Evaluation & Management of Dizziness and Imbalance

COURSE INSTRUCTORS

David Zee, MD
& A. Tucker Gleason, PhD

May 19-20, 2017

Renaissance Baltimore Harborplace Hotel
202 East Pratt Street
Baltimore, MD 21202
(410) 547-1200

COST: $650 until 04/27/17
($700 afterwards)
Hotel Accommodations
Renaissance Baltimore Harborplace Hotel
202 East Pratt Street
Baltimore, MD 21202
(410) 547-1200
Room Rates: $249
Rates available until 04/28/17
Call hotel directly to make your reservation, mention “Micromedical Technologies Group Rate” to get the special rate
Airport & Directions:

AREA AIRPORTS: This hotel does not provide shuttle service

Baltimore/Washington International Thurgood Marshall (BWI) (10mi S)
Transportation Options:
- BWI Airport Taxi: $35 (one way TO hotel only) [www.bwiairporttaxi.com](http://www.bwiairporttaxi.com)
- Super Shuttle: $17 (shared ride) [www.supershuttle.com](http://www.supershuttle.com) reservation req.

Driving Directions:
- Exit airport to I-195 West. Merge onto I-95N, then to I-395 N. SEE “From I-395N” directions below.

Washington Dulles International Airport (IAD) (60mi S)
Transportation Options:
- Super Shuttle: $151 (non-stop van) [www.supershuttle.com](http://www.supershuttle.com) reservation req.

Driving Directions:
- Take the Dulles Access Road to I-495 N to I-95 N. SEE “From I-395N” directions below.

Ronald Reagan Washington National Airport (DCA) (42mi S)
Transportation Options:
- Super Shuttle: $142 (non-stop van) [www.supershuttle.com](http://www.supershuttle.com) reservation req.

Driving Directions:
- Follow I-95N into the Baltimore area and take Exit 53 (Downtown I-395). SEE “From I-395N” directions below.

From I-395 N (Cal Ripken Pkwy):
- Take the slight right onto W. Conway St. Take left at 3rd light onto Light St., turning into far right two lanes, road will merge to the right, into Pratt Street. Make immediate 1st left onto South Street. Hotel entrance is on the left.

From I-83 S:
- Keep right to stay on I-83 S (at I-695 intersection), follow signs for Baltimore. Take the Pleasant Street exit on the left. Turn right onto E. Pleasant St. Turn left onto St. Paul Pl. Continue onto St. Paul Pl. Continue onto Light St. Turn left onto E. Pratt St. The hotel will be on the left.

From I-70 E:

From I-95N take exit 53 for I-395N. SEE “From I-395N” directions above

From I-97N:
- Take exit 17A to Merge onto I-695N. Take exit 7B for Maryland 295N/Balt-Wash Pkwy toward Baltimore. Merge onto MD-295N. Turn right onto W. Pratt St. Hotel will be on the left.

Parking: Valet $43 daily, On-Site: $30 Daily (garage height clearance 6’6”)
## COURSE AGENDA*

