



CURRICULUM VITAE
ARTHUR IAN MALLINSON, Ph. D.

**NEUROPHYSIOLOGIST
NEURO-OTOLOGY UNIT
4TH FLOOR - DIAMOND HEALTH CARE CENTRE
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Date of Birth: April 20, 1952

EDUCATION

1. **B.Sc. (Biological Sciences) 1978**
Simon Fraser University, Burnaby, B.C.

2. **M.Sc. (Neurophysiology) 1985 (Special Arrangements)**
Simon Fraser University

Course work included:

- Mammalian Bioenergetics (special topics course)
- Research design and reporting
- Neurochemistry
- Physiological Psychology
- Interaction of perceptual mechanisms (special topics course)

Research:

Extensive studies into vestibulospinal control mechanisms, functional vestibular physiology and psychophysiological recording techniques.

Thesis:

“Recording of vestibulospinal reflexes using caloric-induced electromyographic responses in limb extensors”

Subsequent coursework:

- **Simon Fraser University**
Directed studies in motor learning and biomechanics
- **University of British Columbia**
Neuroanatomy/neurophysiology and neuropathology (Medicine II course)

3. **Ph.D. (Health, Medicine and Life Sciences), 2011**
Maastricht University, Maastricht, Netherlands

Research:

Extensive work on vestibular diagnostics and clinical evaluation of balance

Thesis:

“Visual Vestibular Mismatch: A poorly understood presentation of balance system disease.”

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PRESENT POSITIONS HELD

- Neurophysiologist, Neuro-Otology Unit, Vancouver General Hospital (1981 to present):
- Clinical Assistant professor, Division of Otolaryngology, Department of Surgery, Faculty of Medicine, University of British Columbia (2010 to present)

Duties/Responsibilities:

- Vestibular assessments, interpretations and report production for inpatients and outpatients referred by specialists all over Western Canada for problems of dizziness and imbalance. (As we are a tertiary care centre, many of my patients are complex referrals that are sent specifically to me for assessment.)
- Discussions with specialists about patients with problems that are difficult to diagnose.
- Computerized Dynamic Posturography assessments and interpretations of complex balance disorders and medical legal cases referred from all over Western Canada (I am the co-author of a booklet that outlines the Mallinson – Longridge criteria for malingering; these are now accepted as valid criteria for detecting aphysiologic performance on posturography).
- Monitoring program for inpatients on vestibulotoxic medications. (This is a program I developed and continue to run). This service is also provided to outpatients enrolled in the Home IV program, whose staff I collaborate with. Screening is also carried out by pharmacists under my guidance. I also serve as a consultant to staff from Home IV programs at other hospitals.
- Consultation with clinicians, audiologists, technologists and technicians in outlying hospitals across western Canada and around the world who do vestibular assessments. I also oversee my technologist's assessments and technical reports.
- Related administration to do with Neuro-otology Unit
- Lecturer to audiology students, medical residents, medical students, neuroscience graduate program students (lectures prepared and given on various aspects of balance, dizziness, diagnostics, neurophysiology, etc.)

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- Ongoing clinical instruction to local and foreign medical students, residents, and fellows.

Past Member, Advisory Committee (1984–2001), Chair (1988–1992)
Electroneurophysiology Program
British Columbia Institute of Technology

This program is a two year diploma program which trains technologists to work in labs that perform a wide variety of diagnostic electrophysiological patient assessments, including EMG, EEG and evoked response testing. As Chair of the Advisory Committee during a formative period of the program, I was involved in developing the curriculum for the program, and as a member, I continued to participate in planning for the present and the future.

Senior Instructor, Electroneurophysiology Program
British Columbia Institute of Technology (1990–1999)

Designed, wrote and taught course entitled “Introduction to Neurology”

Facial Nerve Intraoperative Monitoring Program
Vancouver General Hospital (1990–1999)

In conjunction with the neurosurgical staff of Vancouver General Hospital, I was instrumental in setting up and carrying out the neurosurgical intraoperative monitoring program utilizing a cranial nerve monitor. This program has now expanded and is run by a consultant neurologist and his technological staff.

