



MITCHELL A. GARBER, M.D., M.P.H., M.S.M.E.
SENIOR MANAGING CONSULTANT

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Dr. Garber is a Senior Managing Consultant at ESi. Dr. Garber is a physician and engineer with over 30 years of military and civilian experience in transportation accident investigation. He was the first and only full-time Medical Officer at the U.S. National Transportation Safety Board, participated in well over 1000 investigations in all transportation modes, and has presented testimony to Congress regarding medical issues in transportation accidents. He specializes in the investigation of medical issues in transportation and other accidents, including the evaluation of pathology, toxicology, human performance, and biomechanics in accident investigation.

Dr. Garber has addressed a wide range of medical and human factors issues in all transportation modes, including physical standards, fatigue, perception, medication use, visual impairment, obstructive sleep apnea, substance dependence, injury analysis, egress and evacuation concerns, ergonomics, and the effects of pre-existing disease on transportation operator performance, among others. Additional work specific to aviation has included investigations of hypoxia, spatial disorientation, and visual and vestibular illusions. He has often been called upon to evaluate the potential role of subtle cognitive impairment from a variety of causes in complex transportation accidents. Dr. Garber also has expertise in the optimization of ergonomics for customized office and industrial workstations. He has held a private pilot certification since 1996.

Areas of Specialization

Medical Analysis
Transportation Policy
Human Factors and Ergonomics
Accident Investigation and Reconstruction
Biomechanics
Injury Causation

Education

M.S.M.E., Bioengineering, Georgia Institute of Technology, 1996
M.P.H., Occupational and Environmental Medicine, Harvard University School of Public Health, 1991
M.D., Emory University School of Medicine, 1987
B.A., Psychology/Sociology, Duke University, 1982 (Magna Cum Laude)

Medical Training

PGY-1, Internal Medicine, Wilford Hall USAF Medical Center, Lackland AFB, TX, 1988.
Residency, Aerospace Medicine, USAF School of Aerospace Medicine, Brooks AFB, TX, 1992.

March 2022

Medical Certification

Maryland Medical Licensure since 1999 (inactive)
Georgia Medical Licensure since 1994 (current)
Board Certification in Preventive Medicine (Aerospace Medicine), 1993
Diplomate, National Board of Medical Examiners, 1988
Medical Review Officer since 2011

Additional Clinical Experience

Physician Volunteer, Physician's Care Clinic, Atlanta, GA, 2021-present
Staff Physician, VA Medical Center, Atlanta, GA, 2004-2020
Staff Physician, U.S. Coast Guard Clinic, Washington D.C., and National Naval Medical Center, Bethesda, MD, 1997–2003
Medical Director, Roswell West Medical Center, Roswell, GA, 1995-96
Staff Physician, Georgia Institute of Technology Student Health Center, Atlanta, GA, 1994-95
Contract Physician (through DynCorp), CDC Occupational Health Clinic, Atlanta, GA, 1994-96

Additional Training

SCUBA Certification (PADI), 1992
Basic Life Support Certification, Current

Professional Affiliations

Aerospace Medical Association
Member and Fellow
Aerospace Human Factors Association Charter Member
Life Sciences and Biomedical Engineering Branch Member
American Society of Safety Professionals
Member
Human Factors and Ergonomics Society
Member
Association for the Advancement of Automotive Medicine
Member
American College of Occupational and Environmental Medicine
Member

Awards

Bertil Aldman Award, International Research Council on the Biomechanics of Injury, September 2011.

President's Award, American College of Occupational and Environmental Medicine, March 2011.

John W. Hardy, MD Memorial Award, Great Plains College of Occupational and Environmental Medicine, February 2011.

Fellow of the Aerospace Medical Association since 2003.

Harry G. Moseley Award, Aerospace Medical Association, May 2001.

Dr. John K. Lauber Award, National Transportation Safety Board, February 2001.

Ross McFarland Student Award, Life Sciences and Biomedical Engineering Branch of the Aerospace Medical Association, May 1997.

Certificate of Commendation, Young Investigators Award, Space Medicine Branch of the Aerospace Medical Association, May 1991.

