

Contents—Volume 87

January through December 2016

JANUARY 2016

EDITORIAL

1 Journal Metrics

F. Bonato

PRESIDENT'S PAGE

2 AsMA Rings in the New Year 2016

K. Belland

RESEARCH ARTICLES

3 Physiological and Cognitive Effects of Acute Normobaric Hypoxia and Modulations from Oxygen Breathing

C. Malle, C. Bourrilhon, P. Quinette, M. Laisney, F. Eustache, and C. Piérard

13 Hypergravity Effects on the Retina and Intraocular Pressure in Mice

Y. J. Kim, J. S. Chung, T. Y. Jang, Y. H. Kim, and H. S. Chin

18 Respiratory Muscle Training and Cognitive Function Exercising at Altitude

J. Quackenbush, A. Duquin, S. Helfer, and D. R. Pendergast

26 Occupant Injury Severity and Accident Causes in Helicopter Emergency Medical Services (1983–2014)

D. D. Boyd and N. D. Macchiarella

32 Occupational Ocular UV Exposure in Civilian Aircrew

A. C. Chorley, K. A. Baczynska, M. J. Benwell, B. J. W. Evans, M. P. Higlett, M. Khazova, and J. B. O'Hagan

40 Pilots' Visual Scan Patterns and Attention Distribution During the Pursuit of a Dynamic Target

C-S. Yu, E. M. Wang, W-C. Li, G. Braithwaite, and M. Greaves

48 Posture and Helmet Load Influences on Neck Muscle Activation

M. F. Harrison, K. A. Forde, W. J. Albert, J. C. Croll, and J. P. Neary

REVIEW ARTICLE

54 Fitness to Fly Testing in Patients with Congenital Heart and Lung Disease

M. E. Spoorenberg, M. H. A. H. van den Oord, T. Meeuwssen, and T. Takken

SHORT COMMUNICATIONS

61 Equivalent Air Altitude and the Alveolar Gas Equation

J. Conkin

65 Biodynamic Hypothesis for the Frequency Tuning of Motion Sickness

J. F. Golding and M. A. Gresty

CASE REPORTS

69 Blue Laser Induced Retinal Injury in a Commercial Pilot at 1300 ft

D. B. Gosling, J. B. O'Hagan, and F. M. Quhill

71 Motion Sickness Prediction in Aeromedical Evacuation of Patients with Ebola

M. Lucertini, A. Autore, J. Covioli, R. Biselli, and R. D'Amelio

FEATURES

75 You're the Flight Surgeon—V. M. Pearson

78 You're the Flight Surgeon—H. L. Li

81 Erratum

82 This Month in Aerospace Medicine History—W. W. Dalitsch III

FEBRUARY 2016

PRESIDENT'S PAGE

83 Meetings, Meetings, Meetings

K. M. Belland

RESEARCH ARTICLES

- 84 Morphing Compression Garments for Space Medicine and Extravehicular Activity Using Active Materials**
B. T. Holschuh and D. J. Newman
- 93 Exercise Responses to Gravity-Independent Flywheel Aerobic and Resistance Training**
T. Owerkowicz, J. A. Cotter, F. Haddad, A. M. Yu, M. L. Camilon, T. N. Hoang, D. J. Jimenez, A. Kreitenberg, P. A. Tesch, V. J. Caiozzo, and G. R. Adams
- 102 Wearable Accelerometers in High Performance Jet Aircraft**
G. M. Rice, T. B. VanBrunt, D. H. Snider, and R. E. Hoyt
- 108 Hypoxia and Coriolis Illusion in Pilots During Simulated Flight**
K. P. Kowalczyk, S. P. Gazdzinski, M. Janewicz, M. Gąsik, R. Lewkowicz, and M. Wyleźół
- 114 Missing Aircraft Crash Sites and Spatial Relationships to the Last Radar Fix**
R. J. Koester and I. Greatbatch
- 122 Gastrointestinal Disease in Pilots, 2001–2013**
P. R. Storms and M. J. Kinchen

REVIEW ARTICLE

- 128 Subjective Vertical Conflict Theory and Space Motion Sickness**
W. Chen, J-G. Chao, J-K. Wang, X-W. Chen, and C. Tan

