. AT THE SAME PERIOD THE DEVELOPMENT OF SEX FUNCTION ACCELERATES. THERE IS A DEFINITE BUT NOT CLEARLY DEFINED CORRELATION BETWEEN THE DEVELOPMENT OF NEARSIGHTEDNESS AND FAULTS IN THE DEVELOPMENT OF SEX. THERE IS MUCH THAT REMAINS TO BE EXPLAINED BEFORE A FULL SCIENTIFIC UNDERSTANDING OF THE NATURE OF SEX DEVELOPMENT CAN BE ATTAINED".

VOLUMES COULD BE WRITTEN SHOULD ONE'S AMBITION LEAD HIM IN AN ATTEMPT TO REVIEW ALL THE LITERATURE ON PREVENTION, CONTROL AND REDUCTION OF MYOPIA. ALTHOUGH NUMEROUS THEORIES HAVE BEEN ADVANCED TO DATE, AND AS MANY METHODS EMPLOYED IN THE ATTEMPT TO REDUCE OR CONTROL MYOPIA. THE FACTS ARE, NONE WERE CONCLUSIVE.

MY OWN EXPERIMENTS IN REDUCTION OF MYOPIA AS PART OF ORTHOPTICS DATES BACK OVER TWENTY YEARS. THESE EXPERIMENTS WERE GREATLY ACCELERATED AFTER CAMERON SURGICAL COMPANY SOLD ME MY AMBLYO SYNTONIZER. SHORTLY THEREAFTER I FELT I HAD OBTAINED, WHAT SEEMED AT THAT TIME, ANOTHER TOOL TO EXPERIMENT WITH.

HOWEVER, AFTER TAKING A BASIC COURSE IN SYNTONICS BY DR. RILEY SPITLER, I LEARNED THE IMPORTANCE OF SYNTONIC PRINCIPLE IN ORTHOPTICS, AND THIS PROVED TO BE A FURTHER INCENTIVE TO INTENSIFY THE EXPERIMENTS. ABOUT THE SAME TIME, DR. SKEFFINGTON CAME TO CHICAGO WITH THE OPTOMETRIC EXTENSION PROGRAM AND PRESENTED THE ANALYTICAL APPROACH FOR PRESCRIBING AND CORRECTING VISUAL DISCOMFORT PROBLEMS WITH HIS APPROACH IN EVALUATING THE VARIOUS CLASSIFICATIONS OF MYOPIA.

THIS CONTRIBUTION BY DR. SKEFFINGTON PROVED PRICELESS IN SELECTING MATERIAL FOR FURTHER EXPERIMENTS. I HAVE ALSO MADE USE OF SOME OF THE TECHNIQUES TAUGHT IN THE EXTENSION PROGRAM, AS WELL AS SOME OF THE TECHNIQUES TAUGHT BY DR. VAN ORDEN AND DR. ANN NICHOLS TO A LIMITED EXTENT. HOWEVER, ALL THROUGH THE YEARS AND TO THIS DATE, THE SYNTONIC PRINCIPLE IS THE BACKBONE IN ALL MY VISUAL TRAINING.

DR. EMANUEL JOSEPHSON, IN HIS BOOK "NEARSIGHTEDNESS CAN BE PREVENTED", ALSO STRESSES THE IMPORTANT ROLE THE AUTONOMIC NERVOUS SYSTEM PLAYS IN THE DEVELOPMENT OF MYOPIA, WHICH I MENTION ONLY AS ADDITIONAL SUBSTANTIATING EVIDENCE POINTING TO CORRECTNESS OF SYNTONIC APPROACH, THROUGH BALANCING OF THE SYMPATHETIC AND PARASYMPATHETIC BRANCH OF THE AUTONOMIC NERVOUS SYSTEM, AS TAUGHT BY DR. SPITLER.

THIS GIVES US A MEDIUM OF ATTACKING THE PROBLEM AT THE VERY ROOT AND REINFORCED THROUGH VISUAL TRAINING, WIDENING THE AREA OF TOLERANCE IN VISUAL REFLEX, BETWEEN POSITIVE AND NEGATIVE CONVERGENCE AND MONOCULAR AND BINOCULAR ACC. ROCK AT EVERY TRAINING PERIOD, AND ALWAYS FOLLOWED BY SYNTONIZING.

