

INDEX TO SUBJECTS

A

- Abstracts, 86th Annual Scientific Meeting-157
- Acceleration
in suborbital spaceflight, risks to participants with cardiac malformations-999
scrotal hematoma after centrifuge training in fighter pilot with varicocele-1063
- Accelerometers, determining psychomotor performance of helicopter pilots-641
- Accidents
evaluation of Human Factors Analysis and Classification System-728
Loss of Signal-Aeromedical Lessons Learned from the STS-107 Columbia Space Shuttle Mishap (Book Review)-752
- Actigraphy
6-month assessment of sleep at sea during naval deployment-481
cabin crew sleep and fatigue on ultra-long range flights-705
- Acute ischemic stroke, manual cervical manipulation leading to-1066
- Acute mountain sickness
effects of hypoxia, hypobaria, and exercise duration-614
exhaled nitric oxide in-693
statin use and-97
- Adrenal myelolipoma, aeromedical disposition after nephrectomy and splenectomy-421
- Aerial platforms, ad hoc, cabin temperature effect on crew well-being on-125
- Aerobic exercise capacity
effects on cardiac autonomic control in fighter pilots-875
responses to long-duration spaceflight on ISS-A78
upper body, as predictor of lower body performance-599
- Aeromedical disposition
acute low back pain in a fighter pilot-842
after nephrectomy and splenectomy for adrenal myelolipoma-421
atypical optic neuritis with Uhthoff phenomenon-845
brief reactive psychosis-69
bronchogenic cyst-144
cholelithiasis-577
complex regional pain syndrome-574
eosinophilic esophagitis-418, 742
epilepsy in a fighter pilot-500
for arrhythmogenic right ventricular cardiomyopathy-756
hand, foot, and mouth disease-497
herpes zoster in a flight surgeon-754
incidental suprasellar mass in military flying cadet-477
keratoconus in a flight surgeon-1004
lateral epicondylitis in a pilot-1077
Meckel's diverticulum in a student fighter pilot-1006
Ménière's disease-662
Miller-Fischer syndrome-918
Parkinson's disease-1046
pneumocephalus and neurosurgery in rotary aircrew-59
priapism caused by sickle cell trait-665
pulmonary sarcoidosis-67
sudden foot drop after centrifuge training-146
vitamin A toxicity from-920
white matter hyperintensities after prior trauma with LOC-928
- Aeromedical evacuation—*See also* Emergency medical services
pulmonary artery pressure response to simulated air travel-529
use of portable oxygen concentrators in-351
- Aerospace Medical Association (AsMA)
86th Annual Scientific Meeting Program and Abstracts-153
Association Business-327
Association News-151, 583, 669, 763
bylaws and proposed changes-333
making a difference in aerospace medicine-343, 427
medical guidelines for air travel—*See* Medical Guidelines
past presidents-327
position paper on sleep apnea screening in morbidly obese pilots-835
President's page-2, 75, 153, 343, 427, 507, 587, 687, 773, 851, 927, 1013
recommendations on pilot mental health-1013
tax code status of-851
- Aerospace medicine
history of—*See* History
importance of-75
- Aerospace Medicine and Human Performance*
making a difference-2
welcome-1
- Aerospace medicine specialist-507
- Ageing, preventing prospective memory failures in pilots-366
- Air traffic controllers
eosinophilic esophagitis in-418
quality of life, health, and sleep with different shift systems-895
- Air travel
AsMA medical guidelines for—*See* Medical Guidelines
in-flight echocardiography after scuba diving week-488(Letter)
simulated, pulmonary artery pressure response in hypobaric chamber-529
transcranial bright light and symptoms of jet lag-344, E1, E2, E3(Apr)
- Aircraft—*See also specific aircraft types*
delayed ejection in mishaps-774
Fast Flying Jets: Human Factors and Performance Limitations (Book Review)-143
cabin temperature and aircrew well-being on ad hoc platform flights-125
environmental tobacco smoke on, pilots' medical symptoms related to-458
inventor of sealed cabin-581
- Aircrew Flight Frame Operational style, assessment of alternative Army aircrew eyewear-1014
- Aircrew—*See also* Military aircrew and Pilots
otosclerosis and fitness to fly-1039
- Airports, humans as critical factor in aviation security (Commentary)-915
- Allergy, immune effects of prolonged simulated microgravity-803
- Altitude effects
exhaled nitric oxide in acute normobaric hypoxia-693
hypobaric hypoxia effects on contrast sensitivity-118
impact on sleep in Antarctica-392
increased prevalence of white matter hyperintensities-928
overactive performance monitoring at chronic high altitude-860
oxygen requirement to reverse hypoxemia-351
real-time effects of transient near-anoxia on-76
statin use and acute mountain sickness-97
unusual ocular complication of barotrauma at altitude-994
- Amphibious vehicles, rebreather unit to prolong underwater survival time-1028
- Anemia, with Meckel's diverticulum-1006

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.
Page numbers preceded by an "A" indicate that the article appears in the Supplement to the December issue.

Animal models

- DDFPe for decompression sickness in rats-21
- effects of weightlessness and iron excess-8, E1(Jan)
- first aid for decompression illness in goats after simulated submarine escape-1020
- immune effects of prolonged simulated microgravity in mice-803

Antarctica

- altitude and seasonality impact on sleep in-392
- statin use and acute mountain sickness in-97

Anxiety, cognitive and virtual reality treatment program for fear of flying-723

Aortic insufficiency, potential risks to commercial spaceflight participants with-999

Apnea training, hypercapnic ventilatory response before and after-27

Apollo program, review of lower body negative pressure research in-633

Arm-cranking exercise

- exercise tests and simulated mission task performance in astronauts-982
- predicting lower body performance with-599

Arrhythmogenic right ventricular cardiomyopathy, aeromedical disposition-756

Artificial gravity—See Microgravity, simulated and Simulated spaceflight

Asthma, immune effects of prolonged simulated microgravity on-803

Astronauts—See also Cosmonauts and Spaceflight

- aerobic exercise responses to long-duration spaceflight on ISS-A78
- assessment of postural stability after return from ISS-A45
- causes of shoulder injury in space suits-606
- challenges of estimating fracture risk with DXA-628
- Cognition* test battery for, development and validation of-942, E1(Nov)
- evaluating bone loss in ISS astronauts-A38
- Exercise Countermeasures: The First Decade on ISS (Supplement to December issue)-A1
- exercise tests and simulated mission task performance-982
- group dynamics during isolation at space station analogue-819
- hypobaric decompression sickness treatment model-508
- isokinetic strength changes after long-duration spaceflight on ISS-A68
- physical training for long-distance spaceflight-A14
- team composition for future space explorations-548, E1(June)
- training in remote-guidance ultrasound for exploration spaceflight-1034
- upper body aerobic exercise as predictor of lower body performance-599

Ataxia, assessment postural stability after return from ISS-A45

Automatic implantable cardioverter defibrillator (AICD), for arrhythmogenic right ventricular cardiomyopathy-756

Autonomic circulatory regulation, dose-effect relationship with mild levels of hypergravity-535

Autonomic nervous system, physical fitness and dehydration effects on cardiac-875

Autonomic responses, fluid loading effects in head-down tilt-88

Aviation—See also Aircraft and Pilots

- factors association with delayed ejection during-774
- security screening, humans as critical factor in (Commentary)-915
- training general aviation pilots for convective weather situations-881

Aviator spectacles, assessment of alternative Army aircrew eyewear-1014

B

Back pain

- flight bags as cause of injuries in commercial pilots-563
- in fighter pilots related to modern air combat developments-936
- low—See Low back pain

Barometric pressure changes, pneumocephalus and neurosurgery in rotary aircrew-59

Baroreflex, cardiac, response to mild levels of hypergravity-535

Barotrauma

- dental, in military divers-652
- unusual ocular pathology at altitude-994

Bed rest

- historical review of lower body negative pressure research-633
- low back pain in-541
- short-term, effect on portal and lower limb veins-524

