INDEX TO SUBJECTS

Α

Abdominal crunch syndrome, in a pilot-86 Abstracts 93rd Annual Scientific Meeting-149 not presented-655 Acceleration autonomic modulation and +Gz in fighter pilots-761 CBF-based modeling of G₂-induced effects-409 G-test results in Air Force cadets-384 grating stimulus as visual endpoint for G tolerance-894 layperson tolerance in simulated spaceflight-584 tolerance in subject with hemophilia A-470 Acceleration atelectasis, cabin pressure altitude effect on-3 ACCES system, skin pathology in deployed fighter aircrew using-396 Accidents, aviation aeronautical decision-making role in-807 during agricultural aviation operations-852 Canadian ultralight, in water-437 in Hawaii, regional approach to analysis-131 Acute medical care AI applications for space medicine-610 for hydrazine inhalation in spaceflight-532 Acute radiation sickness, AI applications for space medicine-610 Aero-otitis media, pilot qualification after-629 Aerobatics, CBF-based modeling of G₂-induced effects-409 Aerobic exercise, interval, and sweat loss in space-623 Aeromedical disposition—See also Waivers aero-otitis media after balloon Eustachian tubuloplasty-629 blue rubber bleb nevus syndrome-415 centipede envenomation-944 corticosteroid-induced psychosis-561 familial cerebral cavernous malformation-733 glioblastoma multiforme-949 hypogonadism-800 paroxysmal atrial fibrillation in a pilot-97 pernicious anemia-796 for pilot applicants to British Army Air Corps-939 post-COVID-19 infection-728 request for COVID-19 vaccination on ISS-645 Salzmann's nodular degeneration in pilot-400 seronegative rheumatoid arthritis-488 sleep apnea in USAF pilot-648 sudden neurological symptoms in altitude chamber attendant-558 supratentorial stroke-864 Aeronautical decision-making, role in fatal aviation accidents-807 Aerospace Medical Association (AsMA) 93rd Annual Scientific Meeting abstracts-149 annual lectures-148 Association News-52, 143, 493, 569, 656 award winners-569 bylaws-358 constituent organization presidents-493 council-353 minutes of 2022 business meeting-356 past presidents-352 staff-355, 805 Wing board of directors-355 Aerospace medicine aviation decompression sickness in-11 extended reality applications for space health-122 USAF Medical Risk Assessment and Airworthiness Matrix-314

Aerospace Medicine and Human Performance President's Page-2, 53, 101, 145, 367, 421, 499, 583, 665, 737, 805, 873 Aerospace Medicine Clinic blue rubber bleb nevus syndrome-415 cardioembolic stroke-415 centipede envenomation-944 corticosteroid-induced psychosis-561 familial cerebral cavernous malformation-733 glioblastoma multiforme-949 hypogonadism-800 late latent syphilis in patient with HIV-861 paroxysmal atrial fibrillation-97 pernicious anemia-796 recertification post-COVID-19 infection in a pilot-728 seronegative rheumatoid arthritis-488 sleep apnea in aviator-648 spaceflight immunology and vaccine ethics-645 sudden neurological symptoms in altitude chamber attendant-558 Aerozine, acute inhalation in spaceflight-532 Agricultural aviation, wire strikes and in-air obstacle collisions-852 Air Force cadets, Korean, G-test results in-384 Air quality revisions to SMACs for benzene-544 SMAC for ethyl acetate-25 Air traffic controller, HIV and syphilis in-861 Aircraft—See also specific aircraft types cockpit performance evaluation metrics-696 Airline pilots—See Commercial airline pilots Airplane travel, by patients with COPD-102, E1(Mar) Airworthiness, USAF Medical Risk Assessment and Airworthiness Matrix-314 Alendronate, countermeasures on long-duration spaceflight-389 Allergic rhinitis, in China National Railway employees-821 Altitude effects biomarkers for exertional decompression stress-738 in COPD patients during air travel-102, E1(Mar) DCS in high-altitude parachutist dispatchers-666 detecting hypoxia tolerance at high altitude-485 high G atelectasis-3 lingering, in synthetic cockpit-135 moderate-altitude vs. sea-level mice-887 sudden neurological symptoms in altitude chamber attendant-558 American Board of Preventive Medicine-737 American Heart Month-53 Anemia, pernicious-796 Anesthesia, AI applications for space medicine-610 Anesthetist-Intensivists, in-flight medical emergency skills-94 (Letter) Aneurysms, in blue rubber bleb nevus syndrome-415 Animal models, moderate-altitude vs. sea-level mice-887 Anthropometrics, cockpit performance evaluation techniques-696 Anticoagulation therapy, with paroxysmal atrial fibrillation-97 Anxiety, exercise effect on mental health in quarantine-686 Apnea-See Obstructive sleep apnea syndrome Apollo-Soyuz Test Project, legacy of-651 Armstrong lecture-367 Artemis program, surface EVA performance risks-34

Page numbers preceded by an "E" indicate supplemental material for individual articles that can be found online through https://www.asma.org/journal/read-the-journal.

