INDEX TO SUBJECTS

A	scarlet fever–139
Abdominal mass, renal cell carcinoma in a pilot-1064	spontaneous diaphragmatic hemiparesis-581
Abdominal pain, pancreatitis during long-duration lunar	symptomatic sickle cell trait-63
mission-570	Aeromedical evacuation, effects on polytraumatized
Abstracts	casualties–1016, E2(Dec)
90th Annual Scientific Meeting-153	Aerospace Medical Association (AsMA)
not presented-745	90th Annual Scientific Meeting and Program Abstracts–149
Acceleration	by-laws-343
aircrew conditioning program impact on +Gz tolerance-764	global connections–2, 69, 353, 427, 915 with AsMA Global Liaison and Outreach Committee–427
cervical load with helmet-mounted display in air combat	with ASMA Global Elaison and Gutteach Committee-427 with EU Chief Medical Officers' Forum-2
maneuvering-834	with European Society of Aerospace Medicine–915
comparison of three anti-G trouser systems–925	with Iberoamerican Association of Aerospace Medicine–69
management of F-16 pilot after spontaneous splenic rupture-	with IFALPA and ECA-353
1055 Accidents, aviation	with International Academy of Aviation and Space
associated with SODA waivers–1034	Medicine-915
aviation safety vs. medical confidentiality–872	through international meetings-915
disclosing pilot health information for investigation of–872	News-148, 593, 665, 747, 990
fatal night-time helicopter emergency medical service–396, 738	past presidents-337
(Letter)	President's Page-2, 69, 149, 353, 427, 505, 599, 679, 755, 832, 915,
hot air balloons tours in Cappadocia, Turkey-123	991
injuries due to excessive landing airspeed-355	proposed changes to by-laws-148
medical review of fatal high-G aerobatic flight accidents-959	theme for 2020 Scientific Meeting–755
preflight risk assessment for HEMS operations-792	Aerospace medicine
speech analysis for fatigue in pilot before-415	framework of compared with traditional medicine–991
U.S. Army parachute mishap fatalities–637	training in Canada–725
Acoustic stimuli, high altitude performance of earphones–655	Aerospace Medicine and Human Performance
Actigraphy	changes in–1 open access option–831
pilot sleep in long-range commercial flights–109, E1(Apr)	Age
rest and activity patterns in military aviators–48	optimum duration of first-class aeromedical certificates–484
Action boundary, proximity effects on perceptual-motor judgments–1000	relationship with other human performance factors–362
ACTN-3 genotype, +Gz tolerance, body composition, and	Air traffic controllers, video game play as fatigue
fitness-1055	countermeasure-540
Adaptive ground control system, for multiple unmanned aerial	Airborne operations, U.S. Army parachuting fatalities-637
vehicles-841	Aircraft maintenance engineering, predicting fatigue-related errors
Adefovir, for chronic hepatitis B in aircrew-37	in-860
Adenoma, pituitary-742	Aircraft—See also specific aircraft types
Aerobatic flight, medical review of fatal high-G accidents-959	human factors in airworthiness of-618
Aerobic capacity, relationship with other performance factors–362	tactical, risk of breathing elevated oxygen on-1041
Aerobic performance, in psychophysiological training of Special	Aircrew, Asian
Operations forces–953	case of multiple sclerosis in–419
Aeromedical certification	third-culture kid pilots-1026
accidents associated with SODA waivers–1034	Aircrew—See also Commercial airline crew and Military aircrew restless legs syndrome in-934
association of medical factors with mortality in U.S. aviators–938 optimum duration of first-class aeromedical certificates–484	return to flying with chronic hepatitis B–37
Aeromedical disposition	Airlines—See Commercial airlines, passengers, and pilots
chronic hepatitis B and nucleos(t)ide analogues–37	Airworthiness, of aircraft, pilot workload as factor in–618
Dengue fever–660	Alcohol-related problems
Ehlers-Danlos syndrome–583	BrAC/BAC as indicator of 488
emotional trauma after deployments–496	medical review of fatal high-G aerobatic flight accidents-959
eosinophilic esophagitis-986	Alertness
of F-16 pilot after spontaneous splenic rupture–1061	performance aspects during military helicopter flights-389
hypoglycemia and insulinoma-826	video game play countermeasure in air traffic controllers-540
internal jugular phlebectasia-37	Altitude effects
measles-908	cognitive scores and hypoxia onset–429, E1(May)
multiple sclerosis in young Asian aircrew-419	cumulative, of maximal cabin pressure–513
otitis media with effusion–462	high altitude performance of earphones-655
papillary thyroid carcinoma–910	model for aeromedical evacuation of severely wounded-1016,
pituitary adenoma–742	E2(Dec)
potential migraine–494	otitis media with effusion in aircrew-462
renal cell carcinoma-1064	restless legs syndrome in aircrew-934

 $Page\ numbers\ preceded\ by\ an\ ``E"\ indicate\ supplemental\ material\ for\ individual\ articles\ that\ can\ be\ found\ online\ at\ www.asma.org/journal/online_journal.php.$

risk of venous gas emboli in fighter pilots-524 superficial temporal artery aneurysm-53

American College of Cardiology, readiness of naval aviators for new blood pressure guidelines–409

American Heart Association, readiness of naval aviators under new blood pressure guidelines-409

Animal models

dynamic rabbit model of ear barotrauma-696

mild hypobaric hypoxia effects on murine skeletal muscle–1050, E1(Dec)

simulated aero-evacuation in polytrauma rat model-1016, E2(Dec)

Antarctica, performance of military all-women expedition–18 Anti-G straining maneuver (AGSM)

by fighter pilot with internal jugular phlebectasia–132 proficiency and depression in trainee military pilots–613

Anti-G trousers, comparison of three systems-925

Anti-viral treatment, in aircrew with chronic hepatitis B–37 Anticipated negative emotions, effect on civil pilots' incident involvement–774