THE PERTINENT FACTOR TO THE SYNTONISTS, IS THE PART PLAYED BY THE AUTONOMIC NERVOUS SYSTEM, ACCORDING TO DR. RILEY SPITLER, WHERE THE BALANCING OF THE SYMPATHETIC AND PARASYMPATHETIC NERVOUS SYSTEM CONSTITUTE THE SYNTONISTS FIRST STEP. WHILE THERE STILL REMAINS MANY QUESTIONS TO BE ANSWERED AND PROBLEMS TO BE SOLVED, THE FACTS ARE THAT SYNTONICS HELPED ME CONSIDERABLE TO DO A BETTER JOB IN CONTROL AND REDUCTION OF MYOPIA.

WHEN ACCEPTING MYOPIA PATIENTS FOR TRAINING, I HAVE FOUND THE FOLLOWING STEPS OF UTMOST IMPORTANCE:

- (1) NEVER TO COMMIT SELF UNTIL A COMPLETE VISUAL ANALYSIS IS MADE.
- (2) NEVER INDICATE POSSIBILITY OF REMOVING GLASSES, EXCEPT WHEN ANALYSIS INDICATES MINUS WAS NOT INDICATED IN THE FIRST PLACE.
- (3) SPEAK IN TERMS OF IMPROVING VISUAL ACCUITY INSTEAD OF REDUCING MYOPIA.
- (4) ACCEPT ALL CASES WHEN PROGNOSIS IS FAVORABLE ON PROBATIONARY BASIS. YOUNG CHILDREN FOR A MINIMUM OF 15 TRAINING PERIODS; ADULTS FOR 10 TRAINING PERIODS.
- (5) AT THE END OF PROBATIONARY PERIOD, IT IS POSSIBLE TO DETERMINE THE APPROXIMATE LENGTH OF TIME EACH PATIENT MAY REQUIRE TRAINING AND OBSERVATION.
- (6) THE PATIENT OR PARENT MUST BE MADE TO UNDERSTAND THE IMPORTANCE OF CONTINUED OBSERVATION, DEPENDING ON THE AGE OF THE PATIENT AND TYPE OF MYOPIA.

- (7) EACH PATIENT, WHEN ACCEPTED, BECOMES A PROJECT TO A GREATER OR LESSER EXTENT. THE SAME APPLIES TO PREVENTIVE OR CONTROL CASES ACCEPTED.
- (8) PATIENT AND PARENT MUST BE CONTINUALLY INDOCTRINATED OF THE IMPORTANCE OF CORRECT EYE HABITS, AND WHEN OR WHERE NOT CORRECTED, RX MUST BE WORN.
- (9) MOTIVATION AND DESIRE FOR BETTER DISTANCE ACUITY MUST BE KEPT AT HIGHEST LEVEL; HENCE CONTINUOUS INDOCTRINATION FOR THAT PURPOSE. THIS APPLIES AS MUCH TO THE MYOPIA CONTROL PATIENT AND FULL COOPERATION IS A MUST AT ALL TIMES.
- (10) THE PREVENTATIVE STAGE, BY FAR THE MOST IMPORTANT IF WE ARE TO SUCCEED, NEEDS THE FULL COOPERATION OF PARENTS; THIS MUST BE GAINED AND HELD.

SINCE MOST PATIENTS IN THIS CATEGORY ARE YOUNG CHILDREN, MY PROCEDURES ARE THE SAME AS DURING CONTROL STAGES, EXCEPT WHEN THE PATIENTS' VISIT TO THE OFFICE IS LESS FREQUENT. HOWEVER INFREQUENT THESE VISITS MAY BE, PART OF EACH VISIT IS DEVOTED TO INDOCTRINATION OF PATIENT AND PARENT.

MYOPIA IS A CHALLENGE TO EVERY OPTOMETRIST INTERESTED IN VISUAL TRAINING. IN MY OFFICE, THE MYOPIA PATIENTS REPRESENT A SUBSTANTIAL SEGMENT OF MY TOTAL PRACTICE.

I HAVE TRIED IN THIS PAPER, TO SHOW MY EFFORTS TO MEET THE PROBLEM. THE TECHNIQUES, INSTRUMENTATION AND PRINCIPLES EMPLOYED, ARE AN ACCUMULATION OF CONTRIBUTIONS OF MANY EARNEST RESEARCHERS WHO SOUGHT TO MEET THE SAME PROBLEM.