SHORT COMMUNICATION

- 137 Incidence and Features of Barodontalgia Among Military Divers**
M. Gunepin, F. Derache, J-E. Blatteau, I. Nakdimon, and Y. Zadik

CASE REPORTS

- 141 Transient Unilateral Facial Nerve Baroparesis with Vertigo on Ascent in the F-16CM**
M. S. Wimmer and T. Y. Ali
- 144 Hypercapnic Respiratory Acidosis During an In-Flight Oxygen Assessment**
K. J. Spurling, I. K. Moonsie, and J. L. Perks

LETTER TO THE EDITOR

- 148 Letter to the Editor re: Use of Statins for Prophylaxis Against Acute Mountain Sickness**

FEATURES

- 150 You're the Flight Surgeon—M. R. Brown**
- 153 You're the Flight Surgeon—P. Puchta**
- 156 This Month in Aerospace Medicine History—W. W. Dalitsch III**

AEROSPACE MEDICAL ASSOCIATION NEWS

- 157 Association News**

MARCH 2016

**ASMA 87TH ANNUAL SCIENTIFIC MEETING PROGRAM AND ABSTRACT ISSUE
HARRAH'S RESORT, ATLANTIC CITY, NJ
APRIL 24-28, 2016**

- 159 President's Page**
- 160 Educational Objectives/Credit Hours**
- 161 Nurses Sessions and FAA Information**
- 162 Annual Lecturers**
- 163 Meeting Abstracts**
- 323 Index to Abstract Authors and Session Chairs**
- 328 Exhibits & Map**

ASMA ASSOCIATION BUSINESS (BLACK BAR)

- 332 Past Presidents of AsMA**
- 333 Council of AsMA**
- 334 Annual Meeting Chairs & Committees**
- 335 Headquarters Staff Photos**
- 335 Wing Board of Directors**

- 336 Minutes of the 2015 Business Meeting**
- 339 Bylaws of the Aerospace Medical Association**
- 345 Proposed Changes to Bylaws (for approval at Business Meeting)**
- 348 Maps of Meeting Spaces**
- CIII Program at a Glance**

APRIL 2016

PRESIDENT'S PAGE

- 351 Year in Review**
K. M. Belland

RESEARCH ARTICLES

- 352 Complication Rates in Altitude Restricted Patients Following Aeromedical Evacuation**
W. P. Butler, L. W. Steinkraus, E. E. Burlingame, B. L. Fouts, and J. L. Serres
- 360 Motion Sickness and Resting Energy Expenditure in Chinese Male Adults**
J-Q. Wang, R-R. Qi, L-L. Pan, W. Zhou, L-L. Zhang, and Y-L. Cai
- 367 Prediction of Lunar- and Martian-Based Intra- and Site-to-Site Task Performance**
C. J. Ade, R. M. Broxterman, J. C. Craig, S. J. Schlup, S. L. Wilcox, S. Warren, P. Kuehl, D. Gude, C. Jia, and T. J. Barstow
- 375 Physiological Indices of Pilots' Abilities Under Varying Task Demands**
Z. Wang, L. Zheng, Y. Lu, and S. Fu
- 382 A Performance Comparison of Color Vision Tests for Military Screening**
D. V. Walsh, J. Robinson, G. M. Jurek, J. E. Capó-Aponte, D. W. Riggs, and L. A. Temme

REVIEW ARTICLES

- 388 Suicide and Murder-Suicide Involving Aircraft**
C. Kenedi, S. H. Friedman, D. Watson, and C. Preitner
- 397 Design and Human Factors of Therapeutic Hyperbaric Chambers**
N. Bitterman and A. Bonen

SHORT COMMUNICATION

- 406 Lessons from a Space Analog on Adaptation for Long-Duration Exploration Missions**
K. M. Anglin and J. P. Kring

CASE REPORT

- 411 A Novel Treatment of Fear of Flying Using a Large Virtual Reality System**
E. Czerniak, A. Caspi, M. Litvin, R. Amiaz, Y. Bahat, H. Baransi, H. Sharon, S. Noy, and M. Plotnik