Anxiety

effects on simulated flight performance-101 fear of flying in Norwegians-384

Asia Pacific Guidelines, hypertension and obesity among civil aviation pilots–703

Asthma, in rotary-wing military aircrew selection–606 Astronauts, Japanese, mortality among international astronauts–648

Astronauts—See also Spaceflight

behavioral assessment using Robotic On-Board Trainer for Research–819

cooling to facilitate metabolic suppression in-475

international, mortality among-647

Kelly-Kornienko 1-year mission on ISS-4

managing radiation-induced illnesses during exploration spaceflight-966

predicting emergency capsule egress performance-782

Atelectasis, in military aircrew from breathing elevated oxygen–1041

Athletes, precooling for prevention of exertional heatstroke–12 Attention, cumulative effects of maximal cabin pressure–513

Attention deficit and hyperactivity disorder (ADHD), methylphenidate use and flight course success-788

Audiometry, high altitude performance of earphones-655

Auditory stimuli, effect of on flight performance–492 (Letter)

Automation, performance in automated rendezvous and docking-447

Autonomic nervous system, cardiac activity in commercial aircrew during flight duty–109, E1(Apr)

Aviation Medical Examiner deferrals, optimum duration of firstclass aeromedical certificates-484

Aviation safety—See Safety, aviation

Aviation, civil—See Civil aviation pilots

Aviation, general—*See also* Civil aviation *and* Commercial airlines injuries in accidents due to excessive landing speed–355

Aviators—See Aircrew and Pilots

R

Bacteria, DprA gene mutation after spaceflight–116, E1(Feb) Barodontalgia, in aircrew and divers–128

Barotrauma, ear

dynamic rabbit model of-696

otitis media with effusion in aircrew-462

recurrent middle ear, in student pilots-681

Behavior assessment, of astronauts using Robotic On-Board Trainer for Research–819

Binge drinking, BrAC/BAC as indicator of alcohol use problems-488

Bioelectrical impedance spectroscopy

body composition in ROTC cadets-813

Biomedical research, on one-year mission on ISS-4

Blebs—See Emphysema-like changes

Blood alcohol concentration, as indicator of alcohol use problems-488

Blood oxygen saturation, cognitive scores, and hypoxia onset-429, E1(May)

Blood pressure

comparison of three anti-G trouser systems-925

hypertension and obesity among civil aviation pilots-703

readiness of naval aviators under new ACC/AHA guidelines-409

Blood volume

comparison of three anti-G trouser systems-925 relationship with other human performance factors-362

Body composition

ACTN-3 genotype and +Gz tolerance in cadets-1055 of ROTC cadets-813

Body mass measurement device, history of-587

Body position, adaptation to acute changes in gravity and 688

Borrelia, cognitive biases in Lyme disease diagnosis-652

Brain structure, cortical asymmetries in civil aviation pilots–456 Brainwaves

dry-EEG monitoring of hypoxia in simulated flight-92 gender differences in dry-EEG during hypoxia-369

Breath alcohol concentration, as indicator of alcohol use problems-488

Bronchoconstriction, in military aircrew from breathing elevated oxygen-1041

Bullae—See Emphysema-like changes

Burnout, effect on work ability in flight attendants-601

C

Cabin altitude

attention network responses-513

risks with sustained vs. continuous high-altitude exposure-524

Calcium, monitoring in space missions-43

Canada

aviation safety vs. medical confidentiality regulations in –872 space medicine training in –725 $\,$

Canadarm2-819

Canadian astronauts, mortality among-647

Cappadocia, Turkey, hot-air balloon tour accidents in-123

Carbon dioxide, cooling to facilitate metabolic suppression-475 Carbon monoxide, levels in ISS extravehicular mobility unit-84

Cardiology

cardiac activity in commercial aircrew during flight duty–945 quality of in-flight ECGs done by flight attendants–405 template for cardiovascular risk assessment in pilots–730

Cardiovascular parameters, in comparison of three anti-G trouser systems–925

Carotid body chemoreceptor function, in military aircrew from breathing elevated oxygen-1041

Case reports

cognitive biases in Lyme disease diagnosis-652 Internal jugular phlebectasia in a fighter pilot-132

management of an F-16 pilot after spontaneous splenic rupture– 1061

pancreatitis during long-duration lunar mission–570

pneumocephalus due to poor Valsalva technique-566 seizure induced by stroboscopic effect of helicopter blades-891

speech analysis for fatigue detection of pilot-415 squamous cell carcinoma in student aviator-978

superficial temporal artery aneurysm-53

Centrifuge training, depression, and AGSM proficiency in military trainee pilots-613

Certification, aeromedical

accidents associated with SODA waivers-1034

association of medical factors with mortality in U.S. aviators-938 optimum duration of first-class aeromedical certificates-484

Cervical muscles, activity in air combat maneuvering with helmet-mounted displays–834

Cervical spine, prevalence of neck pain in fast jet pilots-882 Chemoprophylaxis, of malaria, adherence among aircrew

members-643

Chest pain, quality of in-flight ECGs done by flight attendants-405 Chinese astronauts, mortality among-647

Circadian rhythm, pilot sleep in commercial long-range flights–109, E1(Apr)

Circulation, adaptation to acute gravity changes-688

Civil aviation pilots—See also Pilots

anticipated negative emotions and incident involvement–774 asymmetries of cortical thickness in–456

hypertension and obesity in-703

template for cardiovascular risk assessment in-730

Cockpit ergonomics, cervical load with helmet-mounted display in air combat–834

Cognitive load, effect of on flight performance–492 (Letter) Cognitive performance

with cooling to facilitate metabolic suppression–475 correlation with hypoxia onset–429, E1(May) in simulated paragliding flight–851

Cold effects, superficial temporal artery aneurysm-53

Cold-water immersion, precooling in prevention of exertional heatstroke–12

Color vision deficiency, screening in military aircrew applicants-71 Combat casualties, aeromedical evacuation model for polytraumatized patients-1016, E2(Dec)