THE FOLLOWING CASE REPORTS MAY ILLUSTRATE THE POSSIBILITIES, AND JUSTIFY OUR APPREHENSIONS, OF THE DANGER SIGNALS, THAT MYOPIA MAY FOLLOW UNLESS WE TAKE PREVENTATIVE AND CONTROL MEASURES WITHOUT DELAY, AND ALSO DEMONSTRATE THE RESULTS WE CAN REASONABLY EXPECT WILL FOLLOW WHEN PATIENT AND PARENT COOPERATE FULLY.

THE REWARD FOR FULL COOPERATION IS EQUALLY DEMONSTRATED IN THE FOLLOWING CASE REPORTS.

CASE # 1 AND 2

IN FEBRUARY 1946, MARILYN, AGE 8 YRS. 9 MO. AND SUSAN 4 YRS. 2 MO. CAME WITH THEIR MOTHER FOR VISUAL CARE.

MARILYN COMPLAINED OF FREQUENT HEADACHES FOR WHICH THE FAMILY PHYSICIAN ADVISED AN EYE EXAMINATION.

THE VISUAL ANALYSIS BRIEFLY SHOWED, N.V. 20/20 + O.D. O.S. AND O.U. STATIC RETINOSCOPE O.U. + 25 DYNAMIC RETINOSCOPE OU + 125 SUBJECTIVE OU + 50 20/20 WITH SLIGHT BLUR BINOCULAR CROSS CYL. + 75 THE SUBJECTIVE WAS PRESCRIBED AND MOTHER INSTRUCTED TO BRING MARILYN BACK IN 3 MONTHS, UNLESS H.A. CONTINUED, IN WHICH CASE TO RETURN FOR VISUAL TRAINING.

SUSAN WAS BROUGHT ALONG BECAUSE HER MOTHER THOUGHT THE LEFT EYE TURNED UP AT TIMES.

N.V. ON CHILDS CHART WAS 20/30 O.D. O.S. AND OU. STATIC RETINOSCOPE OU + 50 DYNAMIC RETINOSCOPE OU + 2.00 SUBJECTIVE OU + .75

THE FULL SUBJECTIVE WAS PRESCRIBED AND MOTHER WAS ALSO INSTRUCTED TO RETURN WITH SUSAN IN 3 MONTHS. I DID NOT SEE EITHER PATIENT AGAIN UNTIL FEB. 1948, WHEN THE MOTHER PHONED FOR AN APPOINTMENT, AND SHEEPISHLY COMMENTED SHE FEARED THE CHILDRENS EYES WERE WORSE. AS AN EXCUSE SHE STATED THE CHILDREN OBJECTED TO WEARING THE RX PRESCRIBED BECAUSE OF THE SLIGHT BLUR, ALTHOUGH SHE WAS FULLY WARNED AT THE TIME OF THE DANGER IF THE RX WAS NOT WORN.

MARILYN NOW IN 5TH GRADE STATED SHE COULD NOT SEE THE BOARD IN SCHOOL. VISUAL ANALYSIS SHOWED N.V. R 20/100 L 20/80 STATIC RETINOSCOPE R-125-50x90 L-100-50x90 CROSS CYL. OU-50x90 SUBJECTIVE-100-50x90 WITH 20/20 OU MARILYN HAD 30 TRAINING VISITS FROM MARCH 11, 1948 TO JUNE 22, 1948 INCLUSIVE, AND THE N.V. IMPROVED TO 20/25-2 OU. ON SEPT. 16,

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1948 THE N.V. WAS OU 20/25, ON FEB. 2, 1949 THE N.V. WAS R 20/40-1 AND L 20/60-2. ON OCT. 8, 1949 THE FOLLOWING RX R-150+50x180 L-175+50x180 WAS PRESCRIBED FOR SCHOOL USE ONLY AFTER THE PARENTS DECIDED NOT TO CONTINUE THE VISUAL TRAINING CONTROL.