TECHNICAL NOTE

- 417 Development of a Field-Deployable Psychomotor Vigilance Test to Monitor Helicopter Pilot Performance**
T. W. McMahon and D. G. Newman

FEATURES

- 423 Science & Technology Watch: Applications of 3D Printing in Austere Environments—*J. Y. Wong***
- 426 You're the Flight Surgeon—*K. VanValkenburg***
- 429 You're the Flight Surgeon—*P. A. DeJulio***
- 433 This Month in Aerospace Medicine History: March—*W. W. Dalitsch III***
- 434 This Month in Aerospace Medicine History: April—*W. W. Dalitsch III***

MAY 2016

PRESIDENT'S PAGE

- 435 Passing the AsMA Presidency Baton**
K. M. Belland and D. P. Gradwell

RESEARCH ARTICLES

- 436 Sunglass Filter Transmission and Its Operational Effect in Solar Protection for Civilian Pilots**
A. C. Chorley, A. Lyachev, M. P. Hignett, M. Khazova, M. J. Benwell, and B. J. W. Evans

- 443 Biochemical Adaptations in a Slow and Fast Plantarflexor Muscle of Rats Housed in Small Cages**
A. Takemura, R. R. Roy, R. Edgerton, and A. Ishihara
- 449 Carotid and Femoral Artery Intima-Media Thickness During 6 Months of Spaceflight**
P. Arbeille, R. Provost, and K. Zuj
- 454 Vestibular Stimulus and Perceived Roll Tilt During Coordinated Turns in Aircraft and Gondola Centrifuge**
A. Tribukait, A. Ström, E. Bergsten, and O. Eiken
- 464 G Protection When Adding Pressurized Sleeves and Gloves to a Representative G-Suit Ensemble**
T. R. Morgan, U. Balldin, and J. R. Fischer
- 470 Ethanol and Drugs Found in Civil Aviation Accident Pilot Fatalities, 1989–2013**
A. K. Chaturvedi, K. J. Craft, J. S. Hickerson, P. B. Rogers, and D. V. Canfield
- REVIEW ARTICLE**
- 477 Central Nervous System Oxygen Toxicity and Hyperbaric Oxygen Seizures**
E. P. Manning
- CASE REPORTS**
- 487 Aortic Root Aneurism Found in a 42-Year-Old Epitomizes the Importance of Auscultation in Routine Exams**
T. R. Fredricks and J. S. Benseler
- 493 North Pole Marathon Laboratory Lessons and Field Success**
M. J. Barwood, H. Burrows, and J. Cessford
- TECHNICAL NOTE**
- 498 Near-Infrared Spectra in Buccal Tissue as a Marker for Detection of Hypoxia**
M. Amini, J. Hisdal, T. Gjøvaag, N. Kapetanovic, T-E. Strand, J. O. Owe, J. R. Hørthe, and P. Mirtaheri
- COMMENTARY**
- 505 Pilot Mental Health: Expert Working Group Recommendations—Revised 2015**
Aerospace Medical Association Working Group on Pilot Mental Health
- FEATURES**
- 508 You're the Flight Surgeon—R. J. Rohrer, A. A. Ostrofe, and R. L. Zenk**
- 510 You're the Flight Surgeon—L. Morgan, N. Arora, and C. Fernelius**
- 513 This Month in Aerospace Medicine History—W. W. Dalitsch III**