Arterial oxygen saturation (SpO₂) voluntary hyperventilation during hypoxia-59 wearable devices for monitoring-42, E1(Jan) Artificial intelligence (AI), applications in space medicine-610 Astronauts-See also Spaceflight 3D ultrasound of jugular vein on ISS-466 crew fatality considerations on ISS-705 retention and transfer of knowledge and skills-902 surface EVA performance risks-34 Atelectasis, high G, cabin pressure altitude effect on-3 Atrial fibrillation, paroxysmal, in a pilot-97 Attrition, medical, of pilot applicants to British Army Air Corps-939 Auditory white noise, and performance in lunar landing simulation-770, E1(Oct) Augmented reality, applications for space health-122 Aural barotrauma, pilot qualification after-629 Autoimmune disorders, seronegative rheumatoid arthritis-488 Autonomic modulation, responses to $+G_7$ in fighter pilots-761 Aviation safety—See Safety, aviation Aviators-See Pilots

AW159 helicopters, spatial disorientation training scenarios-377

B

Balloon Eustachian tubuloplasty, pilot qualification after-620 Baroparesis, facial, in aviation-404 Barotitis media, pilot qualification after-620 Battery fire, cellphone burn during a parachute jump-793 Behavioral health Behavioral Health and Human Interactions in Space (Kanas) -644 crew fatality considerations aboard ISS-706 in spaceflight (NASA Symposium)-634 SSRIs for deep space missions-843 Benzene, off-nominal SMACs-544 Benzodiazepine, for acute urinary retention-90 Bioastronautics, surface EVA performance risks-34 Biomarkers, for exertional hypobaric decompression stress-738 Bisphosphonates, countermeasures on long-duration spaceflight-389 Bladder relief, effects on cognitive performance-79 Bleeding disorders, in commercial spaceflight participants-470 Bloat, human remains containment during spaceflight-368 Blue rubber bleb nevus syndrome-415 Body bags, human remains containment during spaceflight-368 Body surface area, heat intolerance and return to duty-546 Bodybuilding, myocardial infarction in a young fighter pilot-719 Bone mineral density (BMD)

countermeasures on long-duration spaceflight-389 exercise and nutrition impact in spaceflight-923 SSRI effects on, for deep space missions-843 Book review

Behavioral Health and Human Interactions in Space (Kanas)–644 Brain function, imaging changes in space headache–678 Brain microstructure, imaging changes in space headache–678 British Army Air Corps, medical attrition for pilot applicants–939 Burn injury, due to cellphone during parachute jump–792

С

- C-reactive protein (CRP), biomarker of hypobaric decompression stress–738
- Cabin atmosphere, USAF Manned Orbiting Laboratory research on helium in–565 $\,$
- Cabin pressure, high G atelectasis and altitude effect-3
- Caffeine, effect on pilots' performance-750

Calcium, supplementation effect on BMD in spaceflight-923

Canada, ultralight accidents in water-437 Cardiac function, in student pilots during flight training-475, 835 Cardiology coronary artery disease in military aircrew-917 paroxysmal atrial fibrillation-97 Cardiopulmonary reserve function (CPRF), high G tolerance and-911 Cardiovascular deconditioning, AI applications for space medicine-610 Cardiovascular disease, management in military aircrew-917 Case reports abdominal crunch syndrome in a pilot-86 acute urinary retention medications-90 cellphone burn during a parachute jump-793 delayed drowsiness after hypoxia training-715 flying after aero-otitis media-629 heart rate variability in a student pilot-475 heat intolerance, body size, and return to duty-546 hemophilia A in commercial spaceflight-470 implantable collamer lens use in space-48 myocardial infarction in a bodybuilder fighter pilot-719 Salzmann's nodular degeneration-400 transient facial nerve palsy in aviation-404 Cellphones, burn injury due to during parachute jump-792 Cellular dysfunction, human limits to long-term spaceflight-444 Centipede envenomation-944 Centrifuge training CPRF and high G tolerance in aviators-911 grating stimulus as visual endpoint for G tolerance-894 layperson tolerance and performance-584 tolerance in subject with hemophilia A-470 Cerebral blood flow (CBF), CBF-based modeling of G_z-induced effects-409 Cerebral cavernous malformation, familial, in a pilot-733 Cerebral oxygenation, in COPD patients during air travel-102, E1(Mar) Cervico-thoracic pain, risk factors in military aircrew-500 China allergic rhinitis in railway employees-821 high G tolerance and CPRF in Air Force aviators-911 Chronic obstructive pulmonary disease (COPD), air travel with-102, E1(Mar) Circadian rhythms, HEV light for day to night shifts in aviators-66 Civil Aerospace Medical Institute, CBF-based modeling of G_z-induced effects-409 Civil aviation CBF-based modeling of G₂-induced effects-409 pilot recertification post-COVID-19 infection-728 Cockpit, aircraft, performance evaluation techniques-696 Cognitive performance-See also Human performance astronauts' retention and transfer of learning-902 voluntary urine retention effects on-79 Cohesion, team, for long duration spaceflight-457 Collisions, in agricultural aviation operations-852 Colombia Air Force, metabolic syndrome and hyperlipidemias in airmen-604 Color vision, cone specific tests of-54 Combat, air +Gz standards for Indian Air Force-780 team situation awareness in simulated-429 Commercial airline passengers with COPD-102, E1(Mar) transient facial nerve palsy in-404