Lecturer and Laboratory Demonstrator/Assistant
School of Rehabilitation Medicine, Faculty of Medicine
University of British Columbia

Neuroanatomy/Neurophysiology Course (1989–1992)

RESEARCH INTERESTS

- Balance maintenance and mechanisms of falls in the elderly
- Aminoglycoside vestibulotoxicity
- Posture maintenance and otolithic control
- Effects of osteoporosis on balance
- Work related injury affecting balance
- Whiplash associated disorders and imbalance
- Motion sickness and autonomic correlates of vestibular disease
- Clinical assessment of gait

I develop research projects, and also serve as research coordinator and collaborator for a number of research projects being carried out by otolaryngology residents and staff. I am involved in a number of ongoing research studies with international colleagues.

I serve as a consultant for and present regular seminars to several vestibular labs across Western Canada.

I serve as a consultant for several European posturography clinics and aid them in the interpretation of complex assessments.

I am the co-chair of an international motion sickness committee which meets by conference call on a regular basis.

PRESENTATIONS/CONFERENCES

- 1982 International Society for the Clinical Electrophysiology of Vision (Iowa City, IA) (Video and paper given)
- 1984 British Columbia Association of Medical Radiation Technologists Education Day (Vancouver, B.C) “Vestibular Testing” (Invited Speaker)
- 1989 Third Annual International Orthopedic Symposium (Vancouver, BC)
“Assessment of Dizziness and Imbalance” (Guest Speaker).
- 1989 Equitest Interpretation Training Seminar (Denver, CO)
- 1990 Controversies in Neuroscience I—Movement Control (Portland, OR)
- 1991 British Columbia Association of Hospital Pharmacists Annual Meeting (Vancouver, BC) “Monitoring Aminoglycoside Antibiotic Vestibulotoxicity” (Invited Presenter)
- 1991 New York Academy of Sciences—Sensing and Controlling Motion: Vestibular and Sensorimotor Function (Palo Alto, CA)
- 1992 XIth International Symposium of the Society for Posture and Gait Research (Portland, OR) Posture and Gait: Control Mechanisms
- 1995 Physical Medicine and Research Foundation—Whiplash Symposium; Musculoskeletal Pain Emanating from the Head and Neck—Current concepts in diagnosis, management and cost containment (Banff, AB)
- 1998 B.C. Otolaryngological Society Education Day (Vancouver, BC) (Invited Speaker)
- 1998 XXth Barany Society Meeting (Wurzburg, Germany) (Paper presented)
1998. Afternystagmus Study Group 10th Meeting (Wurzburg, Germany)
- 2000 XXIst Barany Society Meeting (Uppsala, Sweden) (Poster and two papers presented)
- 2001 International Society of Posture and Gait (Maastricht, Netherlands) (Paper presented)
2001. Applied Science Technologists and Technicians of British Columbia—Western Regional Biomedical Engineering Conference. (Invited Speaker)
2002. XXIInd Barany Society Meeting (Seattle, WA) (Paper presented)
- 2002 XXIInd Barany Society Satellite Meeting (Orcas Is., WA)

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2003. International Society of Posture and Gait Research (Sydney, Australia) (Poster presented)
2004. XXIIIrd Barany society Meeting (Paris, France) (Paper presented)
2005. International Society of Posture and Gait Research (Marseille, France) (Paper and poster presented)
2006. XXIVth Barany Society Meeting (Uppsala, Sweden) (Paper presented)
- 2008 Canadian Association of Speech Language Pathology and Audiology (CASLPA) Annual Meeting (Kananaskis, AB) (Invited Speaker)
- 2008 XXVth Barany Society Meeting (Kyoto, Japan) (Paper and 3 posters presented)
- 2008 Equitest “refresher” clinical interpretation training seminar (Portland OR,) invited speaker; 2 seminars given.
- 2009 International Society of Posture and Gait Research (Bologna, Italy) (2 posters presented)
- 2010 XXVIth Barany Society Meeting (Reykjavic, Iceland) (2 posters presented).
- 2010 Barany Society Satellite Symposium (Reykholt, Borgarfjörður, Iceland.)
- 2011 Neurootological and Equilibriometric Society 38th Meeting and European Society for Clinical Evaluation of Balance Disorders 7th Meeting (joint meetings) Nancy, France (2 papers presented).
- 2011 Alberta Rehab 2011 (Edmonton, AB) (Invited Speaker) (Talk given; also participation on Vestibular Function Panel)
- 2012 XXVIIth Barany Society Meeting (Uppsala, Sweden) (2 posters presented).
- 2012 European Society for Clinical Evaluation of Balance Disorders: 8th Meeting Nancy, France (2 papers and seminar presented)
- 2012 Canadian Academy of Audiology (Ottawa, ON) Invited speaker (2 seminars given)
- 2013 European Society for Clinical Evaluation of Balance disorders; 9th meeting Nancy, France (2 papers presented)
- 2013 University of Iceland (Reykjavic, Iceland) (Guest Lecturer to Emergency medicine/ENT Department)