Behavior adaptation, confinement vs. isolation in Mars mission models-131

Biomechanics, restraint harness performance during flight maneuvers-466

Blackhawk UH-60 helicopters—See Helicopters

Blind flying, origin of instrument flying-923

Blogs, as research resources for scientists and clinicians-415

Blood pressure

- during combined cognitive stress and lower body negative pressure-688
- evolution of monitors during first decade on ISS-A7

Body mass changes, during long-duration spaceflight (Commentary)-1070

Bodyweight, effects of iron overload and weightlessness in rats-8, E1(Jan)

Bohannon, Lt. Gen. Richard L., training pilot-physicians for Manned Orbiting Laboratory program-1010

Bone densitometry, challenges of estimating fracture risk with-628

Bone loss

- due to iron excess and weightlessness-8, E1(Jan)
- evaluating in ISS astronauts-A38
- in astronauts, challenges of estimating fracture risk with DXA-628

Bone mineral density

- evaluating in ISS astronauts-A38

Book reviews—See Reviews

Boyle's law, hypobaric decompression sickness treatment model-508

Bradykinesia, in Parkinson's disease, aeromedical implications in civilian pilots-1046

Brain lesions, incidental suprasellar mass in military flight cadet-477

Braslet-M thigh cuffs, evolution during first decade on ISS-A32

Breath-hold time

- before and after apnea training-27
- in air and water during helicopter underwater egress training-82

Breathing, diaphragmatic, for motion sickness management-452

Bronchogenic cyst, aeromedical disposition-144

Brownout conditions

- BrownOut Symbolology System, in-flight testing in degraded visual environments-714

- testing in simulated degraded visual environments-588

Bruxism, craniofacial muscle thermography in military pilots with-374, E4(Apr)

C

Cabin crew, managing sleep and fatigue on ultra-long range flights-705

Cabin decompression

- positive pressure breathing simulation model at ground level-15
- subtle presentation of decompression sickness after-1058

Cabin humidity, stresses of flight, in AsMA medical guidelines for air travel-486

Cabin pressure

- pulmonary artery pressure response to simulated air travel-529
- stresses of flight, in AsMA medical guidelines for air travel-486

Cadet, military flight, incidental suprasellar mass in-477

Caffeine, brief reactive psychosis due to sleep deprivation and-69

Calf veins, effect of 5-day bed rest with microgravity countermeasures-524

- Canadian Space Agency (CSA), physical training for long-duration spaceflight aboard ISS-A14
- Carbon dioxide
cerebrovascular response to, after intermittent hypoxia-782
retention in recreational rebreather divers-41
sensitivity to, before and after apnea training-27
- Cardiac baroreflex, response to mild levels of hypergravity-535
- Cardiac implanted devices, simulated suborbital, spaceflight in subjects with-410
- Cardiology
arrhythmogenic right ventricular cardiomyopathy-756
risks to suborbital spaceflight participants with cardiac malformations-999
- Case reports
6-month assessment of sleep during naval deployment-481
cervical manipulation leading to cerebellar stroke in pilot-1066
eosinophilic esophagitis with dysphagia and food impaction-742
G tolerance in diabetics with implanted insulin pumps-407
incidental suprasellar mass in military flying cadet-477
isolated perivesicular hematoma after military parachuting-136
mechanical neck pain in helicopter pilots-907
personality factors in unsuccessful special forces polar expedition-567
pneumocephalus and neurosurgery in rotary aircrew-59, 414(Letter)
risks of commercial spaceflight participant with cardiac malformations-999
scrotal hematoma after centrifuge training in pilot with varicocele-1063
simulated suborbital spaceflight in subjects with cardiac implanted devices-410
subtle presentation of decompression sickness-1058
unusual complication of barotrauma at altitude-994
- Centrifugation, intermittent, as countermeasure during 5-day bed rest-524
- Centrifuge training
acute spinal injury in fighter pilots after-386
scrotal hematoma after, in fighter pilot with varicocele-1063
sudden foot drop after-146
- Cerebral blood flow velocity, during combined lower body negative pressure and cognitive stress-688
- Cerebrovascular control, response to CO₂ after intermittent hypoxia-782
- Cervical manipulation, manual, leading to vertebral artery dissection and stroke in a pilot-1066
- Cervical spine
neck pain and sagittal alignment in Air Force pilots-445
neck pain in F-16 vs. Typhoon fighter pilots-402
neck pain in helicopter aircrew due to night vision goggles-46
- Chest X-rays, bronchogenic cyst-144
- Chibis lower body negative pressure suit, use during first decade on ISS-A32
- Cholelithiasis, in Air Force aeromedical evacuation nurse-577
- Cholesterol, statin use and acute mountain sickness-97
- Clearances, medical, for air travel, AsMA medical guidelines on-656
- Cognition test battery, for spaceflight, development and validation of-942, E1(Nov)
- Cognitive behavioral techniques, in treatment program for fear of flying-723
- Cognitive deficits, of normobaric hypoxia, recovery time from-357
- Cognitive performance
humans as critical factor in aviation security (Commentary)-915
preventing prospective memory failures in pilots-366
real-time effects of transient near-anoxia on-76
- Cognitive stress, cerebral blood flow velocity during lower body negative pressure and-688
- Cold water immersion, breath-hold times during helicopter underwater egress training-82
- Color vision
comparison of Color Dx Military Research test and three printed tests-852
modified protocol for screening-747
quantification of using tablet display-56
unusual ocular complication of barotrauma at altitude-994
- Columbia space shuttle, *Loss of Signal-Aeromedical Lessons Learned from the STS-107 Columbia Space Shuttle Mishap* (Book Review)-752
- Commercial airline pilots
flight bags as cause of back injuries in-563
managing cabin crew sleep and fatigue on ultra-long range flights-705
medical symptoms associated with work and home environments-458
solar eye protection practices of civilian aircrew-953
- Commercial airlines
emergency medical kit contents for in-flight medical care-572
first aid kit contents for in-flight medical care-572
special services, AsMA medical guidelines on-657
universal precautions kit contents for in-flight medical care-572
- Commercial off-the-shelf aircraft, cabin temperature effect on military crew well-being on-125
- Commercial spaceflight participants
cardiac implanted devices in-410
G tolerance in diabetics with implanted insulin pumps-407
with Tetralogy of Fallot-999
- Complex regional pain syndrome, aeromedical disposition-574
- Computerized dynamic posturography, assessing sensorimotor function after return from ISS-A45
- Computing, human, and super forecasting-1072
- Concentrators, portable oxygen, to reverse altitude-induced hypoxemia-351
- Cone contrast test, color vision testing using tablet displays-56
- Confinement
Cognition test battery for spaceflight-942, E1(Nov)
sleep deprivation in simulated spaceflight operations and-865
vs. isolation, as model for Mars missions-131
- Contrast sensitivity, hypobaric hypoxia effects on at high altitude-118
- Core strengthening, in helicopter crewmembers with low back pain-889
- Corneal pathologies, keratoconus-1004
- Corneal thickness, hypobaric hypoxia effects on contrast sensitivity and-118
- Cosmonauts, exercise countermeasures used by in first decade on ISS-A24, A32
- Countermeasures
5-day bed rest effect on portal and lower limb veins-524
Exercise—See Exercise Countermeasures
for post-spaceflight orthostatic hypotension-88
- Craniofacial muscles, infrared thermography of, in military pilots with bruxism-374, E4 (Apr)
- Craniopharyngioma, aeromedical disposition-477
- Crowdsourcing, human computing and super forecasting-1072
- Cycle ergometer, evolution of, during first decade on ISS-A7, A32

D

- Database management, storing and processing complex data sets with HDF5-659
- Datalink weather technology, training general aviation pilots for convective weather situations-881
- De Haven, Hugh, Crash Injury Research Project at Cornell-849
- Death, reported in-flight, AsMA medical guidelines for advising patients-571
- Decompression, end-tidal CO₂ in recreational rebreather divers-41
- Decompression illness, first aid oxygen treatment for goats after simulated submarine escape-1020