JUNE 2016

PRESIDENT'S PAGE

- 515 From Whence We Came and Where We Are Going**
D. P. Gradwell

RESEARCH ARTICLES

- 516 Altitude Decompression Sickness Risk and Physical Activity During Exposure**
J. T. Webb, T. R. Morgan, and S. D. Sarsfield
- 521 A Dynamic Rabbit Model of Sinus Barotrauma and Its Related Pathology**
X. Xu, B. Wang, Z. Jin, and Y. Zhang
- 528 Domain-Specific Interference Tests on Navigational Working Memory in Military Pilots**
P. Verde, M. Boccia, S. Colangeli, S. Barbetti, R. Nori, F. Ferlazzo, F. Piccolo, R. Vitalone, E. Lucertini, and L. Piccardi
- 534 Performance Assessment in the PILOT Experiment On Board Space Stations Mir and ISS**
B. Johannes, V. Salnitskiy, A. Dudukin, L. Shevchenko, and S. Bronnikov
- 545 Identifying Pilots with Parkinson's Disease**
P. A. Clem, P. D. Navathe, and M. A. Drane
- 550 Pilot Domain Task Experience in Night Fatal Helicopter Emergency Medical Service Accidents**
B. B. Aherne, C. Zhang, and D. G. Newman
- 557 Energy Beverage Consumption Among Naval Aviation Candidates**
T. E. Sather and D. R. Delorey

REVIEW ARTICLE

565 Prostate Cancer in Pilots

D. Raslau, A. M. Abu Dabrh, D. T. Summerfield, Z. Wang, L. W. Steinkraus, and M. H. Murad

SHORT COMMUNICATION

571 Hypoxic Challenge Testing for Fitness to Fly with Severe Asthma

P. M. George, C. Orton, S. Ward, A. Menzies-Gow, and J. H. Hull

CASE REPORT

575 Subdural Hemorrhage in a Military Aviator

G. G. Cable

FEATURES

580 Science & Technology Watch: 3D Printing Applications for Space Missions—J. Y. Wong

583 You're the Flight Surgeon—L. R. Cadet and A. T. Allen

586 This Month in Aerospace Medicine History—W. W. Dalitsch III

JULY 2016

PRESIDENT'S PAGE

593 Atlantic City and the Annual Scientific Meeting

D. P. Gradwell

RESEARCH ARTICLES

596 Cognition Effects of Low-Grade Hypoxia

A. A. Pilmanis, U. I. Balldin, and J. R. Fischer

604 Frequency, Not Amplitude, of Latency Affects Subjective Sickness in a Head-Mounted Display

A. Kinsella, R. Mattfeld, E. Muth, and A. Hoover

610 Neuromuscular Adaptations Following 90 Days Bed Rest With or Without Resistance Exercise

B. A. Alkner, L. Norrbrand, and P. A. Tesch

618 Aeromedical Hazard Comparison of FAA Medically Certified Third-Class and Medically Uncertified Pilots

E. M. Ricaurte, W. D. Mills, C. A. DeJohn, M. C. Laverde-Lopez, and D. F. Porras-Sanchez

622 Cognitive Performance Effects of Bilastine 20 mg During 6 Hours at 8000 ft Cabin Altitude

P. J. L. Valk, R. Simons, A. M. Jetten, R. Valiente, and L. Labeaga

628 Demographic, Lifestyle Factors, and Reasons for Use of Dietary Supplements by Air Force Personnel

K. G. Austin, L. L. Price, S. M. McGraw, G. Leahy, and H. R. Lieberman

638 Sleep Disturbance in Female Flight Attendants and Teachers

B. Grajewski, E. A. Whelan, M. M. Nguyen, L. Kwan, and R. J. Cole

SHORT COMMUNICATIONS

646 Gaze Behavior While Operating a Complex Instrument Control Task

M. Kalicinski, F. Steinberg, M. Dalecki, and O. Bock

652 Personal Flying Accident Rates of Selected Light Sport Aircraft Compared with General Aviation Aircraft

W. D. Mills and C. A. DeJohn

CASE REPORT

655 A Report of Transverse Process Fractures Secondary to the Centrifuge in a Healthy Aviator

M. A. Puderbaugh

COMMENTARY

659 Use of Gene Expression Biomarkers to Predict Suicidality

R. Simons

FEATURES

- 661 **You're the Flight Surgeon**—*J. Rojas*
 664 **This Month in Aerospace Medicine History**—*W. W. Dalitsch III*