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- 2013 Royal Jubilee Hospital (Electrodiagnostic unit) (Guest lecturer to ENT/neurology staff).
- 2014 International Society of Posture and Gait Research (Vancouver, BC)
- 2014 Toronto General Hospital Munk Hearing and Balance Centre
Neuro-otology rounds (Toronto, ON) (Invited Speaker)
- 2014 European Society for Clinical Evaluation of Balance Disorders 10th Meeting and Société Internationale d'otoneurologie 48th Congress (joint meetings) (Nancy, France) (2 papers presented).
- 2014 XXVIIIth Barany Society Meeting (Buenos Aires, Argentina)
(Member of Scientific Advisory Committee) (2 posters and 2 papers presented)
- 2014 XXVIIIth Barany Society Meeting Satellite Symposium, Buenos Aires, Argentina)
- 2014 "The approach of a dizzy patient". Sint-Augustinus Antwerp; European Institute for ORL (Antwerp, Belgium). (Invited Symposium Speaker).
- 2015 European Society for Clinical Evaluation of Balance Disorders 11th Meeting (Nancy, France) and Club des Utilisateurs d'EquiTest (3rd meeting). (2 papers and a one day seminar presented)
- 2016 XXIXth Barany Society Meeting (Seoul, Korea) (2 posters and one paper presented; I co-chaired a special session on "visually induced dizziness").
- 2016 XXIXth Barany Society Meeting satellite meeting (Seoul, Korea).
- 2016 "Pitfalls in vestibular assessment – what's new in vestibular diagnostics: How to avoid pitfalls in assessment of the vestibular patient; experts' opinion on otolithic disease and visual vestibular mismatch". Sint-Augustinus Antwerp; (European Institute for ORL (Antwerp, Belgium). (Keynote Symposium Speaker).
- 2016 Joint meeting; European Society for Clinical Evaluation of Balance Disorders 12th Meeting (Nancy, France) and Club des Utilisateurs d'EquiTest (4th meeting). (2 papers and one day seminar presented)
- 2017 International Federation of Otolaryngological Societies (IFOS) (21st world Congress) Paris, France (invited moderator of two symposia)
- 2017 SIRV; (International Society of vestibular rehabilitation; English translation); Paris, France.

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- 2017 Joint meeting; European Society for Clinical Evaluation of Balance Disorders 13th Meeting (Nancy, France) and Club des Utilisateurs d'EquiTest (5th meeting). (Special topic; "trauma-induced vestibular disorders". I co designed, co-wrote and co-presented this session).
- 2018 39th Annual Neuro-audiology seminar: Title "Vestibular diagnostics and management". St. Joseph's/Candler Center for oto-neurology. (Savannah GA). Invited faculty (6 lectures presented).
- 2018 XXXth Barany Society Meeting (Uppsala, Sweden) (4 posters and 2 talks presented; I also co-chaired a session on VEMP analysis)
- 2018 XXXth Barany Society satellite symposium (Sandhamn, Sweden) "New directions for vestibular research in health and disease."

OTHER PRESENTATIONS/ ACTIVITIES

Developing mock oral exams and half-day teaching sessions for otolaryngology residents.

Recurrent presentations at Neurosciences, Otolaryngology and Physical Medicine and Rehabilitation Grand Rounds.