Decompression sickness
 DDFPe treatment in rats-21
 Hypobaric, treatment model for-508
 identifying subtle presentation of-1058
 Deconditioning, in spaceflight—*See* Exercise countermeasures
 Degraded visual environments
 helmet-mounted symbology system concepts in-588, 714
 in-flight study-714
 simulator study-588
 Dehydration, effects on cardiac autonomic control in fighter pilots-875
 Dental barotrauma, in military divers-652
 Dental occlusion, craniofacial muscle thermography in military pilots with bruxism-374, E4 (Apr)
 Dentistry
 craniofacial muscle thermography in military pilots with bruxism-374, E4 (Apr)
 dental barotrauma in military divers-652
 Diabetes mellitus, G tolerance in subjects with implanted insulin pumps-407
 Diagnostics, portable radiography for ISS and explorer class missions (Commentary)-140
 Diaphragmatic breathing, for motion sickness management-452
 Digital fabrication
 onsite printing of custom mallet splints for Mars analogue crewmembers-911
 ultra-portable solar-powered 3D printers for use onsite-830
 Diplopia, in Miller-Fischer syndrome-918
 Disorientation—*See* Spatial disorientation
 Displacement, group dynamics during isolation at space station analogue-819
 Distressed submarine (DISSUB), first aid oxygen treatment for decompression illness after escape-1020
 Diving
 DDFPe for decompression sickness in rats-21
 dental barotrauma in French military divers-652
 end-tidal CO₂ in recreational rebreather divers-41
 hypercapnic ventilatory response and repeated apneas-27
 in-flight echocardiography after a week of Scuba diving-488(Letter)
 increased prevalence of white matter injury in healthy divers-928
 Dodecafluoropentane (DDFPe), treatment of decompression sickness in rats-21
 Dose-effect relationships, between hypergravity and autonomic circulatory regulation-535
 Drowning, novel rescue-tube device for in-water resuscitation-379
 Dual-energy X-ray absorptiometry (DXA), challenges of estimating fracture risk with-628
 Dysphagia, eosinophilic esophagitis with food impaction and-742

E

Ear, nose, and throat (ENT)
 Ménière's disease in a pilot-662
 otosclerosis and fitness to fly-1039
 Earplugs, molded communication, in military aviation-808
 Echocardiography, in-flight, after a week of Scuba diving-488(Letter)
 Ejection, from aircraft, factors associated with delayed-774
 Elderly passengers, pulmonary artery pressure response to simulated air travel-529
 Electrical muscle stimulator, evolution of, during first decade on ISS-A32
 Electrocardiogram monitors, evolution of, during first decade on ISS-A7
 Emergencies, in-flight
 factors associated with delayed ejection-774
 reported medical, AsMA guidelines for advising patients-571
 Emergency breathing system, in helicopter underwater egress training-82
 Emergency medical services (EMS), ground and helicopter, comparing travel times with GIS-620

Emergency underwater breathing apparatus, rebreather unit to prolong underwater survival time in cold water-1028
 Emotions
 cognitive workload and physiological parameters in helicopter pilots-1052
 group dynamics during isolation at space station analogue-819
 Endurance, exercise tests and simulated mission task performance in astronauts-982
 Environmental tobacco smoke, exposure to, in commercial airline pilots-458
 Environments, extreme—*See* Extreme environments
 Eosinophilic esophagitis
 in an air traffic control student-418
 with dysphagia and food impaction-742
 Epilepsy, aeromedical disposition in a fighter pilot-500
 Ergonomics
 core strengthening in helicopter crewmembers with low back pain-889
 flight bags as cause of back injuries in commercial pilots-563
 Erratum-580
 Error analysis, Human Factors Analysis and Classification System-728
 Esophagitis, eosinophilic
 in an air traffic control student-418
 with dysphagia and food impaction-742
 European Space Agency (ESA)
 exercise countermeasure hardware for ISS-A7
 physical training for long-duration spaceflight aboard ISS-A14
 Evidence-based medicine
 aeromedical risk assessment of pharmaceuticals using-824
 in human performance-64
 Exercise
 core strengthening in helicopter crewmembers with low back pain-889
 duration of, effects on acute mountain sickness-614
 effect on kidney function on ISS-472
 mood state in normobaric hypoxia and-976
 tests of astronauts, and simulated mission task performance-982
 upper body aerobic, as predictor of lower body performance-599
 Exercise countermeasures
 First Decade on ISS (Supplement to December issue)
 aerobic exercise responses after-A78
 computerized dynamic posturography to assess sensorimotor function after-A45
 evaluating bone loss in ISS astronauts-A38
 evolution of Russian countermeasures-A32
 functional fitness test results after-A87
 hardware evolution for-A7
 isokinetic strength changes after-A68
 lessons learned on expeditions 1-25-A1
 orthostatic intolerance after ISS and shuttle missions and-A54
 physical training for-A14
 Russian systems for-A24
 summary and future directions for-A92
 Explorer-class missions
 confinement vs. isolation as analogue environment for-131
 portable radiography for (Commentary)-140
 team composition issues for future-548, E1(June)
 Extravehicular activity training
 causes of astronaut shoulder injury in space suits-606
 exercise tests and simulated mission task performance in astronauts-982
 Extreme environments
 altitude and seasonality impact on sleep in Antarctica-392
 confinement vs. isolation in Mars mission models-131
 personality factors in unsuccessful special forces polar expedition-567
 ultra-portable solar-powered 3D printers for use onsite-830
 Eye fixations, spatial patterns of, and ultradian rhythms in pilots

F

- F-16 pilots—*See also* Military pilots
 modern air combat developments and neck and back pain in-936
 neck pain in F-16 vs. Typhoon pilots-402
- Fatigue
 6-month assessment of sleep during naval deployment-481
 cabin crew, management on ultra-long range flights-705
 subtle presentation of decompression sickness in aircrew-1058
 validation of portable psychomotor vigilance test-428
- Fatigue risk management system, for cabin crew on ultra-long range flights-705
- Fear of flying, cognitive and virtual reality treatment program for-723
- Fearless temperament, personality factors in unsuccessful special forces polar expedition-567
- Female pilots, recurrent and transient spinal pain among commercial helicopter pilots-962
- Field studies
 6-month assessment of sleep during naval deployment-481
 effect of transcranial bright light on jet lag symptoms-344, E1, E2, E3(Apr)
- Fighter jets, restraint harness performance during flight maneuvers-466
- Fighter pilots—*See* Military pilots
- First aid
 AsMA guidelines for in-flight medical care-572
 oxygen treatment for decompression illness after submarine escape-1020
- Fitness to fly, aircrew—*See also* Aeromedical disposition
 history of Schneider index-1081
 otosclerosis and-1039
- Fitness to fly, passengers
 AsMA medical guidelines on-656
 pulmonary artery pressure response to simulated air travel-529
- Fitness, physical
 effects on cardiac autonomic control in fighter pilots-875
 functional fitness testing after long-duration spaceflight on ISS-A87
- Flight attendants, occupational exposure measurement error in study of-990
- Flight bags, as cause of back injuries in commercial pilots-563
- Flight duties, return to—*See* Aeromedical disposition
- Flight maneuvers
 determining psychomotor performance of helicopter pilots during-641
 restraint harness performance during-466
- Flight phobia, cognitive and virtual reality treatment program for-723
- Flight surgeons
 origin of first naval-149
 pre-World War I historical perspective on-424
- Fluid loading, countermeasure for orthostatic hypotension after spaceflight-88
- Food impaction, eosinophilic esophagitis with dysphagia and-742
- Foot drop, sudden, after centrifuge training-146
- Force loader, evolution during first decade on ISS-A32
- Fracture risk, in astronauts, challenges of estimating with DXA-628
 Parkinson's disease, aeromedical implications in civilian pilots-1046
- Functional fitness testing, after long-duration spaceflight on ISS-A87
- Fused deposition modeling
 onsite printing of custom mallet splints-911
 ultra-portable solar-powered 3D printers-830

G

- G forces
 acute spinal injury in fighter pilots after centrifuge training-386
 G duration tolerance of fighter pilots, unpredictability of-397
 scrotal hematoma after centrifuge training in fighter pilot with varicocele-1063