AEROSPACE MEDICAL ASSOCIATION NEWS

- 665 **AsMA Annual Award Winners**

AUGUST 2016**PRESIDENT'S PAGE**

- 681 **How Is AsMA Run?**
D. P. Gradwell

RESEARCH ARTICLES

- 682 **Brain Perfusion and Arterial Blood Flow Velocity During Prolonged Body Tilting**
D. Montero and S. Rauber
- 688 **Blood Flow Restricted Exercise Compared to High Load Resistance Exercise During Unloading**
K. J. Hackney, M. E. Downs, and L. Ploutz-Snyder
- 697 **Local Pressure Application Effects on Discomfort, Temperature, and Limb Oxygenation**
K. E. Games, J. M. Lakin, J. C. Quindry, W. H. Weimar, and J. M. Sefton
- 704 **Respiratory Muscle Training and Exercise Endurance at Altitude**
S. Helfer, J. Quackenbush, M. Fletcher, and D. R. Pendergast
- 712 **Depression Prevalence and Exposure to Organophosphate Esters in Aircraft Maintenance Workers**
J. E. Hardos, L. W. Whitehead, I. Han, D. K. Ott, and D. K. Waller

REVIEW ARTICLE

- 718 **Sustained Military Operations and Cognitive Performance**
S. Vrijkotte, B. Roelands, R. Meeusen, and N. Pattyn

SHORT COMMUNICATIONS

- 728 **Army Air Ambulance Blood Product Program in the Combat Zone and Challenges to Best Practices**
N. Powell-Dunford, J. F. Quesada, K. R. Gross, and S. A. Shackelford
- 735 **Initial Severity Scoring and Residual Deficit in Scuba Divers with Inner Ear Decompression Sickness**
E. Gempp, P. Louge, S. de Maistre, J-B. Morvan, N. Vallée, and J-E. Blattau

CASE REPORT

- 740 **Recurrence of Neurological Deficits in an F/A-18D Pilot Following Loss of Cabin Pressure at Altitude**
T. Robinson, J. S. Evangelista III, E. Latham, S. T. Mukherjee, and A. Pilmanis

TECHNICAL NOTE

- 745 **Technique for Performing Lumbar Puncture in Microgravity Using Portable Radiography**
D. J. Lerner, A. J. Parmet, S. Don, J. S. Shimony, and M. S. Goyal

FEATURES

- 748 **You're the Flight Surgeon**—*T. K. Bozung*
 752 **This Month in Aerospace Medicine History**—*W. W. Dalitsch III*
 753 **Abstracts Not Presented**

AEROSPACE MEDICAL ASSOCIATION NEWS

- 755 **New Officers and Annual Award Winners**

SEPTEMBER 2016

PRESIDENT'S PAGE

- 763 Time to Plan, Time to Engage, Time to Promote**
D. P. Gradwell

RESEARCH ARTICLES

- 764 Compilation of Cognitive and Personality Norms for Military Aviators**
T. R. Carretta, R. E. King, M. J. Ree, M. S. Teachout, and E. Barto
- 772 Association of Individual Characteristics with Teleoperation Performance**
D. Pan, Y. Zhang, Z. Li, and Z. Tian
- 781 Social, Occupational, and Cultural Adaptation During a 12-Month Wintering in Antarctica**
M. Nicolas, S. L. Bishop, K. Weiss, and M. Gaudino
- 790 Metabolic Syndrome in Military Aircrew Using a Candidate Definition**
S. Sharma, AM Chandrashekar, and V. Singh
- 795 Characterization of Low Back Pain in Pilots and Maintenance Technicians on a Commercial Airline**
H. A. Fajardo Rodriguez and V. A. Ortiz Mayorga
- 800 Assessment of a Prototype Apache Flight Eyewear**
D. V. Walsh, G. M. Jurek, W. E. McLean, J. K. Statz, R. L. Allen, and D. W. Riggs

SHORT COMMUNICATIONS

- 806 3D Printed Surgical Instruments Evaluated by a Simulated Crew of a Mars Mission**
J. Y. Wong and A. C. Pfahnl
- 811 Sleep and Fatigue Differences in the Two Most Common Types of Commercial Flight Operations**
C. Reis, C. Mestre, H. Canhão, D. Gradwell, and T. Paiva
- 816 Flying After Conducting an Aircraft Excessive Cabin Leakage Test**
S. Houston and E. Wilkinson