Combat preparedness, high intensity interval training protocols for 32

Commercial airline aircrew

barodontalgia in-128

cardiac autonomic activity during flight duty–945 fatigue risk with 4 consecutive days of flight duty–462 otitis media with effusion in aircrew–462 quality of in-flight ECGs taken by flight attendants–405

Commercial airline passengers, flight anxiety in Norwegian–384 Commercial airline pilots

cumulative effects of maximal cabin pressure–513 multi-cultural identity effects on attitudes of–1026 optimum duration of first-class aeromedical certificates–488 sleep in long-range and ultra-long-range flights–109, E1(Apr)

Compensatory reserve

central hypovolemia and menstrual cycle phases-378 exercise-induced changes in-1009

Computed tomography ($\check{\mathrm{CT}}$), follow-up of emphysema-like changes in pilots–867

Conditioning program, for military aircrew, impact on +Gz tolerance-764

Cone Contrast Test, in military aircrew applicants-71

Continuous glucose monitoring, in-flight, for pilots on insulin-735 Cooling, to facilitate metabolic suppression-475

Coordination motor abilities, effect of survival training for naval academy cadets on–632

Coping, proactive, in pilots with anticipated negative emotions–774 Cortical thickness, hemispheric asymmetries in civil aviation pilots–456

Cosmonauts—See also Astronauts

Mikail Kornienko 1-year mission on ISS-4

voice analysis and task performance in space-624, E1(July)

Countermeasures

blood flow restricted rowing exercise-440 GravitySuit for spaceflight-993 muscle activation during gravity-independent exercise–506 video game play for fatigue in air traffic controllers–540

Crashes—See Accidents, Aviation

Critical care, pancreatitis during long-duration lunar mission–570 Critical power, predicting emergency capsule egress performance–782

Cultural background, effect on third-culture kids' attitudes as pilots–1026

D

Death rates—See also Mortality

among international astronauts-647

Decompression sickness, risk with sustained vs. continuous highaltitude flight-524

Dehydration, precooling for prevention of extertional heatstroke–12 Dengue fever–660

Dentistry

barodontalgia in aircrew and divers-128

fractured tooth stabilization on a submarine in 1970-135

Depression, and AGSM proficiency in trainee military pilots–613 Dermatitis, in scarlet fever–139

Dexmedetomidine, cooling to facilitate metabolic suppression–475 Diabetes mellitus, in-flight glucose monitoring for insulin-treated pilots–735

Diagnostic errors, cognitive biases in Lyme disease diagnosis–652 Diaphragmatic hemiparesis, spontaneous–581

Diversity, multi-cultural identity effect on attitudes of pilots–1026 Diving, barodontalgia in divers–128

DprA gene mutation, in bacteria after spaceflight–116, E1(Feb) Driving under the influence (DUI) convictions, in pilots–488 Drug events, adverse

 $medication\ adverse\ reaction, risk\ stratification\ model-896\\modafinil\ as\ stimulant\ for\ military\ aviators-480$

Dry-EEG

gender differences in during hypoxia–369 monitoring hypoxia in simulated flight–92

Dyspnea, in spontaneous diaphragmatic hemiparesis-581

I

Ear barotrauma

dynamic rabbit model of-696

otitis media with effusion in aircrew-462

recurrent middle ear, in student pilots-681

Earphones, high altitude performance of-655

Eating habits, effect on work ability in flight attendants-601

Edridge Lantern Test, screening for color vision deficiency–71

Education, space medicine training in Canada-725

Ehlers-Danlos syndrome-583

Electrocardiograms (ECG), in-flight quality of-405

Electroencephalography (EEG)

dry-EEG monitoring of hypoxia in simulated flight–92 gender differences in dry-EEG during hypoxia–369

Electromyography

during gravity-independent resistance exercise–506 neck muscles activity with joint helmet-mounted cueing system–834

Emergency medicine

aeromedical evacuation effects on polytraumatized casualties–1016, E2(Dec)

fatal night HEMS accidents-396, 738 (Letter)

weather-related preflight risk assessment-792

Emotional intelligence, effects on simulated flight performance–101 Emotions, anticipated negative, and civil pilots' incident involvement–774

Emphysema-like changes, follow-up with CT in pilots 40 and older-867

Endocrinology

hypoglycemia and insulinoma in a pilot-826

in-flight glucose monitoring for insulin-treated diabetic pilots–735 pituitary adenoma–742

Entecavir, for chronic hepatitis B in aircrew-37

Enterococcus faecium, DprA gene mutation after spaceflight-116, E1(Feb)

Environmental factors, impact on military all-women Antarctic expedition–18

Eosinophilic esophagitis-986

Epileptic seizure, induced by stroboscopic effect of helicopter blades–891

Errata-422, 633

Esophagitis, eosinophilic-986

European astronauts, mortality among-647

European Aviation Safety Agency, Chief Medical Officers' Forum-2

European Cockpit Association-353

European Society of Aerospace Medicine-915

Eustachian tube dysfunction

dynamic rabbit model of ear barotrauma-696

recurrent middle ear barotrauma in student pilots-681 in scarlet fever-139

Executive control, cumulative effects of maximal cabin pressure–513

Exercise

aircrew conditioning program impact on +Gz tolerance-764 changes in compensatory reserve and heart rate complexity with-1009

precooling for prevention of heatstroke-12

predicting emergency capsule egress performance-782

Exercise countermeasures

gravity-independent, muscle activation during-506 responses to blood flow restricted rowing-440

Exertional heatstroke

precooling for prevention of-12

Experience, pilots' fixation patterns and visibility during taxiing-546

Exploration spaceflight—See Long-duration space missions and Mars missions

Extravehicular activity, space suit injury risk-553

Extreme environments—See Environmental factors

Eye movement, of operators of multiple unmanned aerial vehicles-841

F

Fast jet pilots—*See also* Fighter pilots *and* Military pilots. comparison of three anti-G trouser systems for–925 prevalence of neck pain in–882