- G-suits, positive pressure breathing simulation model at ground level-15
- Gait, at sea while walking fore-aft vs. athwart-435
- Gas exchange threshold, predicting lower body performance with upper body aerobic exercise-599
- Gastroenterology
 cholelithiasis in Air Force aeromedical evacuation nurse-577
 eosinophilic esophagitis in air traffic control student-418
 eosinophilic esophagitis with dysphagia and food impaction-742
 Meckel's diverticulum in a student fighter pilot-1006
- Gemini program, aerospace medicine in 1965-73
- Gender differences
Absent Aviators—Gender Issues in Aviation (Book Review)-493
 in motion sickness induced by linear visual oscillation-787
 in navigational memory of pilots and non-pilots-103
- General aviation, training pilots for convective weather situations-881
- Geographic information systems (GIS), comparing ground and helicopter EMS travel times with-620
- Glioma, aeromedical disposition of low grade-477
- Global health, ultra-portable solar-powered 3D printers for use off the grid-830
- Go/no-go task, overactive performance monitoring at chronic high altitude-860
- Goats—*See* Animal models
- Guidelines, AsMA medical, for air travel—*See* Medical Guidelines

H

- Hand injuries, onsite 3D printing of custom mallet splints for Mars analogue crewmembers-911
- Hand, foot, and mouth disease, aeromedical disposition in-497
- Hardware systems, for exercise countermeasures, evolution of on ISS-A7
- Hardy Rand Rittler (HRR) color vision test, compared with mColorDx test-852
- Head trauma, white matter hyperintensities after prior trauma with loss of consciousness-928
- Head-down tilt
 fluid loading effects and cardiovascular responses-88
 lower body negative pressure reduces intraocular and intracranial pressure during-3
- Health, of air traffic controllers on different shift systems-895
- Hearing loss
 Ménière's disease in a pilot-662
 otosclerosis and fitness to fly-1039
- Hearing protection, molded communication earplugs in military aviation-808
- Heart disease—*See* Cardiology
- Heart rate monitors, evolution during first decade on ISS-A7
- Heart rate variability
 diaphragmatic breathing for motion sickness management-452
 estimating pilots' psychophysiological load-518
 physical fitness and dehydration effects on autonomic control of-875
- Heart valves, artificial, potential risks to commercial spaceflight participants with-999
- Helicopter pilots
 cognitive workload and physiological parameters in multitask activity-1052
 conservative management of mechanical neck pain in-907
 determining psychomotor performance during flight maneuvers-641
 helmet-mounted symbology concepts in degraded visual environments-588
 neck pain due to night vision goggles-46
 recurrent and transient spinal pain among commercial-962
- Helicopters
 Blackhawk UH-60-34, 815

- breath-hold times in underwater egress training-82
 comparison with ground EMS travel times with GIS-620
 core strengthening in crewmembers with low back pain-889
 pneumocephalus and neurosurgery in aircrew-59, 414(Letter)
 prolonged restricted sitting effects in UH-60-34
 tissue changes during operational load bearing using MRI in UH-60-815
 UH-60-34, 815
 Helmet Display Tracking System, testing in simulated and degraded visual environments-588
 Hematoma, isolated perivesicular, after military parachuting-136
 Herpes zoster, in a flight surgeon-754
 Hierarchical Data Format (HDF) 5, storing and processing complex data sets with-659
 High-altitude pulmonary edema, exhaled nitric oxide in acute normobaric hypoxia-693
 Hind limb unloading model, prolonged, immune effects on murine allergic asthma-803
 History
 Crash Injury Research project at Cornell-849
 first naval flight surgeons-149
 firsts in space and space medicine-73
 Focus on Aerospace Medicine History-73, 149, 424, 504, 581, 849, 923, 1010, 1081
 historical review of lower body negative pressure research-633
 invention of sealed cabin-581
 NASA's contribution to development of telemedicine-504
 of Schneider index-1081
 origins of instrument flying-923
 pre-World War I perspective on flight surgeons-424
 This Month in Aerospace Medicine History-74,150, 426, 506, 582, 668, 760, 850, 925, 1012, 1082
 training pilot-physicians for Manned Orbiting Laboratory program-1010
 Home environment, for commercial airline pilots, medical symptoms associated with-458
 Human computing, and super forecasting-1072
 Human factors
 factors associated with delayed ejection in aviation mishaps-774
 in aviation security (Commentary)-915
 quality of life of air traffic controllers on different shift systems-895
 Human Factors Analysis and Classification System, evaluating reliability of-728
 Human performance
 bringing evidence to practice of-64
 Cognition test battery for spaceflight-development and validation of-942, E1(Nov)
 exercise tests and simulated mission task performance in astronauts-982
 Fast Flying Jets: Human Factors and Performance Limitations (Book Review)-143
 gait at sea while walking fore-aft vs. athwart-435
 measuring tax complexity in flight-698
 real-time effects of transient near-anoxia on-76
 recovery from normobaric hypoxia-357
 remotely piloted aircraft human-system integration-736
 team composition issues for future space explorations-548, E1(June)
 upper body aerobic exercise as predictor of lower body performance-599
 validation of portable psychomotor vigilance test-428
 Human-systems integration, for remotely piloted aircraft-736
 Hyperbaric exposures, increased prevalence of white matter hyperintensities in healthy divers-928
 Hyperbaric therapy, for decompression sickness in aircrew-1058
 Hypercapnic ventilatory response, before and after apnea training-27
 Hypergravity, dose-effect relationship with autonomic circulatory regulation-535
 Hypertension, spaceflight-induced intracranial-557
 Hypobaric chamber, pulmonary artery pressure response in-529
 Hypobaric decompression sickness, treatment model for-508
 Hypobaric hypoxia
 altitude and seasonality impact on sleep in Antarctica-392
 effects on acute mountain sickness-614
 effects on contrast sensitivity at high altitude-118
 oxygen requirement to reverse altitude-induced-351
 Hypothalamic hamartoma, aeromedical disposition of-477
 Hypoxemia, oxygen requirement to reverse altitude-induced hypoxemia-351
 Hypoxia
 aircraft cabin, pulmonary artery pressure response to-529
 cerebrovascular response to CO₂ after intermittent-782
 effects on acute mountain sickness-614
 exercise improves mood state in-976
 exhaled nitric oxide in acute normobaric-693
 hypobaric, effects on contrast sensitivity at high altitude-118
 normobaric, effects on performance and recovery time-357
 novel rescue-tube device for in-water resuscitation-379
 positive pressure breathing simulation model at ground level-15
 robust detection with pulse oximeter signal fusion-495
 transient, real-time effects on performance-76
- ## I
- Illness, reported in-flight, AsMA guidelines for advising patients-571
 Immunology, immune effects of prolonged simulated microgravity-803
 Implanted medical devices
 AICD for arrhythmogenic right ventricular cardiomyopathy-756
 cardiac devices, simulated suborbital spaceflight in subjects with-410
 insulin pumps, G tolerance in diabetics with-407
 In-flight emergencies
 AsMA guidelines for in-flight medical care-572
 factors associated with delayed ejection during-774
 reported medical events, AsMA guidelines for advising patients-571
 In-flight research, estimating pilots' psychophysiological load-518
 In-water resuscitation, novel rescue-tube device for-379
 Incidental findings, suprasellar mass in military flying cadet-477
 Infarct, manual cervical manipulation leading to cerebellar stroke-1066
 Infrared thermography, of craniofacial muscles in military pilots with bruxism-374, E4(Apr)
 Injuries
 acute spinal injury after centrifuge training-386
 back, flight bags as cause of in commercial pilots-563
 isolated perivesicular hematoma after military parachuting-136
 shoulder, causes of in astronauts in space suits-606
 Institute for Biomedical Problems (Russia), Evolution and history of exercise countermeasure systems on ISS-A24
 Instrument flying, origins of blind flying and-923
 Insulin pumps, G tolerance in diabetics with implanted-407
 Intermittent hypoxia, cerebrovascular response to CO₂ after-782
 International Space Station (ISS)
 body mass changes during long-duration spaceflight (Commentary)-1070
 effect of physical exercise on kidney function-472
 exercise countermeasures, first decade on ISS (Supplement to December issue)—See Exercise Countermeasures
 portable radiography for (Commentary)-140
 review of lower body negative pressure research in-633
 Interpersonal interactions, group dynamics during isolation at space station analogue-819
 Intervertebral disk, low back pain in microgravity and bed rest studies-541
 Intracranial hypertension, spaceflight-induced-557