SUSAN NOW SIX YEARS AND TWO MONTHS IS IN 1ST GRADE. DOES NOT COMPLAIN, HOWEVER VISUAL ANALYSIS DISCLOSED N.V. R 20/40 L 20/30 HABITUAL PHORIA 8 Eso. AT NEAR 6 Eso. STATIC RETINOSCOPE OU-50 DYNAMIC RETINOSCOPE OU + 150 SUBJECTIVE OU-50 IND. PHORIA 4 Eso. IND. PHORIA AT NEAR 4 Eso.

SUSAN HAD 14 VISUAL TRAINING VISITS, FROM FEB. 28 TO MAY 22ND, INCLUSIVE.

THE SAME TRAINING STEPS AND INSTRUMENTATION WERE FOLLOWED AS CASE #1.

WE PRESCRIBED OU+50 FOR STEADY WEAR, AND HER MOTHER WAS TOLD WHAT THE CONSEQUENCES WOULD BE IF SHE DID NOT WEAR THEM, AND SUSAN, A BRIGHT CHILD, WAS VISIBLY FRIGHTENED AND PROMISED TO WEAR THE GLASSES. SUSAN'S MOTHER WAS INSTRUCTED TO RETURN WITH HER IN SIX MONTHS.

IN SEPTEMBER, AN EXAMINATION REVEALED N.V. 20/20 OU. AND SUBJECTIVE INCREASED TO + 1.25 OU. AND THIS WAS PRESCRIBED FOR STEADY WEAR, WITH INSTRUCTIONS TO RETURN IN SIX MONTHS. IN FEBRUARY, 1949 THE SUBJECTIVE INCREASED TO + 200 OU. OCTOBER 8, 1949 THE SUBJECTIVE WAS +250 WITH V.A. 20/20 OU.

THE RX WAS NOT CHANGED AT THIS TIME AND MOTHER WAS INSTRUCTED TO SEE TO IT THAT RX WAS WORN IN SCHOOL AND FOR ALL CLOSE TASKS, AND TO BRING SUSAN IN WHEN NOTIFIED, IN ABOUT A YEAR.

ON OCTOBER 10, 1950, THE SUBJECTIVE WAS + 1.75 OU AND SINCE SUSAN NEEDED NEW GLASSES, THE SUBJECTIVE WAS PRESCRIBED TO BE WORN FOR SCHOOL AND ALL CLOSE TASKS AS BEFORE.

THESE TWO CHILDREN HAVE LEARNED THE IMPORTANCE OF CONSULTING AN OPTOMETRIST PERIODICALLY, AND HEED HIS ADVICE, AFTER MARILYN PAID THE PENALTY; NEEDLESS TO ADD, THEIR MOTHER IS FULLY AWARE OF HER RESPONSIBILITY, AND WE ARE HAVING FULL COOPERATION.

CASE # 3

THE FOLLOWING CASE REPORT OF ALLAN, WILL FURTHER EMPHASIZE THE IMPORTANCE OF GAINING PARENTS' COOPERATION AND INSTITUTING CORRECTIVE MEASURES EARLY. ALLAN, AGE 10 YRS, 11 MOS. AN INTELLIGENT BOY, CAME TO MY OFFICE ACCOMPANIED BY HIS MOTHER, WHO IS A PATIENT OF MINE. ALLAN SAID HE THINKS THE BLACKBOARD IN SCHOOL SEEMS A LITTLE BLURRED AT TIMES, AND HE WILL NOT WEAR GLASSES UNDER ANY CIRCUMSTANCES. ALLAN'S MOTHER HAD DIFFICULTY IN PERSUADING HIM TO ACCOMPANY HER; HOWEVER, HE CONSENTED TO A VISUAL ANALYSIS.