CASE REPORTS

- 821 Loss of Consciousness During Single Sling Helicopter Hoist Rescue Resulting in a Fatal Fall**
J. Biles and A. A. Garner
- 825 Endovascular Treatment of a Severe Stroke Occurring in a Commercial Airplane Over the Sahara**
C. Foerch, C. A. Mayer, J. Berkefeld, and S-J. You

FEATURES

- 830 Science & Technology Watch: Potential Utility of a Cost-Effective Virtual Reality System for Treatment of Fear of Flying—D. Boyd and J. Hart**
- 833 You're the Flight Surgeon—B. G. Carnes, J. J. Pavelites, and D. T. Grigley**
- 836 This Month in Aerospace Medicine History—W. W. Dalitsch III**

OCTOBER 2016

PRESIDENT'S PAGE

- 837 AsMA, A Global Organisation**
D. P. Gradwell

RESEARCH ARTICLES

- 838 Flipping a Switch "Down" When Not Aligned with the Gravitational Vertical**
O. Bock and N. Bury
- 844 Distortion Product Otoacoustic Emissions and Intracranial Pressure During CSF Infusion Testing**
M. A. Williams, J. Malm, A. Eklund, N. J. Horton, and S. E. Voss
- 852 Pitch-Plane Angular Displacement Perception During Helicopter Flight and Gondola Centrifugation**
A. Tribukait, E. Bergsten, and O. Eiken
- 862 Prognostic Factors for Outcomes of In-Flight Sudden Cardiac Arrest on Commercial Airlines**
P. M. Alves, C. A. DeJohn, E. M. Ricourte, and W. D. Mills

869 Subjective Measurements of In-Flight Sleep, Circadian Variation, and Their Relationship with Fatigue*M. J. van den Berg, L. J. Wu, and P. H. Gander***876 Middle Ear Resonance Frequency in Pilots and Pilot Candidates***M. M. Tuncer, S. T. Babakurban, and E. Aydin***REVIEW ARTICLE****882 Screening and Mitigation of Layperson Anxiety in Aerospace Environments***R. A. Mulcahy, R. S. Blue, J. L. Vardiman, T. L. Castleberry, and J. M. Vanderploeg***SHORT COMMUNICATIONS****890 Spatial Disorientation Training in the Rotor Wing Flight Simulator***N. Powell-Dunford, A. Bushby, and R. A. Leland***894 Elevated End-Tidal Pco₂ During Long-Duration Spaceflight***R. L. Hughson, N. J. Yee, and D. K. Greaves***CASE REPORTS****898 Lipid Subhyaloid Maculopathy and Exposure to High Altitude***R. R. Petrocinio and E. D. Gomes***901 Fighter Pilot with Recurrent Central Serous Chorioretinopathy***K. C. Dietrich***FEATURES****906 You're the Flight Surgeon**—C. R. Lenz, J. L. Shields, and A. O. Morgan**910 This Month in Aerospace Medicine History**—W. W. Dalitsch III *SEPTEMBER 2016***NOVEMBER 2016****PRESIDENT'S PAGE****911 Denver, First Look***D. P. Gradwell***RESEARCH ARTICLES****912 Autonomous, Computer-Based Behavioral Health Countermeasure Evaluation at HI-SEAS Mars Analog***A. P. Anderson, A. M. Fellows, K. A. Binsted, M. T. Hegel, and J. C. Buckley***921 Color Vision and Performance on Color-Coded Cockpit Displays***J. P. Gaska, S. T. Wright, M. D. Winterbottom, and S. C. Hadley***928 Neck Muscle Strain in Air Force Pilots Wearing Night Vision Goggles***M. W. Pousette, R. Lo Martire, J. Linder, M. Kristofferson, and B. O. Ång***933 Psychometric Personality Differences Between Candidates in Astronaut Selection***J. M. Mittelstädt, Y. Pecena, V. Oubaid, and P. Maschke***940 Communication Delays Impact Behavior and Performance Aboard the International Space Station***N. M. Kintz and L. A. Palinkas***947 Pilot and Passenger Injuries Associated with Powered Parachutes***N. W. Skelley, L. M. Yarholar, and L. C. Richardson***SHORT COMMUNICATIONS****954 Psychometric Properties of the Greek Version of the Gianaros Motion Sickness Assessment Questionnaire***P. Kousoulis, A. Pantos, G. Alevetsovitis, and O. Fydanaki***958 Emergency Medical Considerations in a Space-Suited Patient***A. Garbino, D. M. Nusbaum, D. M. Buckland, A. S. Menon, J. B. Clark, and E. L. Antonsen***CASE REPORTS****963 Explosive Decompression with Resultant Air Gas Embolism in a Fourth Generation Fighter at Ground Level***J. X. Zhang, J. R. Berry, and D. P. Beckstrand*