Intracranial pressure
 lower body negative pressure during head-down tilt-3
 spaceflight-induced intracranial hypertension-557
 vision impairment and-557
 Intraocular pressure, lower body negative pressure during head-down tilt-3
 Iron overload, effects of weightlessness and-8, E1(Jan)
 Ishihara test
 compared with mColorDx test-852
 modified protocol for color vision screening using-747
 Isokinetic strength changes, after long-duration spaceflight on ISS-A68
 Isolation
Cognition test battery for spaceflight-942, E1(Nov)
 group dynamics at space station analogue-819
 vs. confinement as model for Mars missions-131

J

Japan Aerospace Exploration Agency (JAXA), physical training for long-duration spaceflight aboard ISS-A14
 Jet lag
 stresses of flight, in AsMA medical guidelines for air travel-486
 transcranial bright light and symptoms of-344, E1, E2, E3(Apr)
 Joint helmet mounted cueing system, neck and back pain in fighter pilots related to-936

K

Karolinska Sleepiness Scale
 cabin crew sleep and fatigue on ultra-long range flights-705
 transcranial bright light and symptoms of-344, E1, E2, E3(Apr)
 Kentavr G-suit, use during first decade on ISS-A32
 Keratoconus, aeromedical disposition in a flight surgeon-1004
 Korean Air Force—*See* Military Pilots
 Kyphosis, neck pain and cervical sagittal alignment in pilots-445

L

Laryngeal tube, novel rescue-tube device for in-water resuscitation-379
 Lateral epicondylitis, in a pilot, aeromedical disposition-1077
 Leadership, group dynamics during isolation at space station analogue-819
 Libraries, public, as research resources-415
 Linear Acceleration Mass Measurement Device, body mass changes during long-duration spaceflight (Commentary)-1070
 Liver damage, due to iron excess and weightlessness-8, E1(Jan)
 Load-bearing stress, tissue changes on MRI in UH-helicopter aircrew during-815
 Loading suite, evolution of, during first decade on ISS-A32
 Long-duration flights, cabin temperature and aircrew well-being on ad hoc platform flights-125
 Long-duration space missions—*See also* International Space Station and Explorer-class missions
 body mass changes during (Commentary)-1070
 ultra-portable solar-powered 3D printers for use on-830
 Loss of consciousness, white matter hyperintensities after history of head trauma and-1075
 Low back pain
 acute, aeromedical disposition in a fighter pilot-842
 core strengthening exercises in helicopter crewmembers-889
 flight bags as cause of injuries in commercial pilots-563
 in microgravity and bed rest studies-541
 recurrent and transient, among commercial helicopter pilots-962
 tissue changes on MRI during load bearing in UH-60 helicopter-815
 Low density lipoprotein (LDL), statin use and acute mountain sickness-97

Lower body negative pressure
 Chibis suit, use during first decade on ISS-A32
 history of space medicine research on-633
 intraocular and intracranial pressure during head-down tilt-3
 with cognitive stress, cerebral blood flow velocity during-688
 Lunar Palace 1, group dynamics during isolation at space station analogue-819

M

Magnetic resonance imaging (MRI)
 increased prevalence of white matter hyperintensities in healthy divers-928
 tissue changes during load bearing in UH-60 helicopters-815
 Mallet splints, functional custom, onsite 3D printing of-911
 Manipulation therapy, spinal, for mechanical neck pain in helicopter pilots-907
 Manned Orbiting Laboratory program, training pilot-physicians for-1010
 Markers, clinical, of metabolic syndrome among military aircrew-970
 Mars analogue missions
 onsite 3D printing of custom mallet splints-911
 team composition issues for future-548, E1(June)
 ultra-portable solar-powered 3D printers for use on-830
 Mars-500 experiment, as analogue environment for Mars missions-131
 Mechanical neck pain, conservative management in helicopter pilots-907
 Meckel's diverticulum, aeromedical disposition in a student fighter pilot-1006
 Medical events
 AsMA guidelines for in-flight medical care-572
 reported in-flight, AsMA guidelines for advising patients-571
 Medical guidelines
 AsMA medical guidelines for air travel
 airline special services-657
 fitness to fly and medical clearances-656
 in-flight medical care-572
 reported in-flight medical events and death-571
 stresses of flight-486
 Medications, aeromedical risk assessment of pharmaceuticals-824
 Memory, prospective, preventing failures of, in aviation-366
 Ménière's disease, in a pilot-662
 Mental health
 brief reactive psychosis in a military pilot-69
 of pilots, AsMA Working Group recommendations on-1013
 Mental workload, spatial patterns of eye fixations and ultradian rhythms in pilots-647
 Metabolic syndrome, clinical markers among military aviators-970
 Mice—*See* Animal models
 Microgravity—*See also* Simulated spaceflight
 5-day bed rest effect on portal and lower limb veins-524
Cognition test battery for spaceflight, development and validation of-942, E1(Nov)
 Exercise Countermeasures: The First Decade on ISS (Supplement to December issue)-A1
 low back pain in-541
 Middle cerebral artery, blood flow velocity during lower body negative pressure and cognitive stress-688
 Military aircrew—*See also* Military pilots
 assessment of alternative Army aircrew eyewear-1014
 cabin temperature effect on well-being on ad hoc platform flights-125
 identifying subtle presentation of decompression sickness in-1058
 isolated perivesicular hematoma after parachuting-136
 neck pain due to night vision goggles-46
 pneumocephalus and neurosurgery in rotary aircrew-59, 414(Letter)
 prolonged restricted sitting effects in UH-60 helicopters-34

tissue changes during operational load bearing in UH-60 helicopters-815

Military divers, dental barotrauma in-652

Military flight cadets
incidental suprasellar mass in-477
white matter hyperintensities after prior head trauma-1075

Military parachuting, isolated perivesicular hematoma after-136

Military personnel, personality factors in unsuccessful special forces polar expedition-567

Military pilots
acute low back pain in fighter pilots-842
acute spinal injury after centrifuge training in fighter pilots-386
bruxism, craniofacial muscle thermography in-374, E4(Apr)
clinical markers of metabolic syndrome among-970
modern air combat developments and neck and back pain in fighter pilots-936
molded communication earplugs for-808
neck pain and cervical sagittal alignment in fighter vs. non-fighter pilots-445
neck pain in F-16 vs. Typhoon pilots-402
physical fitness and dehydration effects on cardiac autonomic control in fighter pilots-875
real-time effects of transient near-anoxia on-76
unpredictability of G duration tolerance in fighter pilots-397

Miller-Fischer syndrome, aeromedical disposition-918

Mobilization therapy, for mechanical neck pain in helicopter pilots-907

Mood state, effect of exercise on, in normobaric hypoxia-976

Motion sickness
and visual blur in optokinetic drum-440
diaphragmatic breathing for management of-452
induced by linear visual oscillation, gender differences in-787
sleep duration in rough sea conditions-901

Multiple sclerosis, atypical optic neuritis as possible sign of-845

Multitask activity, cognitive workload and physiological parameters in helicopter pilots-1052

Musculoskeletal injury, tissue changes on MRI during load bearing in helicopter aircrew-815

Myelolipoma, adrenal-421

N

National Aeronautics and Space Administration (NASA)
exercise countermeasure hardware evolution aboard ISS-A7
Exercise Countermeasures: The First Decade on ISS (Supplement to December issue)-A1
physical training for long-duration spaceflight on ISS-A14
role in development of telemedicine-504

Naval deployment, 6-month assessment of sleep at sea during-481

Navigational memory, gender differences in pilots and non-pilots-103

Neck pain
and cervical sagittal alignment in Air Force pilots-445
due to night vision goggles in military helicopter aircrew-46
in F-16 vs. Typhoon fighter pilots-402
in fighter pilots related to modern air combat developments-936
mechanical, conservative management in helicopter pilots-907
recurrent and transient, among commercial helicopter pilots-962