ALLAN IS A NORMAL HEALTHY BOY WHO LOVES SPORTS, BUT FINDS TIME TO READ WHICH HE LIKES VERY MUCH; HE IS A GOOD STUDENT AND HELPFUL AT HOME. N.V.R. 20/30 L-20/25 ALL PRELIMINARY FINDINGS ARE NORMAL. ABSOLUTE CONVERGENCE 2" PUPILS - MEDIUM SMALL. HABITUAL PHORIA 1 Eso. 13A 2Eso. STATIC RETINOSCOPE OU + 50 DYNAMIC RETINOSCOPE OU + 1.75 SUBJECTIVE R-50 L-25 WITH 20/20 VISION O.D.O.S. AND OU. INDUCED PHORIA 1 Eso. TRUE ADDUCTION 12 + CONVERGENCE 24/11 ADDUCTION 11/6 VERTICAL PHORIA - NEGATIVE INDUCED PHORIA AT NEAR 3 Eso. BINOCULAR CROSS CYLINDER OU + 75 INDUCED PHORIA 1 X TOTAL ADDUCTIVE STIMULATION 24 X POSITIVE FUSIONAL RESERVE 24/12 TOTAL ADDUCTIVE INHIBITION 26 X NEGATIVE FUSIONAL RESERVE 26/20 VERTICAL PHORIA NEGATIVE TOTAL ACCOMODATIVE STIMULATION - 350) TAKEN THROUGH PLANO TOTAL ACCOMODATIVE INHIBITION + 300) TAKEN THROUGH PLANO + 50 OU WERE PRESCRIBED AS TEMPORARY RX TO BE WORN STEADILY EXCEPT WHILE PLAYING GAMES; AND TO RETURN FOR A PROGRESS CHECK IN FOUR WEEKS. ALLAN'S MOTHER PHONED IN FOUR WEEKS TO CANCEL THE APPOINTMENT, AS ALLAN WOULD NOT WEAR THE GLASSES AND HE TOLD HER HIS EYES WERE FINE.

ON OCTOBER 13, 1951, ALLAN AND HIS MOTHER CAME IN BY APPOINTMENT; IN FACT ALLAN REQUESTED THE APPOINTMENT, AS HE SAID HE COULD NOT SEE THE BLACKBOARD, IN SCHOOL.

THE EXAMINATION REVEALED N.V. R-20/70 L-20/60-2 HABITUAL PHORIA 4 Eso. AT NEAR ORTHO STATIC RETINOSCOPE OU -1.25 SUBJECTIVE R-125 L-100 WHICH GAVE 20/20 INDUCED PHORIA 6 Eso. CONVERGENCE 24/20 ADDUCTION 9/4 BINOCULAR CROSS CYL. SAME AS SUBJECTIVE TOTAL ACCOMODATIVE STIMULATION - 200) THROUGH SUBJECTIVE TOTAL ACCOMODATIVE INHIBITION + 175) THROUGH SUBJECTIVE

AGAIN THE + 50 WERE PRESCRIBED AS TEMPORARY RX FOR STEADY WEAR AND VISUAL TRAINING BEGAN AND IS BEING CONTINUED. AT PRESENT, HE HAS HAD TO DATE 28 VISITS. VISUAL TRAINING STEPS AND INSTRUMENTATION THE SAME AS CASES #1 AND #2. WE SEE HIM

ONCE IN TWO WEEKS. N.V. NOW IS 20/30 + 0U. FURTHER IMPROVEMENT IS POSSIBLE, SINCE ALLAN IS FULLY COOPERATIVE NOW; HE HAS LEARNED THE HARD WAY AND SMART ENOUGH TO ADMIT IT. BOTH ALLAN AND HIS MOTHER REALIZE THE NEED FOR CONTINUOUS OBSERVATION AND CONTROL, IF WE MAY SUCCEED IN PREVENTING THE NECESSITY OF NEAR-SIGHTED CORRECTION FOR STEADY WEAR.

CASE # 4 - MRS. H. L., AGE 46

WHILE OBSERVING A VISUAL ANALYSIS OF HER YOUNGEST DAUGHTER, AGE 6 YRS, MADE THE REMARK: "I DON'T SUPPOSE YOU CAN DO ANYTHING FOR A LADY LIKE ME." SHE VOLUNTEERED THE INFORMATION THAT SHE HAD WORN GLASSES FOR NEARLY 30 YEARS AND WOULD LIKE TO BE ABLE TO GET ALONG WITHOUT THEM, ESPECIALLY FOR DISTANCE. WHEN I ASSURED HER THAT A VISUAL ANALYSIS WOULD GIVE US THE ANSWER TO THAT QUESTION, SHE MADE AN APPOINTMENT AND THE FOLLOWING ANALYSIS WAS MADE.