Fatalities

fatal night-time HEMS accidents-396, 738 (Letter) medical review of high-G aerobatic flight accidents-959 preflight risk assessment in HEMS operations-792 U.S. Army parachute mishaps-637

Fatigue

cardiac activity in commercial aircrew during flight duty–945 cumulative effects of maximal cabin pressure–513 modafinil as stimulant for military aviators–480 predicting errors in aircraft maintenance engineering related to–860 rest and activity patterns in military aviators–48 risk in aircrew during 4 days of flight duty–466 speech analysis for pilot sleepiness and–415

video game play countermeasure in air traffic controllers-540

Fear of flying, in Norwegian airline passengers-384

Federal Aviation Administration (FAA)

BrAC/BAC as indicator of alcohol use problems–488 medical certification factors and mortality in aviators–938 optimum duration of first-class aeromedical certificates–484

Fighter pilots—See also Military pilots

comparison of three anti-G trouser systems for-925

Ehlers-Danlos syndrome in-583

internal jugular phlebectasia-132

management of an F-16 pilot after spontaneous splenic rupture–1055 neck pain in–882

pneumocephalus due to inappropriate Valsalva technique-566 risk of venous gas emboli-524

Fitness

ACTN-3 genotype and +Gz tolerance in cadets-1055

body composition in ROTC cadets-813

predicting emergency capsule egress performance-782

Fitness to fly—See Safety, aviation; Aeromedical disposition; and Waivers

Fixation patterns, and visibility during taxiing-546

Flight attendants

insomnia, burnout, and eating habits in-601

quality of in-flight ECGs done by-405

Flight experience, pilots' fixation patterns and visibility during taxiing-546

Flight performance

effect of disorienting stimuli on-492 (Letter)

hypoxia hangover after normobaric hypoxia exposure-720

Flight simulator—See also Simulated flight

measuring pilot workload in-618

Flywheel training, muscle activation during gravity-independent-506

G

+Gz forces, management of an F-16 pilot after spontaneous splenic rupture–1055

+Gz tolerance

aircrew conditioning program impact on–764 and *ACTN-3* genotype in senior cadets, 764

G protection, comparison of three anti-G trouser systems-925

Gas bubble formation, risk with sustained vs. continuous high-altitude flight-524

Gastroenterology

eosinophilic esophagitis, 986

hypothetical pancreatitis case during long-duration lunar mission-570

Gender differences

in dry-EEG during hypoxia-369

in flight anxiety reported in Norway-384

relationship with other human performance factors-362

Gene mutations, in DprA in bacteria after spaceflight-116, E1(Feb)

Global Liaison Outreach Committee (AsMA)-427, 915

Glucose monitoring, continuous in-flight, for pilots on insulin-735 Gravitational changes, adaptation of systemic and pulmonary

circulation-688

GravitySuit, for spaceflight-993

Gynecomastia, in pituitary adenoma-742

Η

Headache, potential migraine, impact of diagnosis-494 Health risks, optimum duration of first-class aeromedical certificates-484

Hearing, high altitude performance of earphones-655

Hearing impairment

and noise exposure in Swedish Air Force pilots-757

in scarlet fever-139

Heart rate, in predicting pilot workload-618

Heart rate complexity, exercise-induced changes in-1009

Heart rate variability

in commercial aircrew during flight duty-945

exercise-induce changes in-1009

Heatstroke, precooling for prevention of exertional-12

Helicopter Emergency Medical Service (HEMS) analysis of fatal night accidents–396, 738 (Letter) weather-related preflight risk assessment–792

Helicopter pilots

performance aspects during military flights-389 superficial temporal artery aneurysm-53

Helicopter Underwater Egress Training, preferred retraining intervals for 800

Helicopters

asthma in selection of military aircrew for-606 seizure induced by stroboscopic effect of blades-891

Helmet-mounted displays, neck muscle activity during air combat maneuvering-834

Hematocrit, relationship with other human performance factors–362 Hemodynamics

central hypovolemia and menstrual cycle phases-378 comparison of three anti-G trouser systems-925

Hemorrhage, model for aeromedical evacuation of severely wounded-1016, E2(Dec)

Hepatitis B, return to flying for aircrew being treated for–37 High intensity interval training, protocols for combat preparedness–32 High-G training, AGSM proficiency and depression in trainee pilots–613

History

early aviation and the movies-423

Focus on Aerospace Medicine History–65, 144, 423, 501, 587 fractured tooth stabilization on a submarine in 1970–135 Margaria, Rodolfo–982

Mutke, Hans Guido-144

Space Station Freedom and Health Maintenance Facility–65 This Month in Aerospace Medicine History–68, 147, 425, 426, 504, 592, 664, 744, 830, 914, 989, 1069

Thornton, William-587

von Diringshofen, Heinz-501

Hot air ballooning, tour accidents in Cappadocia, Turkey–123 Human papillomavirus, oropharyngeal squamous cell papilloma in a student aviator–978

Human performance—See also Cognitive performance compensatory reserve and heart rate complexity as metrics of–1009 cumulative effects of maximal cabin pressure–513 effects of sex, age, blood volume, and Vo_{2max}–362 emotional intelligence effects during simulated flight–101 in manual and automated rendezvous and docking–447 medication adverse reaction, risk stratification model–896 of all-woman military Antarctic expedition–18 performance aspects during military helicopter flights–389 psychophysiological training in Special Operations forces–953 responses to blood flow restricted rowing exercise–440

Hypertension

and obesity in civil aviation pilots-703

readiness of naval aviators under new blood pressure guidelines-409

Hyperthermia, precooling for prevention of exertional heatstroke–12

Hyperventilation, hyperoxic, in military aircrew from breathing elevated oxygen–1041

Hypobaric chamber tests, dynamic rabbit model of ear barotrauma-696

Hypobaric hypoxia, mild, effects on murine skeletal muscle–1050, E1(Dec)