Professional Activities

Peer Reviewer, *Human Psychopharmacology: Clinical and Experimental*, since 2015

Peer Reviewer, Human Factors and Ergonomics Society Annual Meeting, since 2015

Member of Medical Expert Panel on Schedule II Opioids and Stimulants & CMV Crash Risk and Driver Performance, Federal Motor Carrier Safety Administration (FMCSA), 2014

Member of NASA Medical Policy Board 2007-2011

Member of Editorial Board, *Aviation, Space, and Environmental Medicine*, 1999-2001, 2008-present

Chief Operating Officer, POSTURx Office Ergonomics, Inc., 2006-2008

Clinical Assistant Professor, Department of Community Health, Wright State University School of Medicine, 2002-2015

Clinical Assistant Professor, Department of Preventive Medicine and Community Health, The University of Texas Medical Branch at Galveston, 1997-2014

Peer Reviewer, *Journal of the American Medical Association (JAMA)*, since 1997

Adjunct Assistant Professor (Human Factors), Embry-Riddle Aeronautical University, College of Continuing Education, Laughlin AFB, TX, 1989-90

Teaching Assistant, NASA Space Life Sciences Training Program, Kennedy Space Center, FL, 1985

Positions Held

Engineering Systems Inc., Norcross, GA
Senior Managing Consultant, 2011 to Present

National Transportation Safety Board, Atlanta, Georgia and Washington, DC
Medical Officer, 1996-2011

U.S. Air Force, Various Locations
Flight Surgeon, 1987-1994
Chief of Flight Medicine, 1988-1990
Chief of Aeromedical Services, 1992-1994

Publications/Presentations

Migraine Prophylaxis Using Novel Monoclonal Antibody Injections in a Commercial Pilot, with JI Sirven, RS Roth, and JM Hemphill, in *Aerospace Medicine and Human Performance*, 91(10):824–825 (2020)

Complex Medical Issues: Timing Is Critical, in *Strictly Speaking*, the newsletter of the DRI Product Liability Committee, Volume 16, Issue 3, December 2019

You Can't Find It if You Don't Look for It: Medical Issues in Aviation Accident Investigation, presentation at Florida Bar Aviation Law Committee Meeting, June 2019

Forensic Accident Investigation: Aviation Case Studies, presentation at American Association of Legal Nurse Consultants Annual conference, April 2019

Safe Travels: Occupational Implications of Transportation Accident Investigations, presentation at Osteopathic Medicine Conference and Exposition, October 2018

May Cause Drowsiness... Medication Use in the Aviation Environment, presentation at GA Air Safety Investigators Workshop, September 2018

Office Ergonomics: Computer Work Need Not be Such a Pain in the ..., *Defense Lawyer A Magazine for the Civil Defense Trial Bar*, 15:1, 25 (Summer 2018)

Any Doctor's Appointment You Walk Away From... Coverage Consideration of Aeromedical Issues, presentation at Beaumont International Aerospace Conference, July 2018

Forensic Accident Investigation: Motor Vehicle Case Studies, presentation, with Dinah Lee Campbell, BSN, RN, CLNC, at American Association of Legal Nurse Consultants 2016 Annual Forum, April 2017

Fitness For Duty: Optimizing Performance, invited presentation, with Kathryn Hughes, M.D., M.P.H., DAvMED, at Gulfstream Safety Down Day, February 2017

Passengers Under Pressure? Cabin Pressure Loss in Civilian Aviation, with Paulo Alves, M.D., presented at the Annual Scientific Meeting of the Aerospace Medical Association, April 2016

Accident Detectives: Medical Issues in Occupational Incident Investigations, presented at the American Occupational Health Conference, April 2016

Medical Presentations in the Courtroom, with Chuck Fox, Ph.D., presented at the Illinois Association of Defense Trial Counsel Spring Symposium, March 2016

I Don't Feel So Good: Medical and Psychological Issues in Aviation Accidents, presented at the Embry-Riddle Aviation Law and Insurance Symposium, January 2016

Fatigue Management and Sleep Disorders, invited presentation to Gulfstream Aerospace Flight Test Engineers, Savannah, GA, June 2015

The Gillingham Illusion in an Aviation Accident, with WR Ercoline, presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2015

Dual Disciplines: Where Medicine and Engineering Intersect, invited presentation to the University of Alabama, College of Engineering at the annual Richard C. Bradt Lecture, November 2014

Fatigue Countermeasures in a Record-Setting Around-the-World Flight (Abstract), with TC Horne, presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2014

Old Dogs/New Tricks: Aging Drivers and Emerging Technologies, presented at the Defense Research Institute Product Liability Conference, April 2014

You Can't Find It if You Don't Look for It: Medical Issues in Forensic Investigation, presented to the Georgia Defense Lawyers Association Annual Meeting, June 2013

What Do We Really Know? Reporting of Pilot Medical Conditions: An International Perspective, presented at the International Civil Aviation Organization Session of the Annual Scientific Meeting of the Aerospace Medical Association, May 2013

Postmortem Ethanol in the Setting of Ethanol-Containing Automotive Fuel, with Canfield DV, Lewis RJ, Simmons SD, Radisch DL, in *American Journal of Forensic Medicine and Pathology*, 34:1, 7-8 (2013)

Obstructive Sleep Apnea: Concerning and Costly, in *Georgia Defense Lawyer*, Winter 2013

Undisclosed Medical Conditions in the International Aviation Community: The Risks of Medical Certification Systems Based Upon Voluntary Self-Disclosure, with Amster D and McQueen D, *Issues in Aviation Law and Policy*, 12:1, 47-66 (2012)