PATIENT TYPE A STATES SHE HAS NO DISCOMFORT BUT DISLIKES WEARING GLASSES. HEALTH PAST AND PRESENT GOOD. N.V. RIGHT 20/40, LEFT 20/30. OLD 1947 PRESCRIPTION RIGHT -150 TO -125 V.A. 20/20-1 LEFT -100+75 x 105, V.A. 20/20-2. VERSIONS ROTATIONS AND EYE MOVEMENTS GOOD. ABSOLUTE CONVERGENCE 6" PUPILS LARGE, PUPILARY REFLEX AND CONSENSUAL IRIS, LIDS, CONJUNCTIVE, LACHRIMAL NORMAL, CORNEA AND LENS CLEAR.

OPHTHALMOSCOPE NO PATHOLOGY PRESENT; DISCS WELL DEFINED, ARTERIES AND VEINS IN RATIO.

OPHTHALMOMETER R 42x10 43.5x90. L 42. x 5 43.25 x 85. HABITUAL PHORIAS AT 20 FT. 8 EXO. AT 16" 13 EXO.

STATIC RETINOSCOPE AT 20 FT. R-50-125 x 10 L-50-75x65

DYNAMIC RETINOSCOPE AT 16"

R - 125 - 125 x 10 L - 150 -75 x 05

SUBJECTIVE R - 50 - 125 x 180 V.A. 20/20

L - 50 - 75 x 180 V.A. 20/20

INDUCES PHORIA 8 EXO

TRUE ADDUCTION 6 TO BLUR

CONVERGENCE - ADDUCTION 12/4

ADDUCTION 11/6

VERTICAL PHORIAS NEGATIVE.

INDUCED PHORIA AT 16" 11x0

DISSOCIATION CROSS CYL. R - 25 - 125 x 0

L - 50 x -75x0 INDUCED PHORIA 15 EXO

BINOCULAR CROSS CYL. AND INDUCED PHORIA THE SAME. TOTAL ADDUCTIVE STIM. 14 x. POSITIVE FUSIONAL RESERVE 14/4. TOTAL ADDUCTIVE INHIBITION 20 NEGATIVE FUSIONAL RESERVE 26/14. VERTICAL PHORIAS NEGATIVE. TOTAL CC STIMULATION - 200 WITH 14 B Gros. TOTAL ACC. INHIBITION - 2.25 WITH 14 B Gros. SINCE PATIENT INSISTED ON DISTANT VISION PRESCRIPTION, SHE WAS GIVEN TEMPORARY PRESCRIPTION R-100 + 100 x 90 L - 75 + 75 x 90. VISUAL TRAINING WAS STARTED ON AUGUST 3, 1950 WITHOUT PRESCRIPTION. AFTER 6 VISITS PATIENT INFORMED ME THAT SHE WAS QUITE COMFORTABLE WITHOUT GLASSES AND SAW BETTER. ON OCTOBER 28 AFTER 17 VISITS, THE SUBJECTIVE PRESCRIPTION WAS R-25 -50 x 0 V.A. 20/20. L + 25 - 75 x 0 V.A. 20/20. INDUCED PHORIA 2 EXO INDUCED PHORIA AT NEAR? 2 EXO BINOCULAR CROSS CYL. R + 75 - 50 x 0. L + 100 - 75 x 0. INDUCED PHO. A ORTHO. PATIENT PRESCRIPTION WAS CHANGED TO R + 25 + 50 x 90. L + 25 + 75 x 90 TO BE USED FOR VISUAL TRAINING AND A 11 NEAR TASKS. AFTER 8 MORE VISITS, PATIENT'S V.A. R 20/20 L 20/20. AFTER ADVISING PATIENT WHEN SHE SHOULD RETURN FOR EXAMINATION, SHE WAS DISCHARGED.

CASE # 5

A. R. FEMALE-AGE 13 EIGHTH GRADE PUPIL TYPE A. COMPLAINS OF EYES BURNING AND H.A. WITH OLD GLASSES PRESCRIBED BY PROMINENT EYE SPECIALIST ABOUT THREE MONTHS AGO. HEALTH GOOD. HAS WORN GLASSES SINCE AGE 6. HAD FREQUENT EXAMINATIONS BY SAME SPECIALIST.

R - 450 x 180 - V A 20/20
 OLD Rx, L - 450 x 160 - V A 20/25 -2
 N V R - 20/80 L 20/80 O U 20/80
 SQUINTS TO SEE CHART.