Nephrectomy, for adrenal myelolipoma-421

Nerve conduction studies, sudden foot drop after centrifuge training-146

Neurobehavioral performance, validation of portable psychomotor vigilance test-428

Neurological conditions
complex regional pain syndrome-574
manual cervical manipulation and vertebral artery dissection-1066
Miller-Fischer syndrome-918
Parkinson's disease-1046
pneumocephalus in rotary aircrew-59, 414(Letter)
sudden foot drop after centrifuge training-146

Neuropathy, peroneal, sudden foot drop after centrifuge training-146

Neurophilosophy, *Touching a Nerve* (Book Review)-752

Neuropsychological tests, *Cognition* test battery for spaceflight-942, E1(Nov)

Neurosurgery, pneumocephalus in rotary aircrew-59, 414(Letter)

Next Generation Weather Radar (NEXRAD), training general aviation pilots on-881

Night vision goggles
neck and back pain in fighter pilots related to-936
neck pain in military helicopter aircrew due to-46

Nitric oxide, exhaled, in acute normobaric hypoxia-693

Noise, molded communication earplugs for military aviation-808

Normobaric hypoxia
effects on acute mountain sickness-614
effects on performance and recovery time-357
exercise improves mood state in-976
exhaled nitric oxide in acute-693

Nutritional status, of air traffic controllers on different shift systems-895

O

Obesity, morbid, screening for sleep apnea in pilots with (AsMA Position Paper)-835

Obstructive sleep apnea, screening in morbidly obese pilots (AsMA Position Paper)-835

Occlusal splint, craniofacial muscle thermography in military pilots with bruxism-374, E4 (Apr)

Occupational exposures
flight bags as cause of back injuries in commercial pilots-563
isolated perivesicular hematoma after military parachuting-136
measurement error in study of flight attendants-990
prostate cancer risk in pilots-112; retraction-491
recurrent and transient spinal pain among commercial helicopter pilots-962
subtle presentation of decompression sickness in aircrew-1058

Odontological problems, dental barotrauma in French military divers-652

Operation complexity, sleep deprivation and confinement in simulated spaceflight-865

Ophthalmology
atypical optic neuritis with Uhthoff phenomenon-845
color vision testing using tablet displays-56
comparison of mColorDx color vision test and three printed tests-852
hypobaric hypoxia effects on corneal thickness and contrast sensitivity-118
keratoconus in a flight surgeon-1004
Miller-Fischer syndrome-918
modified protocol for color vision screening-747
reducing intraocular and intracranial pressure during head-down tilt-3
unusual ocular complication of barotrauma at altitude-994

Optic flow, effect of stimuli on ground surfaces on vection-794

Optic neuritis, atypical, with Uhthoff phenomenon-845

Optic neuropathy, unusual complication of barotrauma at altitude-994

Optometry, assessment of alternative Army aircrew eyewear-1014

Orthopedics, lateral epicondylitis in a pilot-1077

Orthostatic intolerance
after ISS and space shuttle missions-A54
fluid loading effects in head-down tilt-88

Orthostatic stress, simulated, with cognitive stress, cerebral blood flow velocity during-688

Osteoma, pneumocephalus and neurosurgery in rotary aircrew-59

Otosclerosis, and aircrew fitness to fly-1039

Over the counter medications, vitamin A toxicity from sports supplements-920

Overconfidence, personality factors in unsuccessful special forces polar expedition-567
 Oxygen
 first aid for decompression illness after submarine escape-1020
 positive pressure breathing simulation model at ground level-15
 supplemental, AsMA medical guidelines for air travel and-657
 Oxygen concentrators, portable, to reverse altitude-induced hypoxemia-351
 Oxygen exposure limits, end-tidal CO₂ in recreational rebreather divers-41
 Oxygen window, hypobaric decompression sickness treatment model-508

P

Pacemakers, simulated suborbital spaceflight in subjects with-410
 Pachymetry, hypobaric hypoxia effects on corneal thickness and contrast sensitivity-118
 Pain management, complex regional pain syndrome in fighter squadron crew-574
 Parachuting, isolated perivesicular hematoma after-136
 Parkinson's disease, aeromedical implications-1046
 Passengers, aircraft
 AsMA medical guidelines for physicians advising—486, 571, 572, 656, 657
 airline special services-657
 fitness to fly and medical clearances-656
 in-flight medical care-572
 reported in-flight medical events and death-571
 stresses of flight-486
 fear of flying, cognitive and virtual reality treatment program for-723
 pulmonary artery pressure response to simulated air travel-529
 Penguin-3 loading suit, evolution during first decade on ISS-A32
 Perceptual deficits, of normobaric hypoxia, recovery time from-357
 Perfluorocarbons, DDFPe for decompression sickness in rats-21
 Performance—*See* Human performance
 Performance monitoring, overactive, due to chronic high altitude exposure-860
 Peroneal neuropathy, sudden foot drop after centrifuge training-146
 Personality traits, as factor in unsuccessful special forces polar expedition-567
 Personnel selection
 effect on remotely piloted aircraft human-systems integration-736
 humans as critical factor in aviation security (Commentary)-915
 Pharmaceuticals, aeromedical risk assessment of-824
 Photovoltaics, ultra-portable solar-powered 3D printers for use on-site-830
 Physical activity—*See* Exercise
 Physical fitness, effects on cardiac autonomic control in fighter pilots-875
 Physical therapy, for lateral epicondylitis in a pilot-1077
 Physical training, for long-duration spaceflight aboard ISS-A14
 Pilot-physicians, trained for Manned Orbiting Laboratory program-1010
 Pilots—*See also* Aircrew, Helicopter pilots, and Military pilots
 estimating psychophysiological load of-518
 flight bags as cause of back injuries in commercial-563
 gender differences in navigational memory vs. non-pilots-103
 general aviation-training for convective weather situations-881
 helmet-mounted symbology concepts in degraded visual environments-588, 714
 measuring tax complexity in flight-698
 medical symptoms associated with work and home environments-458
 mental health of, AsMA Working Group recommendations on-1013
 morbidly obese, screening for sleep apnea in (AsMA Position Paper)-835

Parkinson's disease in, aeromedical implications-1046
 preventing prospective memory failures in-366
 risk of prostate cancer in-112; retraction-491
 solar eye protection practices of civilian aircrew-953
 spatial patterns of eye fixations and ultradian rhythms in-647
 Planetary exploration missions
 confinement vs. insolation as analogue environment for-131
 effects of personality and decision making on team performance-567
 team composition issues for future-548, E1(June)
 Pneumocephalus, and neurosurgery in rotary aircrew-59, 414(Letter)
 Podcasts, as research resources-415
 Polar regions
 altitude and seasonality impact on sleep in-392
 personality factors in unsuccessful special forces expedition-567
 statin use and acute mountain sickness in-97
 Portal veins, effect of 5-day bed rest with microgravity countermeasures-524
 Positive pressure breathing, model for simulating at ground level-15
 Postural instability, assessment after return from ISS-A45
 Posturography, dynamic computerized, assessing re-entry from ISS with-A45
 Preflight medical evaluations, for aircraft passengers, AsMA medical guidelines on-656
 Preterm birth, occupational exposure measurement error in flight attendant study-990
 Priapism, caused by sickle cell trait-664
 Prospective memory, preventing failures of, in aviation-366
 Prostate cancer, meta-analysis of risk in pilots-112; retraction-491
 Protective clothing, positive pressure breathing simulation model at ground level-15
 Pseudoisochromatic plates Ishihara compatible (PIPIC) test, compared with mColorDx test-852
 Psychiatric disorders, brief reactive psychosis in a military pilot-69
 Psycho-motor Vigilance Test, for cabin crew fatigue on ultra-long range flights-705
 Psychomotor performance, of helicopter pilots during flight maneuvers-641
 Psychomotor vigilance test, validation of portable touchscreen-428
 Psychophysiological load, of pilots, heart rate variability in estimation of-518
 Psychosis, brief reactive, in a military pilot-69
 Psychosocial environment, of commercial airline pilots, medical symptoms associated with-458
 Public health concerns, hand, foot, and mouth disease-497
 Pulmonary edema, high altitude, exhaled nitric oxide in acute normobaric hypoxia-693
 Pulmonary function system, evolution of, during first decade on ISS-A7
 Pulmonary sarcoidosis, diagnosis and aeromedical disposition-67
 Pulmonary vasoconstriction, hypoxic, in simulated air travel-529
 Pulse oximeters, signal fusion for robust hypoxia detection-495