Recurrent presentations (including teleconferencing) to other clinicians

International consultant for other users of Computerized Dynamic Posturography to assist in interpretation of complex results.

Recurrent Invited Public Lecturer/Panelist on public forums for B.A.D.D. (Balance and Dizziness Disorders Society)

I am on the Editorial Review Board for six peer reviewed journals (Journal of Vestibular Research, Gait and Posture, Otolology and Neurotology, Experimental Brain Research, Clinical Neurophysiology, Journal of International Advanced Otolology).

AWARDS

2002. Poster presentation at Canadian Otolaryngological society – 2nd prize. Mallinson AI, Longridge NS, Wong K – “Swaystar: measuring sway amplitudes in the office setting”.

2002. Presentation at Canadian Society of Hospital Pharmacists (British Columbia Branch) Residency Research Presentation Night. Shalansky K, Carr D, Marra F, Mallinson A. - Pharmacist utilization of the DIE test to assess aminoglycoside vestibulotoxicity. Winner of GlaxoSmithKline (Pharmaceutical care) Award 2001/2002.

WORKSHOPS ORGANIZED

2014 International Society of Posture and Gait Research (Vancouver, BC) Pre Congress Workshops:

1. “Keeping balance: Function and assessment of the saccule and utricle in the clinical neuro-otology setting—part one: ideas and theories.”
2. “Keeping balance: Function and assessment of the saccule and utricle in the clinical neuro-otology setting—part two: results and data.”

I designed, wrote and presented these two workshops along with my research colleague (Dr. Neil Longridge).

MEMBERSHIPS

1. **BADD (Balance and Dizziness Disorders Society)** (1999–present); Member, Executive Advisory Board; elected president as of June 2017.
2. **Bárány Society** (2000–present). This is the premier world society on dizziness and balance. Members in the society must be nominated by two other members and are required to be active in vestibular research.
3. **ISPGR (International Society of Posture and Gait Research)**; 2000–present).
4. **ESCEBD (European Society for Clinical Evaluation of Balance Disorders)**: (2010 – present). This is a society mainly for European clinicians who use posturography; I am an invited member
5. **CLUTEQ (Club des Utilisateurs d'EquiTest)**; (2012-present). this is also a society mainly for European clinicians who use posturography; I am an invited member

REFEREED PUBLICATIONS

1. Mallinson AI, Longridge NS, Dunn HG, McCormick AQ. Vestibular studies in Pelizaeus-Merzbacher disease. *J Otolaryngol*. 1983;12(6):361-364.
2. Longridge NS, Mallinson AI. Discussion of the dynamic illegible E test: A new method of screening for aminoglycoside vestibulotoxicity. *Otolaryngol Head Neck Surg* 1984;92:672-677.
3. Longridge NS, Mallinson AI. Arnold-Chiari malformation and the otolaryngologist: Place of magnetic resonance imaging and electronystagmography. *Laryngoscope* 1985;95:335-339.
4. Longridge NS, Mallinson AI. The dynamic illegible E test—a technique for assessing the vestibulo-ocular reflex. *Acta Otolaryngol* 1987;103:273-279.
5. Longridge NS, Mallinson AI, MacLeod PM. Machado-Joseph disease: The vestibular presentation. *J Otolaryngol* 1987;16(2):93-95.
6. Longridge NS, Mallinson AI. The dynamic illegible E test—a simple technique for assessing the ability of the vestibulo-ocular reflex to overcome vestibular pathology. *J Otolaryngol* 1987;16(2):97-103.
7. Hamman RR, Mekjavic I, Mallinson AI, Longridge NS. Training effects during repeated therapy sessions of balance training using visual feedback. *Arch Phys Ther Rehab* 1992;73:738-744.
8. Mallinson AI, Longridge NS, Peacock C. Dizziness, imbalance, and whiplash. *J Musculoskeletal Pain* 1996;4(4):105-112.
9. Mallinson AI, Longridge NS. Specific vocalized complaints in whiplash and minor head injury patients. *Am J Otology* 1998;19:809-813.
10. Mallinson AI, Longridge NS. Dizziness from whiplash and head injury: (Differences between whiplash and head injury). *Am J Otology* 1998;19:814–818.