VERSIONS - ROTATIONS MOVEMENTS OF EYES GOOD. ABSOLUTE CONVERGENCE 3". PUPILS MEDIUM LARGE. PUPILLARY REFLEXES GOOD RESPONSE. CONSENSUAL IRIS. CONJUNCTIVE LIDS. LACHRIMAL NORMAL. CORNEA AND LENS CLEAR. OPHTHALMOSCOPE. NO PATHOLOGY PRESENT. DISC WELL DEFINED ARTERIES AND VEINS IN RATIO.

OPHTHALMOMETER R 42.5 x 0 46.75 x 90
 L 42.75 x 170 46.5 x 80

HABITUAL PHORIA | E 6 0 AT NEAR | X 0
 STATIC RETINOSCOPE

R + 1.00 - 250 x 180

L + 1.00 - 250 x 170

DYNAMIC AT 20" R + 200 - 250 x 0

L + 200 - 250 x 1.70

SUBJECTIVE R + 50 - 250 x 180 - 20/25

L + 50 - 250 x 170 20/25 + V A O U 20/20-2

INDUCED PHORIA 2 X 0

VISUAL TRAINING WAS STARTED ON AUGUST 23, 1947 AND UP TO NOVEMBER 10TH THE PATIENT HAD 22 TRAINING PERIODS. ON NOV. 10TH, 1947 A VISUAL ANALYSIS WAS

7 (OD + 100-200x180 VA 20/20 + OS+ 100-200x180 VA 20/20+
 # 8 1X0 #9 NO BLUR #10 -36/3 #11 9/6 #12 NEGATIVE
 #13B 1ESO #14A OU + 100 - 200 x 180 #15A 2ESO
 #14B + 100 - 200x180 #15D 2ESO #16A 20 TO DRAKE
 #16D 20/15 #17A 17. #17D 17/0 #18 NEGATIVE
 #19 -7.00 OD.OS AND OU # 20 -350 WITH #7
 #21 + 275 WITH #7

THE RX WAS CHANGED TO -100+200 x 90

OU AND TRAINING CONTINUED TO MARCH 27, 1948 AND AFTER 29 VISITS N V IMPROVED TO OD 20/25-1 OS 20/25-1 AND SUBJECTIVE OD AND OS -50+200x90 GAVE 20/20 O.D. AND O.S. OU 20/20+. ON APRIL 2ND PATIENTS RX WAS CHANGED TO + 150 x 90 OU WHICH GAVE V.A. 20/20-3 OU FOR CLOSE TASKS ONLY AND V.T. CONTINUED TO JUNE 14TH AND AFTER 29 VISITS THE N.V. R -20/20 -1 L -20/20 -1 OU 20/20+. WHEN PATIENT WAS DISCHARGED.

THIS PATIENT CAME FROM A WEALTHY HOME AND MONEY WAS NO OBJECT. WE HAD COMPLETE COOPERATION OF BOTH PARENTS AND PATIENT HATED GLASSES.

THE FOLLOWING CASE REPORT IS SUBMITTED ONLY TO EMPHASIZE THE IMPORTANCE OF SYNTONICS AND VISUAL TRAINING IN VISUAL GERIATRICS.

PATIENT F.R. AGE 44, FEMALE, REGISTERED NURSE IN ONE OF OUR HOSPITALS, WAS REFERRED BY AN OPTOMETRIST, WHO HAD PRESCRIBED BIFOCALS FOR HER DIZZINESS AND HEADACHES ABOUT 6 MONTHS PREVIOUS TO VISITING MY OFFICE. THE PATIENT STATED THAT SHE HAD MANY EXAMINATIONS, AND THE LENS RX CHANGED THREE TIMES IN LESS THAN A YEAR. THE RX WORN BY HER NOW IS + 525 - 150 AXIS 180 WITH V.A. O.D. 20/100 OS 20/80 AND OU 20/80, THE LAST RX BY M.D. ABOUT 3 MONTHS AGO

PATIENT HAS ALWAYS ENJOYED GOOD HEALTH, SHE IS A WIDOW AND SUPPORTS A DAUGHTER OF HIGH SCHOOL AGE.

A/T HAS WORN GLASSES FOR 11 OR 12 YRS., THAT WERE CHANGED ABOUT EVERY TWO YRS.