Q

Quality of life, of air traffic controllers on different shift systems-895

R

Radiology, portable radiography for ISS and explorer class missions (Commentary)-140
 Rapid decompression
 DDFPe for decompression sickness in rats-21
 positive pressure breathing simulation model at ground level-15
 Rathke's cleft cyst, aeromedical disposition-477
 Rats—*See* Animal models
 Reaction time testing, validation of portable psychomotor vigilance test-428
 Real-time performance, effects of normobaric transient near-anoxia on-76

Rebreather devices, end-tidal CO₂ in recreational divers using-41
 Rebreather unit, to prolong underwater survival time in cold water-1028
 Recovery time, of performance after normobaric hypoxia-357
 Rehabilitation, functional fitness testing after long-duration spaceflight on ISS-A87
 Remote environments—*See* Extreme environments
 Remote-guidance ultrasound, use by astronauts on exploration spaceflight-1034
 Remotely piloted aircraft, personnel selection and human-systems integration-736
 Research
 bias from measurement error in study of flight attendants-990
 Crash Injury Research project at Cornell-849
 non-traditional resources for scientists and clinicians-415
 on lower body negative pressure, historical review of-633
 storing and processing complex data sets with HDF5-659
 Resistance exercise devices
 evolution of, during first decade on ISS-A7, A32
 isokinetic strength changes after long-duration spaceflight on ISS-A68
 Restraint harness, performance during flight maneuvers-466
 Resuscitation, novel rescue-tube device for in-water-379
 Retraction, of prostate cancer article (112)-490(Letter), 491
 Reviews
 Absent Aviators—Gender Issues in Aviation-493
 Fast Flying Jets: Human Factors and Performance Limitations-143
 from *American Family Physician*-493
 from NASA's SPACELINE service-62-492
 Loss of Signal, Aeromedical Lessons Learned from the STS-107 Columbia Space Shuttle Mishap-752
 The Art of Space-62
 Touching a Nerve-752
 useful links to sources of-62
 Rigidity, in Parkinson's disease, aeromedical implications in civilian pilots-1046
 Risk assessment
 aeromedical, of pharmaceuticals using evidence-based medicine-824
 challenges of estimating fracture risk in astronauts with DXA-628
 Rotary wing aircraft—*See* Helicopters
 Royal Canadian Air Force AVS.7 symbology system testing in simulated graded visual environments-588
 Russian space program
 evolution of exercise countermeasure systems on ISS-A32
 history of exercise countermeasure systems on ISS-A24

S

Safety, aviation
 Crash Injury Research Project at Cornell-849
 positive pressure breathing simulation model at ground level-15
 restraint harness performance during flight maneuvers-466
 screening for sleep apnea in morbidly obese pilots (AsMA Position Paper)-835
 Samn-Perelli Crew Status Check, for cabin crew fatigue on ultra-long range flights-705
 Sarcoidosis, diagnosis and aeromedical disposition-67
 Schneider index, history of-1081
 Science and Technology Watch
 evidence in practice of human performance-64
 human computing and super forecasting-1072
 hypoxia detection with pulse oximeter signal fusion-495
 non-traditional research resources for scientists and clinicians-415
 storing and processing complex data sets with HDF5-659
 Scrotal hematoma, after centrifuge training in fighter pilot with varicocele-1063
 Scuba diving—*See* Diving

Sea travel
 6-month assessment of sleep during naval deployment-481
 human gait while walking fore-aft vs. athwart-435
 sleep duration in rough sea conditions-901
 Seasickness—*See* Motion sickness
 Seasonal effects, impact on sleep in Antarctica-392
 Seat discomfort, prolonged restricted sitting in UH-60 helicopters-34
 Seizures, epilepsy in a fighter pilot-500
 Self-motion, effect of stimuli on ground surfaces onvection-794
 Self-regulation, diaphragmatic breathing for motion sickness management-452
 Sensorimotor readaptation, assessment after return from ISS-A45
 Sensory conflict, visual blur and motion sickness in optokinetic drum-440
 Sex differences—*See* Gender differences
 Shift work, quality of life of air traffic controllers on different systems of-895
 Ship motion, gait at sea while walking fore-aft vs. athwart-435
 Shoulder injury, causes of in astronauts in space suits-606
 Shuttle program—*See* Space shuttle program
 Sickle cell trait, priapism caused by-665
 Simulated spaceflight
 effects of iron overload and weightlessness in rats-8, E1(Jan)
 fluid loading to prevent re-entry orthostatic hypotension-88
 group dynamics during isolation at space station analogue-819
 immune effects of prolonged hind limb unloading in mice-803
 lower body negative pressure reduces intraocular and intracranial pressure in-3
 under sleep deprivation and confinement-865
 Sinus disease, unusual ocular complication of barotrauma at altitude-994
 Sitting, prolonged restricted, in UH-60 helicopters-34
 Skeletal strength, challenges of estimating fracture risk in astronauts with DXA-628
 Skylab program
 body mass changes during long-duration spaceflight (Commentary)-1070
 review of lower body negative pressure research in-633
 Sleep
 6-month assessment of during naval deployment-481
 altitude and seasonality impact in Antarctica-392
 cabin crew, management on ultra-long range flights-705
 duration of in rough sea conditions-901
 of air traffic controllers on different shift systems-895
 Sleep apnea, screening in morbidly obese pilots (AsMA Position Paper)-835
 Sleep deprivation
 and confinement in simulated spaceflight operations-865
 brief reactive psychosis in a military pilot due to-69
 Cognition test battery for spaceflight-942, E1(Nov)
 screening for sleep apnea in morbidly obese pilots (AsMA Position Paper)-835
 validation of portable psychomotor vigilance test-428
 Sleepiness, transcranial bright light and symptoms of jet lag-344, E1, E2, E3(Apr)
 Sopite syndrome, sleep duration in rough sea conditions-901
 South Korean Air Force—*See also* Military pilots
 clinical markers of metabolic syndrome among military aviators-970
 neck pain and cervical sagittal alignment in pilots-445
 Soviet spaceflight missions, historical review of lower body negative pressure research-633
 Space adaptation syndrome-557
 Space shuttle program
 Loss of Signal, Aeromedical Lessons Learned from the STS-107 Columbia Space Shuttle Mishap (Book Review)-752
 orthostatic intolerance after missions on-A54
 review of lower body negative pressure research in-633