Unworkable? Adverse Consequences of Occupational Impairment, presented to the Pennsylvania Occupational and Environmental Medicine Society, September 2012

Medical Issues in Accident Investigation, invited presentation to U.S. Air Force Residents in Aerospace Medicine, August 2012

Wake Up and Work! Sleep Disorders in the Occupational Setting, presented at the Georgia Safety, Health and Environmental Conference, September 2012

The Role of Accident Investigation in Biomechanics Research, in *2011 IRCOBI Conference Proceedings*, International Research Council on the Biomechanics of Injury, Zurich, Switzerland, 2011

Airbags in General Aviation Restraint Systems, presented at the ISN Workshop on Biomechanical Experiments and Workshop on Light Aircraft Safety, Krakow, Poland, September 2011

Wake Up and Drive! Sleep Disorders in Transportation Accidents, keynote speech at the Annual Scientific Conference of the Association for the Advancement of Automotive Medicine, October 2010

Substance Dependence in General Aviation Accidents – NTSB Recommendations (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2010

Medical Issues in Marine Accidents (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2010

Medical Issues in Commercial Motor Vehicle Accidents (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2010

Sleep Disorders and Medical Certification for Transportation Operators, invited presentation for National Sleep Foundation Sleep Health and Safety 2010 Conference, March 2010

Sleep Apnea in Transportation Accidents (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2008

Physiological Incidents and General Aviation Avionics Displays – Flight Data Recorders for the Common Man? (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2008

Case Report: Color Vision and Breathing Patterns in an Air Cargo Accident (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2005

Passenger Anoxic Brain Injury Following Alaskan High Altitude Sightseeing Flight (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2004

National Transportation Safety Board: Case Studies, in *Clinics in Occupational and Environmental Medicine*, 2:139-153 (2002)

Association of Postmortem Blood Hemoglobin A_{1c} Levels with Diabetic Conditions in Aviation Accident Pilot Fatalities (Report No.: DOT/FAA/AM-01/12), with VL White, AK Chaturvedi, and DV Canfield, issued by Office of Aerospace Medicine, Federal Aviation Administration (US), July 2001

A Piece of the Puzzle: The Role of Directed Toxicological Research in a High-Profile General Aviation Accident Investigation (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 2001

Medical Guidelines for Space Passengers, as part of the Aerospace Medical Association Task Force on Space Travel, in *Aviation Space and Environmental Medicine*, 72:948-50 (2001)

Bone Loss During Simulated Weightlessness: A Biomechanical and Mineralization Study in the Rat Model, with DL McDowell and WC Hutton, in *Aviation Space and Environmental Medicine*, 71:586-92 (2000)

A Primer on Aircraft Accident Investigation for the Aerospace Medicine Investigator, with MJ Antunano, RD Banks, AH Bellenkes, MM Cohen, JR Fraser, RW Hansrote, RE Kind, JC Neubauer, RB Raymond, CJ Ruehle, F Sahiar, SJ Veronneau, GN Wagner, Aerospace Medical Association, January 2000

NTSB Bus Crashworthiness Special Investigation (Abstract), presented at the American Academy of Pediatrics Annual Meeting, October 1999

Aeromedical Accident Investigation at the National Transportation Safety Board (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 1999

The Role of Corrective Lenses in a Commercial Aviation Accident (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 1998

The Effect of Size Appropriate and Proper Restraint Use on Injury Severity of Children (SAE Paper 973310), with EB Weinstein, MM Sweeney, MD Eastwood, JG Osterman, and JV Roberts, in *2nd Child Occupant Protection Symposium Proceedings*, Society of Automotive Engineers, Warrendale, PA, 1997

You're the Flight Surgeon, in *Aviation Space and Environmental Medicine*, 64:868-9 (1993)

The Role of Pulmonary Surfactant in Extreme Altitude Exposures (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 1992

Asymmetrical Otolith Signals in Modified Gz Environments (Abstract), presented at the Annual Scientific Meeting of the Aerospace Medical Association, May 1991

Protein Casting: A New Replication Technique for Observing Fluid Surface Structures, in *Journal of Electron Microscopy Technique*, 2:71-2 (1985)

Other Research Contributions

X-Ray microanalysis of periosteum, for Dr. Leon Kazarian, Air Force Aerospace Medical Research Laboratory, WPAFB, OH, 1986

Development of ELISA assays for fibronectin and myelin basic protein, for Dr. Robert Hunter, Department of Pathology, Emory University, 1983-84

The effects of weightlessness on circulation (review), for Dr. P. Popovic, Department of Physiology, Emory University, 1983

HLA haplotype variability in Amish, Mennonite, and Hutterite communities, with Dr. Bernard Amos, Department of Immunology, Duke University, 1980-82