Hypoglycemia, and insulinoma in a pilot-826

Hypothermia, to facilitate metabolic suppression-475

Hypovolemia, central, compensating for during menstrual cycle phases–378

Hypoxia, mild hypobaric, effects on murine skeletal muscle–1050, E1(Dec)

Hypoxia training

cognitive scores and onset of-429, E1(May)

dry-EEG manifestations in simulated flight-92 gender differences in dry-EEG during-369 hypoxia hangover and flight performance after-720

Ι

Iberoamerican Association of Aerospace Medicine–69 Illusions, in flight, spatial disorientation and working memory–531 Imaging

cortical asymmetries in civil aviation pilots-456

CT follow-up of emphysema-like changes in pilots-867

Imaging-guided procedures

remote, for in-flight evaluation of VIIP/SANS-58, E1(Jan), 422 (Erratum), 579 (Letter)

In-flight medical emergencies

evaluation of VIIP/SANS-58, E1(Jan), 422 (Erratum), 579 (Letter) myocardial infarction, quality of in-flight ECGs by flight attendants-405

In-flight refueling, risks with sustained vs. continuous high-altitude exposure–524

Incident involvement, anticipated negative emotions effect on-774 Infectious mononucleosis, management of F-16 pilot after spontaneous splenic rupture-1061

Inhalation toxicity, revisions to limits for methanol in spacecraft air–807, E1(Sept)

Injuries

in general aviation landing accidents-355

model for aeromedical evacuation of polytraumatized casualties–1016, E2(Dec)

Insomnia, effect on work ability in flight attendants-601

Instrument meteorological conditions, in fatal accidents on day and night HEMS flights–738 (Letter)

Instrument proficiency, in preflight risk assessment for HEMS operations–792

Insulin, continuous in-flight glucose monitoring for pilots on–735 Integrative countermeasures, GravitySuit for spaceflight–993 Internal jugular phlebectasia, in a fighter pilot–132

International Academy of Aviation and Space Medicine–915 International Civil Aviation Organization, optimum duration of first-class aeromedical certificates–484

International Federation of Airline Pilots' Association–353
International schools, multi-cultural identity effect on attitudes of pilots from–1026

International SOS, for local medical expenses if not near military base–583

International Space Station

1-year mission on-4

CO levels in extravehicular mobility unit-84 urea and minerals monitoring on-43

Interval training, for combat preparedness-32

Intracranial pressure, syndrome of visual impairment and, in-flight evaluation–58, E1(Jan), 422 (Erratum)

Intranasal administration, of scopolamine for motion sickness–917 Ishihara Psuedo Isochromatic Plates, screening for color vision deficiency–71

Isolated, confined, extreme (ICE) environments handling dental emergencies in-135

military all-women Antarctic expedition-18

Israeli Air Force, methylphenidate use and flight course success-788

1

Joint helmet-mounted cueing system, neck muscle activity in air combat-834

K

Kelly, Scott, one-year mission on ISS-4 Kinetic chain, closed vs. open, in gravity-independent exercise-506 Korean Air Force Academy, ACTN-3 genotype and +Gz tolerance in senior cadets-1055

Kornienko, Mikhail, one-year mission on ISS-4

Kraken Disorientation Research Device, optimization of-901

L

Lamivudine, for chronic hepatitis B in aircrew-37

Landing accidents—See Accidents, aviation

Life-threatening conditions, pancreatitis during long duration lunar mission–570

Locomotion, subgravity, Rodolfo Margaria's work on-982

Long-duration space missions

biomedical research on one-year mission on ISS-4

hypothetical pancreatitis case during-570

managing radiation-induced illnesses during-966

responses to blood flow restricted rowing exercise-440

Long-range flights

commercial, pilot sleep in-109, E1(Apr)

mild hypobaric hypoxia effects on skeletal muscle-1050, E1(Dec)

Longevity, in aviators with FAA medical certification-938

Lower body negative pressure

central hypovolemia and menstrual cycle phases and tolerance of -378

GravitySuit for spaceflight-993

Lumbar puncture, ultrasound guided for in-flight evaluation of VIIP/SANS-58, 422 (Erratrum), 579 (Letter)

Lyme disease, cognitive biases in diagnosis-652

M

Magnetic resonance imaging, cortical asymmetries in civil aviation pilots-456

Malaria, prophylaxis adherence among aircrew members–643 Malignant neoplasms, papillary thyroid carcinoma in a pilot–910 Manganese toxicity, spacecraft maximum allowable concentrations for Mars dust–709, E1(Aug)

Mars missions

predicting emergency capsule egress performance–782 spacecraft maximum allowable concentrations for manganese in dust from–709, E1(Aug)

Mathematical models, optimizing the Kraken Disorientation Research Device-901

Measles, in a pilot-908

Mechanical loading, with GravitySuit for spaceflight-993

Medical certification

association of medical factors with mortality in U.S. aviators–938 optimum duration of first-class aeromedical certificates–484 $\,$

Medical confidentiality, vs. aviation safety-872

Medical education, space medicine training in Canada-725 Medications

dexmedetomidine to facilitate cooling and metabolic suppression–475 intranasal scopolamine for motion sickness–917 medical review of fatal high-G aerobatic flight accidents–959

medication adverse reaction, risk stratification model–896 methylphenidate use and flight course success–788 modafinil as stimulant for military aviators–480

nucleos(t)ide analogues for chronic hepatitis B-37

Memory, working, spatial disorientation effect on-531

Menstrual cycle, compensating for central hypovolemia during phase of –378

Mental workload, of operators of multiple unmanned aerial vehicles-841

Messerschmitt 262 aircraft, and Hans Guido Mutke–144 Metabolism

cooling to facilitate suppression of-475

changes in, in saliva and urine samples in space missions-43 Methanol, revisions to limits in spacecraft air-807, E1(Sept)

