

# Neuro- Ophthalmology and Neuro- Otology

A Case-Based Guide for Clinicians  
and Scientists

Daniel Gold



 Springer

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A Case-Based Guide  
for Clinicians and Scientists

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## Preface

As a first-year neurology resident, I saw my first patient with spontaneous nystagmus and a skew deviation due to the acute vestibular syndrome with Dr. Stephen Reich (a fellow eye movement enthusiast), and I immediately fell in love with the bedside ocular motor and vestibular exam. I wanted to learn more about eye movements and read about the “HINTS” exam to diagnose stroke in the acute vestibular syndrome (Drs. Jorge Kattah and David Newman-Toker). I was then introduced to *Walsh & Hoyt’s Clinical Neuro-Ophthalmology* (edited by Drs. Neil Miller, Nancy Newman, Valerie Biousse, and John Kerrison), and *The Neurology of Eye Movements* (by Drs. John Leigh and David Zee), *Neuro-Ophthalmology Illustrated* (by Drs. Valérie Biousse and Nancy Newman), and *Liu, Volpe, and Galetta’s Neuro-Ophthalmology: Diagnosis & Management* became my prized possessions (little did I know that these authors would become my future mentors and colleagues). While I came across excellent neuro-ophthalmology and neuro-otology textbooks and review guides, I couldn’t locate a single clinically based resource that married these two subspecialties. While it was apparent to me that there was considerable overlap between visual and vestibular disorders, there appeared to be a significant knowledge gap at the interface of neuro-ophthalmology and neuro-otology. Additionally, while visual and vestibular symptoms are so common, remarkably few clinicians seemed comfortable evaluating patients with these complaints.

Throughout my training, I had the great fortune of being surrounded by master clinicians, and I was inspired not only by their clinical acumen and bedside manner, but also their penchant for recording eye movements. When I became an attending myself, the lines between “neuro-ophthalmology” and “neuro-otology” blurred within my practice, and I began to record videos of everything I felt had educational value. My burgeoning database of videos turned into my own collection through the North American Neuro-Ophthalmology Society’s (NANOS) Neuro-Ophthalmology Virtual Education Library (NOVEL), with substantial assistance and encouragement from Nancy Lombardo and Dr. Kathleen Digre. My passion for clinical care, the bedside exam, and the desire to formalize my NOVEL Collection became the impetus for this book – a one-stop shop for clinical neuro-ophthalmology and neuro-otology using a case (and video)-based approach. While all of the basics are included here, there are enough clinical pearls, figures, and video examples throughout to keep even the most advanced and experienced readers satiated.

In addition to going through this book chapter by chapter, it can also be used when the reader is in a pinch – e.g., my patient has acute onset prolonged vertigo ... what do I ask or examine first? For these real-time situations, start with the symptom-based tables. Not sure what neuro-ophthalmic or audiovestibular testing is necessary for your patient? There are tables and electronic supplemental materials for that. Not sure how to examine saccades or use your new Maddox rod? It’s all here for you in the form of videos and other interactive resources. I hope this practical resource can be used to enthuse and educate current and future neurologists, ophthalmologists, otolaryngologists, neurosurgeons, audiologists, physical therapists, internists, emergency medicine providers, as well as scientists looking for a clinical perspective, and I hope to inspire others as my mentors and colleagues have inspired me. I would also like to dedicate this book to my family for their support and patience, and to my patients for their generosity in sharing their stories (as well as their eyes).

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# Contents

<b>1</b>	<b>Preparing for the Exam</b> . . . . .	1
1.1	Equipment for the Afferent Neuro-Ophthalmology Bedside Exam . . . . .	1
1.1.1	Vision . . . . .	1
1.1.2	Pupils, Eyelids, Orbits . . . . .	2
1.2	Equipment for the Efferent Neuro-Ophthalmic/ Vestibular Bedside Exam . . . . .	2
	Reference . . . . .	3
<b>2</b>	<b>Disorders of the Pupils, Eyelids, and Orbits.</b> . . . .	5
2.1	Pupil . . . . .	5
2.1.1	Anisocoria—The History . . . . .	5
2.1.2	Anisocoria—The Exam . . . . .	15
2.1.3	Pharmacologic Testing . . . . .	16
2.1.4	Horner’s Syndrome . . . . .	17
2.1.5	Aneursymal Third Nerve Palsy . . . . .	22
2.1.6	Tonic Pupil . . . . .	25
2.2	Eyelid (Ptosis and Spasm) . . . . .	28
2.2.1	Ptosis—The History . . . . .	28
2.2.2	Ptosis—The Exam . . . . .	28
2.2.3	Levator Dehiscence . . . . .	29
2.2.4	Myasthenia Gravis . . . . .	34
2.2.5	Eyelid Spasms . . . . .	38
2.3	Orbit/Globe . . . . .	41
2.3.1	Orbital Disorders—The History . . . . .	42
2.3.2	Orbital Disorders—The Exam . . . . .	42