968 Aeromedical Evaluation for an F-16 Candidate with Incomplete Paraplegia

M. Chahal-Kummen, T-E. Strand, J. O. Owe, E. Gulliksen, and A. S. Wagstaff

FEATURES

972 Science and Technology Watch: Development of a Geographic Information System for Risk-Informed Decision Making in Aerospace Medicine—L. Paskoff

976 You're the Flight Surgeon—B. R. Martin

980 This Month in Aerospace Medicine History—W. W. Dalitsch III

DECEMBER 2016

PRESIDENT'S PAGE

981 The AsMA and the European Congress of Aerospace Medicine

D. P. Gradwell

RESEARCH ARTICLES

983 White Matter Integrity in High-Altitude Pilots Exposed to Hypobaria

S. A. McGuire, G. R. E. Boone, P. M. Sherman, D. F. Tate, J. D. Wood, B. Patel, G. Eskandar, S. A. Wijtenburg, L. M. Rowland, G. D. Clarke, P. M. Grogan, J. H. Sladky, and P. V. Kochunov

989 Pilots' Attention Distributions Between Chasing a Moving Target and a Stationary Target

W-C. Li, C-S. Yu, G. Braithwaite, and M. Greaves

996 Evidence for –G_z Adaptation Observed with Wearable Biosensors During High Performance Jet Flight

G. M. Rice, D. Snider, J. L. Moore, J. T. Lavan, R. Folga, and T. B. VanBrunt

1004 Feasibility of Hypoxic Challenge Testing in Children and Adolescents with Congenital Heart and Lung Disease

M. E. Spoorenberg, E. H. J. Hulzebos, and T. Takken

1010 Home Cervical Traction to Reduce Neck Pain in Fighter Pilots

E. M. Chumbley, N. O'Hair, A. Stolfi, C. Lienesch, J. C. McEachen, and B. A. Wright

1016 Metabolic Syndrome and Periodontal Disease Among Civilian Pilots

X. Chen, L. Xie, Y. Liu, D. Chen, Q. Yu, X. Gan, and H. Yu

REVIEW ARTICLE

1021 Virtual Reality Applications for Stress Management Training in the Military

F. Pallavicini, L. Argenton, N. Toniazzi, L. Aceti, and F. Mantovani

SHORT COMMUNICATIONS

1031 Preventing High Altitude Cerebral Edema in Rats with Repurposed Anti-Angiogenesis Pharmacotherapy

S. Tarshis, J. Maltzahn, Z. Loomis, and D. C. Irwin

1036 The Ecology of Medical Care Among Israeli Military Aviators

B. Gordon, Y. Levy, T. Yemini, E. Carmon, Y. Erlich, and D. Hermoni

CASE REPORT

1041 Treatment and Monitoring of Central Serous Chorioretinopathy in Pilots

A. Shinjima, R. Mori, K. Fujita, and M. Yuzawa

TECHNICAL NOTE

1045 Measuring Uptake and Elimination of Nitrogen in Humans at Different Ambient Pressures

P. Sundblad, O. Frånberg, C. Siebenmann, and M. Gennser

FEATURES

1051 You're the Flight Surgeon—P. T. DeFlorio

1054 Focus on Aerospace Medicine History: The Mercury Thirteen—B. Tarver

1056 This Month in Aerospace Medicine History—W. W. Dalitsch III

1057 Indexes to Volume 87, January – December 2016