Methylphenidate, flight course success and use of-788

Microgravity—See also Simulated spaceflight and Weightlessness

blood flow restricted rowing countermeasure-440

Middle ear barotrauma, recurrent in student pilots-681

Migraine, potential, impact of diagnosis-494

Military aircrew

asthma in selection of-606

barodontalgia in-128

conditioning program impact on +Gz tolerance-764

malaria prophylaxis adherence among-643

potential migraine in, aeromedical disposition of-494

PTSD in, aeromedical disposition of-496

risks from breathing elevated oxygen-1041

U.S. Army parachute mishap fatalities-637

Military personnel

all-women Antarctic expedition-18

ground control system for operators of multiple unmanned aerial vehicles-841

high intensity interval training protocols for-32

psychophysiological training in Special Operations forces-953

survival training for Polish naval academy cadets-632

Military pilots—See also Fighter pilots

AGSM proficiency and depression in trainees-613

dry-EEG monitoring of hypoxia in flight-92

flight school success rates and use of methylphenidate-788

modafinil as stimulant for-480

noise exposure and hearing impairment in-757

performance aspects during helicopter flights-389

rest and activity patterns in-48

risk from breathing elevated oxygen-1041

superficial temporal artery aneurysm-53

symptomatic sickle cell trait in-63

Minerals, monitoring in space missions-43

Modafinil, as stimulant for military aviators-480

Monitoring

glucose, continuous in-flight, for pilots on insulin-735

voice analysis and task performance in space–624, E1(July)

Mononucleosis, management of F-16 pilot after spontaneous splenic rupture–1061

Mortality—See also Fatalities

among international astronauts-647

medical certification factors and mortality in U.S. aviators–938 risks in aeromedical evacuation of polytraumatized casualties–1016, E2(Dec)

Motion sickness

intranasal scopolamine for-917

susceptibility questionnaire, reliability of Thai version-26

Mouse models, mild hypobaric hypoxia effects on skeletal muscle–1050, E1(Dec)

Movies, early aviation and-423

Multi-cultural identity, effect on attitudes of third-culture kid pilots-1026

Multi-Task Battery scores, correlation with hypoxia onset-429, E1(May)

Multiple sclerosis, in a young Asian aircrew-419

Muscle strength, during gravity-independent resistance exercise-506

Musculoskeletal injury, risk due to space suit design-553

Mutations, of DprA gene in bacteria after spaceflight-116, E1(Feb)

Mutke, Hans Guido-144

Myocardial infarction, quality of in-flight ECGs by flight attendants-405 $\,$

N

National Aeronautics and Space Administration (NASA)—See also Spaceflight

one-year mission on ISS-4

Task Load Index scale in predicting pilot workload-618

Neck muscles, activity in air combat maneuvering with helmetmounted displays-834

Neck pain, prevalence in fast jet pilots-882

Netherlands, aviation safety vs. medical confidentiality regulations in-872

Neuro-ocular symptoms, in spaceflight, GravitySuit as countermeasure for 993

Neurological conditions, in-flight evaluation of VIIP/SANS-58, E1(Jan), 422 (Erratum), 579 (Letter)

Neuroticism, effects on simulated flight performance–101 Night flying

fatal HEMS accidents-396, 738 (Letter)

preflight risk assessment for improved safety in HEMS-792

Nitrogen washout, risk with sustained vs. continuous high-altitude flight-524

Noise exposure, hearing impairment in Swedish Air Force pilots-757

Normobaric hypoxia, hypoxia hangover and flight performance after exposure–720

Nucleos(t) \bar{l} de analogues, flight safety in aircrew with chronic hepatitis B-37

0

Obesity, and hypertension in civil aviation pilots-703 Occupational health

cortical asymmetries in civil aviation pilots–456 medication adverse reaction, risk stratification model–896 readiness of naval aviators under new blood pressure guidelines–409 Work Ability Index in flight attendants–601

Oncology

papillary thyroid carcinoma in a pilot-910 renal cell carcinoma in a pilot-1064

One-year mission (1YM), implementing biomedical research on ISS-4

Operational safety

behavioral assessment with Robotic On-Board Trainer for Research-819

risk analysis of fatal night HEMS accidents-396

Ophthalmology, screening test for color vision deficiency-71

Oropharyngeal lesions, squamous cell papilloma-978

Otitis media, with effusion in aircrew-462

Otolaryngology, otitis media with effusion in aircrew-462

Oxygen, elevated, risks to military aircrew from breathing-1041

P

Pain, barodontalgia in aircrew and divers-128 Pancreatectomy, for insulinoma in a pilot-826

Pancreatitis, hypothetical case during long-duration lunar mission-570

Papillary thyroid carcinoma, in a pilot-910

Parachuting, U.S. Army fatalities-637

Paragliding, cognitive function in simulated flight-851

Paraneoplastic syndromes, with renal cell carcinoma-1064

Paratroopers, U.S. Army parachuting fatalities-637

Passengers, flight anxiety reported in Norway-384

Perception-Action Coupling Task (PACT)

reliability and stability of-77

shortening time required to increase usability-1000

Performance—See Human performance and Cognitive performance Periodization training, reverse, in Special Operations forces–953

Personality, impact on military all-women Antarctic expedition-18

Pharmacokinetics, intranasal scopolamine-917

Phobias, flight anxiety in Norwegian airline passengers-384

Phosphorus, monitoring in space missions-43

Physical fitness

body composition in ROTC cadets-813

predicting emergency capsule egress performance-782

Physiology, Rodolfo Margaria's work on subgravity locomotion–982 Pilots—*See also* Aircrew, Commercial airline pilots, Helicopter

pilots, and Military pilots

anticipated negative emotions and incident involvement–774 association of FAA medical certification and mortality–774