VERSIONS-ROTATIONS AND EYE MOVEMENTS GOOD ABSOLUTE CONVERGENCE 3". LIDS-CONJUNCTIVE-LACHRIMAL NORMAL. CORNEA AND LENS CLEAR. PUPILAR RESPONSE TO LIGHT GOOD AND CONSENSUAL OPHTHALMOSCOPE. DISCS WELL DEFINED, ARTERIES AND VEINS IN RATIO.

- PUPILARY DIST 62/59. #3. 6 Eso. #13A 4. Eso;
 #4. OU + 400 - 100 x 180
 #5. OU + 600 - 100 x 180
 #7. OU + 350 - 100 x 180 VA 20/20 OD OS OU
 #8. 2 XO
 #9-10-11 NOT TAKEN
 #12. NEGATIVE
 #13B. 3XO
 #14B. OU + 500 - 100 x 180
 #15B. 11XO
 #16A. 10
 #16B. 10/0
 #17A. 32X
 #17B. 32/24
 #18 NEGATIVE
 #19 - 400 WITH #7
 #20 - 150 WITH #7
 #21 + 250 WITH #7

THE FULL SUBJECTIVE WAS PRESCRIBED FOR CONSTANT WEAR. WITH SYNTONICS AND VISUAL TRAINING, PATIENT REPORTED AFTER 3 VISITS, THE MOST COMFORTABLE VISION SHE HAS ENJOYED IN YEARS.

VISUAL TRAINING CONSISTED OF KEYSTONE E. C. SERIES, BINOCULAR ACC ROCK ON TEL EYE TRAINER.

PATIENT WAS EXAMINED ON DEC, 7TH 1951 AND VISUAL TRAINING PERIODS WERE ON 12-12, 12-14, AND 12-19. THE LAST VISIT WAS DURING THE WORST SNOW STORM IN CHICAGO HISTORY, I WAS SURPRISED WHEN SHE KEPT THE APPOINTMENT. SHE INFORMED ME IT HAPPENED TO BE HER 44TH BIRTHDAY, AND FELT SHE HAD GOTTEN THE BEST BIRTHDAY GIFT SHE HAD EVER RECEIVED BY GETTING RID OF HER DIZZINESS.

BIBLIOGRAPHY

DR. CARL F. SHEPARD	TEACHER
DR. RILEY SPITLER	BASIC SYNTONIC COURSE
DR. A. M. SKEFFINGTON	O. E. P.
DR. RAY MORSE PECKHAM	OPT. RESEARCH INST.
DR. EMANUEL M. JOSEPHSON	NEARSIGHTEDNESS IS PREVENTABLE (1939)
DR. AVERY DE. H. PRANGEN	OF MAYO CLINIC, ROCHESTER, MINN. ARCHIVES OF OPHTHALMOLOGY 1939
DR. ANN SUTTON NISHOLL	LECTURES
DR. G. M. GETMAN	LECTURES
DR. ARNOLD GEBELL	LECTURES
DR. DARELL HARMON	LECTURES
DR. M. E. VAN ORDEN	VISION IN INFANTS AND CHILDREN YALE UNIVERSITY-CLINIC OF CHILD DEVELOPMENT LECTURES

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Syntonic In Mexico 8

Oct. 15, Vol. 3, June 1952

SYNTONIC PRESCRIPTION

CASE #1 #1 9 VISITS NL3 ALPHA OMEGA 8
#2 9 VISITS NL3 UPSILON OMEGA 8
#1 6 VISITS ALPHA OMEGA 8
#2 6 VISITS UPSILON OMEGA 8

CASE #2 #1 6 VISITS NL3 ALPHA OMEGA 8
#2 8 VISITS NL3 UPSILON OMEGA 8

CASE #3 #1 10 VISITS NL3 ALPHA OMEGA 8
#2 19 VISITS NL3 UPSILON OMEGA 8

CASE #4 6 VISITS NL3 ALPHA OMEGA 10
6 VISITS MU DELTA 8 THETA DELTA 10
13 VISITS UPSILON OMEGA 10

CASE #5 #1 10 VISITS ALPHA
#2 20 VISITS ALPHA DELTA
#3 30 VISITS ALPHA OMEGA
#4 (ALTERATE WITH 3 DELTA OMEGA
#5 REMAINDER OF TIME UPSILON OMEGA