11. Longridge NS, Mallinson AI. Low dose intratympanic gentamicin treatment for dizziness in Meniere's disease. *J Otolaryngol* 2000;29(1):35–39.
12. Gill C, Mallinson AI, Longridge NS. Effects of dimenhydrinate on computerized dynamic posturography. *J Otolaryngol* 2000;29(6):337–339.
13. Carter, ND, Khan KM, Petit MA, Heinonen A, Waterman C, Donaldson MG, Janssen PA, Mallinson A, Riddell L, Kruse K, Prior JC, Flicker L, McKay HA. Results of a 10 week community based strength and balance training programme to reduce fall risk factors: a randomized controlled trial in 65–75 year old women with osteoporosis. *Br J Sports Med* 2001 Oct;35(5)348–351.
14. Longridge NS, Mallinson AI, Denton A. Visual vestibular mismatch in patients treated with intratympanic gentamicin for Meniere's Disease. *Journal of Otolaryngology* 2002;31(1): 5–8.
15. Liu-Ambrose T, Eng JJ, Khan KM, Mallinson A, Carter ND, McKay HA. The influence of back pain on balance and functional mobility in 65–75 year old women with osteoporosis. *Osteoporosis International* 2002;13:868–873.
16. Carter ND, Khan KM, Mallinson A, Janssen PA, Heinonen A, Petit MA, McKay HA. Knee extension strength is a significant determinant of static and dynamic balance as well as quality of life in older community-dwelling women with osteoporosis. *Gerontology* 2002;48:360–368.
17. Mallinson AI, Longridge NS. Motion sickness and vestibular hypersensitivity. *J Otolaryngology* 2002;31(6):381–385.
18. Mallinson AI, Longridge NS, Wong K. Using Swaystar to measure sway amplitude in an office setting. *J. Otolaryngology* 2004;33(1):17–21.
19. Mallinson, AI, Longridge NS. Caloric response does not decline with age. *J Vest Res* 2004;14(5):393–396.

20. Mallinson AI, Longridge NS. A new set of criteria for evaluating malingering in work related vestibular injury. *Otol neurotol* 2005 Jul;26;(4):686–690.
21. Longridge NS, Mallinson AI. Visual vestibular mismatch in work related vestibular injury. *Otol neurotol* 2005 Jul;26;(4):691–694.
22. Longridge NS, Mallinson AI. “Across the board” posturography abnormalities in vestibular injury. *Otol neurotol* 2005 Jul;26;(4):695–698.
23. Mallinson AI, Longridge NS, Morley, RE. Evaluation of the effects of alcohol on static and dynamic gait. *J Otolaryngol* 2008;37(6):856–859.
24. Mallinson AI, Longridge NS. Increasing the usefulness of tandem walking evaluation. *J Otolaryngol* 2008;37(6):860–864.
25. Longridge NS, Mallinson AI. Clinical Romberg testing does not detect vestibular disease. *Otol Neurotol* 2010;31:803–806.
26. Mallinson AI, Longridge NS, Pace-Asciak P, Ngo R. Measuring caloric response—comparison of four different analysis techniques. *J Vest Res* 2010;20(6):419–426.
27. Phillips J, Longridge NS, Mallinson AI, Robinson G. Migraine and vertigo: a marriage of convenience? *Headache* 2010 Sep;50(8):1362–5.
28. Phillips JS, Mallinson AI, Hamid MA. Cost effective evaluation of the vestibular patient. *Curr Opin Otolaryngol Head Neck Surg.* 2011 Oct;19(5):403-409.
29. Longridge NS, Mallinson AI, Pothier DD. Do otoliths modulate caloric response? What do VEMPs and CDP measure? What do these tests tell us? *Journal of Otolaryngology – ENT research.* 2015;3(2).
30. Longridge NS, Mallinson AI, Pothier DD. Development and understanding of caloric responses; an overview of the first hundred years. *Journal of Otolaryngology – ENT research.* 2015;3(2).).