BrAC/BAC as indicator of alcohol use problems-488

cardiovascular risk assessment in-730

cortical asymmetries in civil aviation pilots-456

CT follow-up of emphysema-like changes in-867

fixation patterns and visibility during taxiing-546

on insulin, in-flight continuous glucose monitoring for-735

measuring workload in flight simulator-618

medical confidentiality vs. aviation safety-872

medical review of fatal high-G aerobatic flight accidents-959 optimum duration of first-class aeromedical certificates-484 recurrent middle ear barotrauma in student-681

sleep in long-range commercial flights–109, E1(Apr) with SODA waivers, accidents involving–1034

speech analysis for fatigue and sleepiness detection–415

Pituitary adenoma-742

Pneumocephalus, due to inappropriate Valsalva technique–566 Pneumothorax, spontaneous, CT follow-up in pilots 40 and older–867

Polish Naval Academy, survival school training for cadets–632 Positive pressure breathing, by fighter pilot with internal jugular phlebectasia–132

Posttraumatic stress disorder, after deployments, aeromedical disposition of 496

Precooling, in prevention of exertional heatstroke-12

Proactive coping, in pilots with anticipated negative emotions–774 Psychological disorders

depression and AGSM proficiency in military trainee pilots–613 PTSD in military aircrew, aeromedical disposition of–496

Psychological flexibility, in training intervention for Special Operations forces–953

Psychophysiological response, to high intensity interval training protocols for soldiers-32

Pulmonary circulation, adaptation to acute gravity changes–688 Pulmonary oxygen toxicity, in military aircrew from breathing elevated oxygen–1041

Pulmonology

CT follow-up of emphysema-like changes in pilots–867 spontaneous diaphragmatic hemiparesis–581

Pulse oximetry, cognitive scores and hypoxia onset–429, E1(May)
Pupillometry, in fatigue countermeasure in air traffic
controllers–540

R

Rabbit models, dynamic, of ear barotrauma-696

Radiation sickness, acute, management during exploration spaceflight-966

Radiation, space, managing related illnesses during exploration spaceflight-966

Radiculopathy, cognitive biases in Lyme disease diagnosis-652 Rash, cognitive biases in Lyme disease diagnosis-652

Rat models, simulated aero-evacuation in polytrauma-1016, E2(Dec)

Reaction time

action boundary proximity effects on perceptual-motor judgments-1000

novel perception-action coupling task-77

Renal cell carcinoma-1064

Republic of Singapore Air Force

color vision deficiency screening in-71

modafinil as stimulant for aviators in-480

Reserve Officers Training Corps (ROTC), body composition of upper- vs. underclass cadets-813

Respiratory disorders, asthma in selection of military aircrew-610 Sound barrier, Hans Guido Mutke and his Me-262-144 Response time, novel perception-action coupling task-77 Space suits Restless legs syndrome, in aircrew-934 GravitySuit-993 injury risk from design of-553 Return to flying—See Aeromedical disposition Risk assessment Spacecraft Maximum Allowable Concentrations anticipated negative emotions in civil pilots-774 for manganese compounds in Mars dust-709, E1(Aug) for methanol-807, E1(Sept) medication adverse reaction, risk stratification model-896 optimum duration of first-class aeromedical certificates-484 Spaceflight-associated neuro-ocular syndrome (SANS), in-flight preflight, for improved safety in HEMS operations-792 evaluation-58 E1(Jan), 422 (Erratum), 579 (Letter) spacecraft maximum allowable concentrations for manganese in Spaceflight—See also Commercial spaceflight and Simulated spaceflight Mars dust-709, E1(Aug) automation-aided rendezvous and docking performance-447 template for cardiovascular risk assessment in pilots-730 biomedical research on 1-year mission on ISS-4 Robotic On-Board Trainer for Research, behavior assessment CO levels in ISS extravehicular mobility unit-84 using-819 cooling to facilitate metabolic suppression in-475 Rotary-wing aircraft—See also Helicopters DprA mutation in bacteria after-116, E1(Feb) asthma in selection of military aircrew for-606 emergency capsule egress performance predictors-782 GravitySuit as integrative countermeasure for-993 Rowing exercises blood flow restricted-440 hypothetical pancreatitis case during-570 in-flight technique for evaluation of VIIP/SANS-58, E1(Jan), 422 predicting emergency capsule egress performance-782 (Erratum), 579 (Letter) Royal Netherlands Air Force, retraining intervals for helicopter underwater egress training-800 management of radiation-induced illness during long-duration-966 mortality among international astronauts-647 revisions to limits for methanol in spacecraft air-807, E1(Sept) S Robotic On-Board Trainer for Research-819 space suit design, risk of injury from-553 Safety, aviation spacecraft maximum allowable concentrations for manganese in accidents associated with SODA waivers-1034 Mars dust-709, E1(Aug) helicopter underwater egress training-800 urea and minerals monitoring during-43 hot-air balloon tour accidents in Turkey-123 voice as variable in task performance-624, E1(July) medical review of fatal high-G aerobatic flight accidents-959 Spatial disorientation optimum duration of first-class aeromedical certificates-484 effect of on flight performance-492 (Letter) returning aircrew on treatment for chronic hepatitis B-37 optimizing the Kraken Disorientation Research Device-901 risk analysis of fatal night HEMS accidents-396 vs. medical confidentiality-872 working memory load in simulator-induced event-531 Saliva, minerals monitoring in space missions-43 Special Operations forces, psychophysiological training in-953 Speech analysis, for fatigue and sleepiness detection-415 Scarlet fever, aeromedical disposition-139 Splenic infarct, after altitude exposure in sickle cell trait-63 Scopolamine, intranasal, for motion sickness-917 Seizure, induced by stroboscopic effect of helicopter blades-891 Splenic rupture, spontaneous, management of an F-16 pilot after-1061 Sex—See Gender differences Squamous cell carcinoma-978 ST elevation myocardial infarction, quality of in-flight ECGs by Shift work, fatigue countermeasure in air traffic controllers-540 Sick leave, otitis media with effusion in aircrew-462 flight attendants-405 Standards, optimum duration of first-class aeromedical Sickle cell trait, splenic infarct after altitude exposure-63 certificates-484 Simulated flight Statement of Demonstrated Ability (SODA) waiver, aviation cognitive function in paragliding-851 accidents and-1034 dry-EEG monitoring of hypoxia in-92 Stimulants, modafinil for military aviators-480 emotional intelligence effects on performance-101 hypoxia hangover after normobaric hypoxia exposure-720 Stress, psychophysiological training in Special Operations measuring pilot workload in-618 forces-953 Stroboscopic effect, epileptic seizure induced by helicopter spatial disorientation and working memory load-531 blades-891 optimizing the Kraken Disorientation Research Device-901 Subgravity locomotion, Rodolfo Margaria's work on-982 Simulated spaceflight—See also Spaceflight muscle activation during resistance exercise-506 Submarines, fractured tooth stabilization in 1970-135 responses to blood flow restricted rowing exercise-440 Succession splash, pneumocephalus due to inappropriate Valsalva technique-566 Situation awareness, in manual and automated rendezvous and Surgery docking-447 pancreatectomy for insulinoma in a pilot-826 Sleep cardiac activity in commercial aircrew during flight duty and-109, remote guidance for in-flight evaluation of VIIP/SANS-58, E1(Jan), 422 (Erratum), 579 (Letter) Surveillance, by operators of multiple unmanned aerial pilot, in long-range commercial flights-109, E1(Apr) vehicles-841 predicting errors in aircraft maintenance engineering-860 Survival school, training for Polish Naval Academy cadets-632 rest and activity patterns in military aviators-48 Sleep deprivation, survival school training for Polish naval academy Systemic circulation, adaptation to acute gravity changes-688 Systems Theoretic Accident Modeling and Processes (STAMP)-396 cadets-632 Sleepiness, speech analysis for pilot fatigue and 415 Soft tissue injury, risk due to space suit design-553 Solar particle events, managing radiation-induced illnesses during exploration spaceflight-966 Taxiing, pilots' fixation patterns and visibility during-546