### Friday May 19, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30-8:00</td>
<td>Registration</td>
</tr>
<tr>
<td>8:00-8:30</td>
<td>Introduction to Balance &amp; Vestibular - Dr. Gleason</td>
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<tr>
<td>8:30-9:00</td>
<td>Vestibular Anatomy and Physiology - Dr. Gleason</td>
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<tr>
<td>9:00-10:30</td>
<td>Recording Eye Movements and Nystagmus - Dr. Gleason</td>
</tr>
<tr>
<td>10:30-10:45</td>
<td><strong>BREAK</strong></td>
</tr>
<tr>
<td>10:45-11:30</td>
<td>Ocular Motor Tests - Dr. Gleason</td>
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<tr>
<td>11:30-12:30</td>
<td>Position Testing - Dr. Gleason</td>
</tr>
<tr>
<td>12:30-1:30</td>
<td>Lunch (Meal Provided)</td>
</tr>
<tr>
<td>1:30-2:30</td>
<td>Ocular Motor System: Basic Anatomy &amp; Physiology - Dr. Zee</td>
</tr>
<tr>
<td>2:30-3:30</td>
<td>Office/Bedside Examination of the Dizzy Patient - Dr. Zee</td>
</tr>
<tr>
<td>3:30-3:45</td>
<td><strong>BREAK</strong></td>
</tr>
<tr>
<td>3:45-4:45</td>
<td>BPPV and Other Causes of Positional vertigo - Dr. Zee</td>
</tr>
<tr>
<td>4:45-5:30</td>
<td>Hands-on - 3 Stations (Rotate after 20 min)</td>
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<tr>
<td></td>
<td>Ocular Motor Tests - Course Sponsor Staff</td>
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<td></td>
<td>Dizzy Office Exam - Dr. Zee</td>
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<td>Positional Testing - Dr. Gleason</td>
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### Saturday May 20, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>8:00-9:00</td>
<td>Migraine Associated Vertigo and Meniere's Disease - Dr. Zee</td>
</tr>
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<td>9:00-10:00</td>
<td>Stroke Syndromes - Dr. Zee</td>
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<tr>
<td>10:00-10:30</td>
<td>Caloric and Rotary Chair Testing - Dr. Gleason</td>
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<tr>
<td>10:30-10:45</td>
<td><strong>BREAK</strong></td>
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<tr>
<td>10:45-11:00</td>
<td>Dehiscence and Fistula, microvascular compression - Dr. Zee</td>
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<tr>
<td>11:00-12:00</td>
<td>Neurologic Causes of Dizziness &amp; Imbalance</td>
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<td>Cerebellum and basal ganglia- Dr. Zee</td>
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<tr>
<td>12:00-1:00</td>
<td>Lunch (Meal Provided)</td>
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<tr>
<td>1:00-1:30</td>
<td>The Key Differential for Acute Vertibulopathy with a word on PPPD</td>
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<td>(Persistent Perceptual Postural Dizziness) - Dr. Zee</td>
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<tr>
<td>1:30-2:30</td>
<td>Test Interpretation - Recognizing Patterns - Dr. Gleason</td>
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<tr>
<td>2:30-2:45</td>
<td><strong>BREAK</strong></td>
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<tr>
<td>2:45-3:45</td>
<td>Hands-on - 3 Stations (Rotate after 20 min)</td>
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<td>VHIT Testing - Course Sponsor Staff</td>
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<td></td>
<td>Particle Repositioning - Dr. Zee</td>
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<td>Calorics - Dr. Gleason</td>
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<tr>
<td>3:45-4:45</td>
<td>Clinical Exam in the context of contemporary diagnostic techniques - Dr. Zee</td>
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<tr>
<td>4:45-5:30</td>
<td>Other Vestibular Tests: vHIT, VEMP, SVV, Posturography, CTSIB, TUG, DGI,</td>
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<td></td>
<td>Questionnaires and course wrap up - Dr. Gleason and Dr. Zee</td>
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</tbody>
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*Course outline subject to change

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Micromedical Technologies, Inc. would like to thank Interacoustics for their participation in this course.
**David Zee, MD**  
*Professor of Neurology*  
*Johns Hopkins Hospital*  
*Baltimore, MD*  

Dr. Zee is Board Certified by the American Board of Psychiatry and Neurology. Dr. Zee is a Professor of Neurology with secondary appointments in Otolaryngology — Head and Neck Surgery, Ophthalmology, and Neuroscience. Dr. Zee specializes in vertigo, dizziness and imbalance (including ataxia) and in disorders of eye movements (including nystagmus and strabismus). Dr. Zee is also the director of the Vestibular/Eye Movement Testing Laboratory at Johns Hopkins.

**A. Tucker Gleason, Ph.D.**  
*Assistant Professor of Clinical Otolaryngology*  
*Director, Vestibular & Balance Center*  
*University of Virginia Health System, Charlottesville, VA*

Dr. Gleason is an Audiologist certified by the American Speech-Language-Hearing Association. Her clinical practice is dizziness & balance disorders and diagnostic audiology. Her research interests are vestibular physiology, cochlear mechanics, and vestibular/visual interaction.