31. Maire R, Mallinson A, Ceyte H, Caudron S, Van Nechel C, Bisdorff A, Magnusson M, Petersen H, Kingma H, Perrin P. Discussion about visual dependence in balance control: European Society for Clinical Evaluation of Balance disorders. *Journal of International Advanced Otology* 2017;13:404-406.
32. Mallinson AI, Kuijpers A, Longridge NS. Optimum number of sweeps in clinical OVEMP recording; how many sweeps are necessary? *Journal of International Advanced Otology* 2018;14:72-76.
33. Perrin P, Mallinson A, Van Nechel C, Peultier L, Petersen H, Magnusson M, Kingma H, Maire R. Defining clinical posturographic and intraposturographic discordances: - What do these two concepts mean? *Journal of International Advanced Otology* 2018;14:127-129.
34. Longridge NS, Mallinson AI. Tone induced cervical and ocular vestibular-evoked myogenic potentials: comparing abnormalities in traumatic and nontraumatic vestibular disease. *J Laryngol Otol* 2018.
35. Mallinson AI, Longridge NS. Performing and analyzing tone induced cervical and ocular vestibular-evoked myogenic potentials in traumatic and nontraumatic vestibular pathology. *J Laryngol Otol* 2018.
36. Mallinson AI, Kuijpers AC, Van Zwieten G, Kakal J, Mullings W, Longridge NS. Computerized dynamic posturography does not detect measured CVEMP and OVEMP abnormalities. *Gait and Posture* 2019;67:248-250.

NON-REFEREED PUBLICATIONS AND CASE REPORTS

1. Mallinson AI, Longridge NS. ENG of the month—computed tomography and electronystagmography in conflict with minor symptoms and signs. *Ann Oto Rhinol Laryngol* 1984;93(5):525–527.
2. Mallinson AI, Longridge NS. ENG of the month—findings in a posterior fossa lesion. *Ann Otol Rhinol Laryngol* 1984;93(2):195–196.
3. Mallinson AI, Longridge NS. Visual vestibular mismatch in whiplash and Meniere’s disease. In Claussen C-F, Haid C-T, Hofferberth B (eds) *Equilibrium Research, clinical equilibrimetry, and modern treatment*. Elsevier Science BV 2000.
4. Kaur H, Westerberg BD, Mallinson A, Calne D. Progressive supranuclear palsy as a cause of balance disorders (Case report). *J Otolaryngol* 2003;32(1):114–117.

BOOKLETS

Mallinson, AI, Longridge NS. Differentiating real from aphysiologic balance control using Computerized Dynamic Posturography. Neurocom Publications, Clackamas OR, July 2008. (available online at art.mallinson.ca)

DOCTORAL THESIS

Mallinson, AI. “Visual Vestibular Mismatch: A poorly understood presentation of balance system disease.” Ph.D. thesis, 2011 (available online at art.mallinson.ca)

THESES REFEREED

- Zur, Oz (M.Sc.): “Visual vertigo and vestibulopathy: Oculomotor functions, balance and anxiety.” Ph.D. thesis; University of Haifa, Israel, 2012.
- Bisdorff, Dr. Alex (MD): “The epidemiology of vertigo, dizziness and unsteadiness and its links to migraine, motion sickness susceptibility, anxiety-depression, vaso-vagal episodes and agoraphobia.” (Translated from French). Ph.D. Thesis; University of Lorraine, France. 2013.
- Peultier-Celli, Laetitia (M.Sc.): “Predictive factors of the quality of postural control and compensation for traumatic and degenerative pathology of the knee.” (Translated from French) Ph.D. Thesis; University of Lorraine, France. 2017.

MINI-FELLOWSHIP CO-SUPERVISED

- Stevens, Dr. H. (February 2011): with Dr. N. Longridge, I co-supervised a neuro-otology mini-fellowship for Dr. Stevens.

FOREIGN STUDENTS CO-SUPERVISED

- Van Zweiten, Gusta (Medical student; University of Maastricht, Netherlands) with Dr. N. Longridge (April–September 2014).
- Kuijpers, Anouk (Medical student; University of Maastricht, Netherlands) with Dr. N. Longridge (February–June 2016).

LEARNING MODULES

- Phillips, J, Mallinson AI. Vertigo: an update on diagnosis and management. British Medical Journal (BMJ web based module) 2010.