2.3.3	Thyroid Eye Disease . . . . .	44
2.3.4	Eye Pain (Acute Angle Closure Glaucoma) . . . . .	46
2.3.5	Red Eye (Carotid Cavernous Fistula) . . . . .	49
	References . . . . .	52
<b>3</b>	<b>Loss of Vision and Other Visual Symptoms . . . . .</b>	<b>55</b>
3.1	Vision Loss—The History . . . . .	55
3.2	Vision Loss—The Examination . . . . .	55
3.3	Interpretation of Monocular or Binocular Visual Fields—Dr. Neil Miller’s 10 Visual Field Rules to Live by . . . . .	68
3.4	Ancillary Testing in Neuro-Ophthalmology . . . . .	74
3.5	Prechiasmal (Monocular Vision Loss) . . . . .	74
3.5.1	Retina . . . . .	76
3.5.2	Optic Nerve . . . . .	85
3.6	Chiasmal Visual Disorders . . . . .	102
3.6.1	Pituitary Tumor . . . . .	102
3.7	Retrochiasmal Visual Disorders . . . . .	105
3.7.1	The History . . . . .	105
3.7.2	The Exam . . . . .	105
3.7.3	Treatment Options . . . . .	105
3.7.4	Optic Tract . . . . .	105
3.7.5	Lateral Geniculate Nucleus (LGN) . . . . .	106
3.7.6	Optic Radiations . . . . .	108
3.7.7	Occipital Lobe/Striate Cortex . . . . .	110
3.8	Higher Cortical Visual Disorders . . . . .	111
3.8.1	Posterior Cortical Atrophy . . . . .	111
3.8.2	Hallucinations . . . . .	117
3.8.3	Visual Snow . . . . .	119
	References . . . . .	121
<b>4</b>	<b>Motility and Ocular Motor Disorders . . . . .</b>	<b>125</b>
4.1	The History . . . . .	125
4.2	The Exam . . . . .	126

---

4.3	Subarachnoid Space, Cavernous Sinus, Orbital Apex . . . . .	135
4.3.1	Subarachnoid Space . . . . .	135
4.3.2	Cavernous Sinus . . . . .	137
4.3.3	Orbital Apex . . . . .	141
4.4	Medulla . . . . .	142
4.4.1	Lateral Medullary (Wallenberg) Syndrome (Including Skew Deviation and Saccadic Dysmetria) . . . . .	142
4.5	Pons . . . . .	151
4.5.1	Medial Longitudinal Fasciculus Syndrome . . . . .	151
4.5.2	Horizontal Gaze Palsies . . . . .	156
4.5.3	Sixth Nerve . . . . .	160
4.6	Midbrain . . . . .	164
4.6.1	Third Nerve . . . . .	164
4.6.2	Fourth Nerve . . . . .	167
4.6.3	Vertical Gaze Palsies . . . . .	174
4.6.4	Progressive Supranuclear Palsy . . . . .	179
4.7	Cerebellum . . . . .	182
4.7.1	Syndrome of the Flocculus and Paraflocculus (Tonsil) . . . . .	184
4.7.2	Syndrome of the Nodulus and Ventral Uvula . . . . .	187
4.7.3	Syndrome of the Dorsal Vermis and Posterior Fastigial Nucleus . . . . .	188
	References . . . . .	189
<b>5</b>	<b>Oscillopsia, Nystagmus, and Other Abnormal Movements . . . . .</b>	<b>191</b>
5.1	The History—How to Approach Oscillopsia and Nystagmus . . . . .	191
5.2	The Exam—Does My Patient Have Nystagmus or Something Else? . . . . .	192

5.3	Nystagmus . . . . .	194
5.3.1	Horizontal Nystagmus (Bruns Nystagmus) . . . . .	194
5.3.2	Periodic Alternating Nystagmus . . . . .	205
5.3.3	Downbeat Nystagmus . . . . .	206
5.3.4	Upbeat Nystagmus . . . . .	210
5.3.5	Torsional Nystagmus . . . . .	214
5.3.6	Oculopalatal Tremor . . . . .	216
5.3.7	Multiple Sclerosis Acquired Pendular Nystagmus . . . . .	219
5.4	Saccadic Intrusions, Oscillations, and Other Nystagmoid Movements . . . . .	222
5.4.1	Square Wave Jerks (SWJ) and Related Saccadic Intrusions . . . . .	222
5.4.2	Opsoclonus/Ocular Flutter . . . . .	223
5.4.3	Superior Oblique Myokymia . . . . .	226
	References . . . . .	228
<b>6</b>	<b>Vestibular Disorders . . . . .</b>	<b>231</b>
6.1	The Vestibular History . . . . .	231
6.1.1	TRIAGE . . . . .	231
6.1.2	TiTrATE . . . . .	231
6.1.3	Test . . . . .	233
6.2	The Vestibular Examination . . . . .	233
6.3	Bedside Auditory Testing . . . . .	239
6.4	Laboratory Testing of Audiovestibular Disorders . . . . .	240
6.5	Vestibular Syndromes . . . . .	240
6.5.1	Acute Vestibular Syndrome . . . . .	240
6.5.2	Episodic Vestibular Syndrome . . . . .	252
6.5.3	Chronic Vestibular Syndrome . . . . .	285
	References . . . . .	298
<b>7</b>	<b>Pediatric Clinical Pearls . . . . .</b>	<b>305</b>
7.1	Neuroblastoma . . . . .	305
7.2	Neurofibromatosis Type 1 (NF-1) . . . . .	306

---

7.3	Abnormal Development of the Visual Pathways (Optic Nerve Hypoplasia) . . . . .	307
7.4	Infantile Nystagmus (IN) . . . . .	307
7.5	Abnormal (but Characteristic) Eye Movements . . . . .	308
7.6	Esotropia—Infantile or Acquired? . . . . .	310
7.7	Idiopathic Intracranial Hypertension . . . . .	310
7.8	Optic Neuritis . . . . .	312
7.9	Myasthenia Gravis . . . . .	312
7.10	Ocular Motor Palsies (Third, Fourth, Sixth Nerve Palsies) . . . . .	313
7.11	Retinal Disorders Mimicking Neurologic Disease . . . . .	314
7.12	Vertigo and Dizziness . . . . .	315
	References . . . . .	315
	<b>Index</b> . . . . .	317