- Space suits, causes of astronaut shoulder injury in-606
- Spaceflight—*See also* Simulated spaceflight
- causes of astronaut shoulder injury in space suits-606
 - challenges of estimating fracture risk in astronauts with DXA-628
 - Cognition* test battery for-942, E1(Nov)
 - confinement vs. insolation as analogue environment for-131
 - effect of physical exercise on kidney function on ISS-472
 - Exercise Countermeasures: The First Decade on ISS (Supplement to December issue)-A1
 - fluid loading countermeasure for orthostatic hypotension after-88
 - G tolerance in diabetics with implanted insulin pumps-407
 - historical review of lower body negative pressure research-633
 - hypobaric decompression sickness treatment model-508
 - in 1965-73
 - intracranial hypertension induced by-557
 - low back pain in microgravity and bed rest studies-541
 - portable radiography for ISS and explorer class missions (Commentary)-140
 - remote-guidance ultrasound use on exploration missions-1034
 - simulated suborbital, in subjects with cardiac implanted devices-410
 - team composition for future space explorations-548
- Spatial disorientation
- helmet-mounted symbology concepts-588, 714
 - in simulated degraded visual environments-588
 - in-flight testing in degraded visual environments-714
- Spatial orientation, gender differences in pilots and non-pilots-103
- Spectacles, assessment of alternative Army aircrew eyewear-1014
- Spectral analysis
- estimating pilots' psychophysiological load of-518
 - temporal, of spatial patterns of eye fixations in pilots-647
- Spinal curvature, neck pain and cervical sagittal alignment in Air Force pilots-445
- Spinal injury, acute, after centrifuge training-386
- Spinal manipulation and mobilization therapy, for mechanical neck pain in helicopter pilots-907
- Spinal pain
- in fighter pilots related to modern air combat developments-936
 - recurrent and transient, among commercial helicopter pilots-962
- Splenectomy, for adrenal myelolipoma-421
- Standard operating procedures, measuring task complexity in flight-698
- Statins, and development of acute mountain sickness-97
- Strength changes, isokinetic, after long-duration spaceflight on ISS-A68
- Stress
- Cognition* test battery for spaceflight-942, E1(Nov)
 - cognitive, cerebral blood flow velocity during lower body negative pressure and-688
 - flight, in AsMA medical guidelines for air travel-486
- Stroke, cerebellar, cervical manipulation leading to in a pilot-1066
- Submarine escape, first aid oxygen treatment for decompression illness after-1020
- Submersion, rebreather unit to prolong underwater survival time in cold water-1028
- Suborbital spaceflight
- G tolerance in subjects with implanted insulin pumps-407
 - potential risks to participants with cardiac malformations-999
 - simulated, in subjects with cardiac implanted devices-410
- Sunglasses, solar eye protection practices of civilian aircrew-953
- Super forecasting, human computing and-1072
- Supplements, vitamin A toxicity from-920
- Suprasellar mass, incidental, in military flight cadet-477
- Surgeons
- origin of first naval flight surgeons-149
 - pre-World War I historical perspective on flight-424
- Survival analysis, hypobaric decompression sickness treatment model-508
- Symbology system concepts
- helmet-mounted, in degraded visual environments-588, 714
 - in-flight study-714
 - simulator study-588
- Systems theory, aeromedical risk assessment of pharmaceuticals-824
- ## T
- Tablet displays, color vision testing using-56
- Tara expedition, as analogue environment for Mars missions-131
- Task complexity, in flight, developing a measurement for-698
- Team composition
- for future space explorations-548, E1(June)
 - personality traits and decision processes on polar expeditions-567
- Technical Notes
- aeromedical risk assessment of pharmaceuticals-824
 - modified protocol for color vision screening-747
 - on-site 3D printing of custom mallet splints-911
 - ultra-portable solar-powered 3D printers for use in space-830
- Telemedicine
- astronaut training in remote-guidance ultrasound for exploration spaceflight-1034
 - NASA's contribution to development of-504
- Temperament, personality factors in unsuccessful special forces polar expedition-567
- Temperature, cabin, and aircrew well-being on ad hoc platform flights-125
- Temporomandibular joint disorders, craniofacial muscle thermography in military pilots with bruxism-374, E4 (Apr)
- Tetralogy of Fallot, in commercial spaceflight participant-999
- Three-dimensional (3D) printers
- onsite printing of custom mallet splints-911
 - ultra-portable solar-powered, use in remote locations-830
- Tilt test, orthostatic intolerance after ISS and space shuttle missions-A54
- Tinnitus, Ménière's disease in a pilot-662
- Tissue bubble dynamics, hypobaric decompression sickness treatment model-508
- Tobacco smoke, in work environment of commercial airline pilots-458
- Tonus-3 electrical muscle stimulator, evolution of, during first decade on ISS-A32
- Training
- acute spinal injury in fighter pilots after centrifuge training-386
 - breath-hold times during helicopter underwater egress training-82
 - causes of astronaut shoulder injury in space suits-606
 - humans as critical factor in aviation security (Commentary)-915
 - of general aviation pilots for convective weather situations-881
- Transcranial bright light, effect on symptoms of jet lag-344, E1, E2, E3(Apr)
- Transient hypoxia, real-time effects on performance-76
- Trauma
- acute spinal injury after centrifuge training-386
 - comparing ground and helicopter EMS travel times with GIS-620
- Traumatic brain injury, white matter hyperintensities detected after prior trauma-928
- Travel time, for ground and helicopter EMS, comparison using GIS-620
- Treadmills, evolution of, during first decade on ISS-A7, A32
- Tremor, in Parkinson's disease, aeromedical implications in civilian pilots-1046
- Typhoon jets, neck pain in F-16 vs. Typhoon fighter pilots-402
- ## U
- U.S. Air Force—*See also* Military pilots
- training pilot-physicians for Manned Orbiting Laboratory program-1010
- U.S. Army—*See* Military pilots, *also* Helicopter pilots

U.S. Navy—*See also* Military pilots
 origin of first naval flight surgeons-149
 sleep duration in rough sea conditions-901
 UH-60 helicopters—*See* Helicopters, Blackhawk UH-60
 Ultradian rhythms, evidence of in pilots, and spatial patterns of eye fixations-647
 Ultra-long range flights, managing cabin crew sleep and fatigue during-705
 Ultrasound, remote-guidance, use by astronauts on exploration space-flight-1034
 Ultraviolet light exposure, solar eye protection practices of civilian air-crew-953
 Underwater breathing apparatus, rebreather unit to prolong underwater survival time in cold water-1028
 Underwater egress training, helicopter, breath-hold times in air and water-82
 Universal precautions, supplies for in-flight medical care on commercial airlines-572
 Urine protein composition, effect of physical exercise on, on the ISS-472
 Urology
 adrenal myelolipoma-421
 isolated perivesicular hematoma after military parachuting-136
 priapism-664
 scrotal hematoma after centrifuge training in fighter pilot with varicocele-1063

V

Valve replacement, potential risks to commercial spaceflight participants with-999
 Valvular insufficiency, potential risks to commercial spaceflight participants with-999
 Varicocele, scrotal hematoma after centrifuge training in fighter pilot with-1063
 Vasoconstriction, hypoxic pulmonary, in simulated air travel-529
 Vection, effect of stimuli on ground surfaces on-794
 Ventricular tachycardia, in arrhythmogenic right ventricular cardiomyopathy-756
 Vertebral artery dissection, after manual cervical manipulation in a pilot-1066
 Vertigo, Ménière's disease in a pilot-662
 Vestibulocochlear assessment, otosclerosis and fitness to fly-1039
 Viking amphibious vehicles, rebreather unit to prolong underwater survival time-1028
 Viral infections, herpes zoster in a flight surgeon-754
 Virtual reality, in treatment program for fear of flying-723

Vision correction
 assessment of alternative Army aircrew eyewear-1014
 with keratoconus-1004
 Vision impairment
 atypical optic neuritis with Uhthoff phenomenon-845
 keratoconus-1004
 Miller-Fischer syndrome-918
 reducing intraocular and intracranial pressure during head-down tilt-3
 spaceflight-induced intracranial hypertension-557
 Visual blur, and motion sickness in optokinetic drum-440
 Visual motion, gender differences in motion sickness induced by linear oscillation-787
 Visuo-spatial memory, gender differences in pilots and non-pilots-103
 Vitamin A toxicity, from sports supplements-920
 von Schrotter, Hermann, inventor of sealed cabin-581

W

Waivers—*See* Aeromedical disposition
 Walking, gait at sea while walking fore-aft vs. athwart-435
 Water immersion, breath-hold times during helicopter egress training-82
 Water-salt supplements, use during first decade on ISS-A32
 Weather, training general aviation pilots for convective situations-881
 Websites, as research resources for scientists and clinicians-415
 Weightlessness
 challenges of estimating fracture risk in astronauts with DXA-628
 historical review on lower body negative pressure research-633
 White matter hyperintensities
 in an Air Force cadet with history of snowboarding head trauma-928
 increased prevalence in healthy divers-928
 Whiteout conditions, testing helmet-mounted symbolology concepts in simulated-588
 Whole body vibration, core strengthening in helicopter crewmembers with low back pain-889
 Work environment, for commercial airline pilots, medical symptoms associated with-458
 Workload
 and prospective memory failures in pilots-366
 cognitive, and physiological parameters in helicopter pilots-1052
 measuring task complexity in flight-698

Y

You're the Fight Surgeon-67, 69, 144, 146, 418, 421, 497, 500, 574, 577, 662, 664, 754, 756, 842, 845, 918, 920, 1004, 1006, 1075, 1077