**NOTE OF DISCLOSURE:**

**David Zee**  
Relevant financial relationships: Honorarium, accommodations & travel expenses provided by Micromedical Technologies, Inc.  
Relevant non-financial relationships: None

**A. Tucker Gleason**  
Relevant financial relationships: Accommodations & travel expenses provided by Micromedical Technologies, Inc.  
Relevant non-financial relationships: None
CONTINUING EDUCATION:

Evaluation Assessment Tool: A Course Examination will be handed out at the end of the course material covered.

AAA Credits - Micromedical Technologies, Inc. is applying for 1.6 CEU Credits through the American Academy of Audiology (AAA) to offer AAA CEU's for this course. AAA approval of this continuing education activity does not imply endorsement of course content, specific products, or clinical procedures.

Tier 1 Credits - Micromedical Technologies, Inc. is applying for 1.6 CEU Credits (16 Credit Hours) through AAA for the American Board of Audiology recertification requirements.

American-Speech-Language-Hearing Association (ASHA):

This program is offered for 1.6 CEUs (Intermediate Level, Professional Area)

MDPTA Credits - Micromedical Technologies, Inc. will be applying for 16 Credit Hours with the Maryland Physical Therapy Association. Please stay tuned for updates on the approval for CEUs.
INTENDED AUDIENCE

✧ Audiologists ✧ Chiropractors ✧ Neurologists ✧ Otolaryngologists ✧ Physical Therapists ✧ VNG/ENG Technicians

This is an intermediate course for those interested in vestibular testing. Examples of test abnormalities will be discussed and cases used to illustrate how to apply the test results to achieve successful treatment strategies. This course assumes the attendee has a general working knowledge of the anatomy and physiology of the vestibular & balance systems as well as general familiarity and experience with ENG/VNG testing.

LEARNER OUTCOMES

At the completion of this course, the attendee will be able to:
- Describe the vestibule-ocular reflex and its relationship to bedside and laboratory vestibular testing.
- Compare and contrast presenting symptoms of peripheral vs central causes of dizziness and imbalance.
- Describe at least one stroke syndrome associated with vertigo.
- Name 2 or more common patterns of vestibular test results.

REGISTRATION FEES:

Registration fees include course tuition, program materials, refreshments breaks and Lunch. Each participant will receive an email or fax confirming their registration. We expect high interest in this course so register early.

CANCELLATION & REFUND POLICY:

Refund requests will be honored when received in writing within 21 days (04/28/17) before the start of the course. All refunds are subject to a $50.00 processing fee. No refunds will be given 21 days or less before the start of the course. Micromedical Technologies, Inc. reserves the right to cancel or postpone the course due to unforeseen circumstances. In the event of cancellation or postponement, registration fees will be refunded but Micromedical Technologies, Inc. is not responsible for any related costs or charges.

FAX OR MAIL IN THE COURSE REGISTRATION FORM ON FOLLOWING PAGE TO SIGN UP TODAY!
REGISTRATION FORM

☐ Registration: $700.00 after 04/27/17
☐ Early Registration: $650.00 on or before 04/27/17

Name ____________________________________________________________

Specialty/Degree __________________________________________________

Company Name ___________________________________________________

Address __________________________________________________________

City __________________________ State ____ Zip ________________

Ph (____) __________________________ Fax (____) ______________________

Email ____________________________________________________________

CEU Required: AAA ID # __________________ ASHA ID # __________________

☐ Check or Money Order, payable to Micromedical Technologies (US funds only)
(a $25 service charge will apply to checks returned for insufficient funds)
Charge My: ☐ Visa ☐ Master Card

Credit Card #

                                                __________________________

Exp. Date: □ □ / □ □ □ □ □ □ 3-Digit Code: □ □ □

Name printed on card _______________________________________________

Billing Address of Card if different than above:

_________________________________________________________________

_________________________________________________________________

Signature _________________________________________________________

I authorize Micromedical Technologies to charge the amount determined by Micromedical Technologies as registration fees to my credit card

Please Mail this form to:
Micromedical Technologies
10 Kemp Drive
Chatham, IL 62629
OR call us directly: 800-334-4154
OR FAX to 217-483-4533 OR Register on-line at http://www.micromedical.com/Education/
CODE: MDCOURSE

check or money order