Soldiers—See Military personnel

Team performance, on military all-women Antarctic expedition-18

Technical notes

BrAC/BAC as indicator of alcohol use problems–488 high altitude performance of earphones–655 in-flight evaluation of VIIP/SANS–58, 422 (Erratum), 579 (Letter) medication adverse reaction, risk stratification model–896 optimizing the Disorientation Research Device (Kraken)–901 Robotic On-Board Trainer for Research–819 template for cardiovascular risk assessment in pilots–730

Technical skills, performance aspects during military helicopter flights–389

Tension, effects on simulated flight performance-101

Thailand, version of motion sickness susceptibility questionnaire in-26

Third-culture kids, as commercial airline pilots, attitudes of –1026 Thornton, Dr. William–587 $\,$

Toxicity

of manganese compounds in Mars dust-709, E1(Aug) pulmonary oxygen, in military aircrew from breathing elevated oxygen-1041

Training

AGSM proficiency and depression in military pilots–613 high intensity interval, for combat preparedness–32 retraining intervals for helicopter underwater egress training–800 survival school for Polish naval cadets–632

Trauma, model for aeromedical evacuation of severely wounded–1016, E2(Dec)

Trousers

comparison of three anti-G systems for fast jet pilots-925 GravitySuit for spaceflight-993

Turkey

hot-air balloon tour accidents in Cappadocia area-123 restless legs syndrome in aircrew-934

Tympanometric test, new, for recurrent middle ear barotrauma in pilots-681

U

U.K. Royal Air Force, comparison of three anti-G trouser systems for–925

U.S. Air Force—See also Military pilots body composition in ROTC cadets-813

U.S. Army—*See also* Military pilots parachute mishap fatalities–637

U.S. Navy—See also Military pilots

readiness under new ACC/AHA blood pressure guidelines-409

Ultra-long-range flights

commercial, pilot sleep in-109, E1(Apr)

mild hypobaric hypoxia effects on skeletal muscle-1050, E1(Dec)

Ultrasound-guided procedures, remote, for in-flight evaluation of VIIP/SANS-58, E1(Jan), 422 (Erratum), 579 (Letter)

Underwater egress training, preferred retraining intervals for helicopter aircrew, 800

Unfit pilots, aviation safety vs. medical confidentiality-872

United States, aviation safety vs. medical confidentiality regulations in-872

Unmanned aerial vehicles (UAVs), adaptive ground control system for operators of multiple, 841

Upper respiratory infection, acute, in scarlet fever-139

Urea, monitoring in space missions-43

Urine, minerals monitoring in space missions-43

\mathbf{v}

Valsalva maneuver

by fighter pilot with internal jugular phlebectasia–132 pneumocephalus due to inappropriate technique–566

Venous gas emboli, risk in sustained vs. discontinuous high-altitude flight-534

Vestibular system, optimizing the Kraken Disorientation Research Device-901

Viral infections

dengue fever-660

measles in a pilot-908

returning to flight with treated chronic hepatitis B-37

Visibility, pilots' fixation patterns during taxiing-546

Visual illusions, spatial disorientation effect on working memory-531

Visual impairment, and intracranial pressure (VIIP), in-flight evaluation of –58, 422 (Erratum), 579 (Letter)

Voice analysis, as variable in task performance in space-624, E1(July)

von Diringshofen, Heinz-501

W

Waivers—See also Aeromedical disposition Statement of Demonstrated Ability (SODA)–1034 Women

central hypovolemia and menstrual cycle phases–378 performance on military expedition to Antarctica–18

Work Ability Index, factors affecting flight attendants-601

Workforce, readiness of naval aviators under new blood pressure guidelines-409

Working memory, spatial disorientation effect on-531 Workload

cardiac activity in commercial aircrew during flight duty-109, E1(Apr)

fatigue risk in airline crew over 4 days of flight duty-466 in manual and automated rendezvous and docking-447 pilot, predicting for a flight test-618

predicting fatigue-related errors in aircraft maintenance engineering-860

Y

You're the Flight Surgeon-63, 139, 419, 494, 496, 581, 583, 660, 740, 826, 908, 910, 986, 1064