Commercial airline pilots

- performance facing unexpected events-18
- temporary incapacitation of in the UAE-113

Commercial spaceflight participants with hemophilia A-470 tolerance and performance in centrifuge-584 Computer-human interaction, cockpit performance evaluation techniques-696 Confinement, human limits to long-term spaceflight-444 Corneal degeneration, in a pilot applicant-400 Coronary artery disease, management in military aircrew-917 Corticosteroid-induced psychosis, in a student pilot candidate-561 Corticosteroids, psychosis induced by-561 Countermeasures denosumab in long-duration spaceflight-389 to human limits on long-term spaceflight-444 interval aerobic exercise and sweat loss-623 metabolic cost of NMES vs. walking-523 COVID-19 exercise effect on mental health in quarantine-686 recertification of a pilot post-infection-728 request for vaccination aboard ISS-645 Cranial electrotherapy stimulation, vs. SSRIs for deep space missions-843 Crashes-See Accidents, aviation Crew resource management, cockpit performance evaluation techniques-696 Critical care, IV fluid resuscitation in space-596, E1(Aug) Cultural diversity, in teams for long duration spaceflight-457 D Data management, cockpit performance evaluation techniques-696 Daytime sleepiness, excessive, civilian pilot obesity and-815 Death, during spaceflight, remains management for-368 Decision support, AI applications for space medicine-610 Decision-making aeronautical, role in fatal aviation accidents-807 for MEDEVAC in space exploration missions-875 Decomposition, human remains containment during spaceflight-368 Decompression sickness (DCS) in altitude chamber attendant-558

diagnosis in aerospace and hyperbaric medicine–11 in parachutist dispatchers at high altitude–666

Decompression stress, exertional hypobaric, biomarkers for-738 Deep vein thrombosis, in spaceflight (NASA Symposium)-634

Denosumab, osteopenia in long duration spaceflight-389

Dentistry, fiber post bond strength in hypobaric pressure changes-508

Depression, exercise effect on mental health in quarantine–686

Dermatitis, in fighter aircrew using custom hearing protection–396

Diffusion tensor imaging, brain changes in space headache-678

Dim light melatonin onset (DMLO), HEV light for day to night shifts in aviators-66

Disorientation—See Spatial disorientation

Disqualification—See also Aeromedical disposition

medical, of pilot applicants to British Army Air Corps–939 Ditching, ultralight accidents in water–437

Diversity, in teams for long duration spaceflight-457

Drowsiness, after hypoxia training in F/A-18 hornet simulator-715

E

Ear problems

aero-otitis media, pilot qualification after–629 due to hearing protection in deployed fighter aircrew–396 Eating behaviors, G-test results in Korean Air Force cadets–384 Egress, cockpit performance evaluation techniques–696 Electrical impedance tomography, high G atelectasis and altitude–3 Electrical stimulation, metabolic cost of NMES vs. walking–523 Emergencies, in-flight, training for the general medical

community-94 (Letter)

Emergency physicians, in-flight medical emergency skills–94 (Letter) Endodontics, fiber post bond strength in hypobaric pressure changes–508

Energy expenditure, of NMES spaceflight countermeasure vs. walking-523

Ergonomics, cockpit performance evaluation techniques–696 Errata–557, 647, 951

Ethical issues, request for COVID-19 vaccination aboard ISS-645 Ethyl acetate, spaceflight maximum allowable concentrations-25 Eustachian tube dysfunction, aero-otitis media in pilots-629 Eustress activities, heart rate variability in student pilots-475, 835 Evacuation, medical (MEDEVAC), risks in space exploration-875 Excessive daytime sleepiness, role of civilian pilot obesity in-815 Exercise

abdominal crunch syndrome in a pilot–86 effect on mental health in isolation or quarantine–686 inertial exercise trainer in spaceflight–923 myocardial infarction in a bodybuilder fighter pilot after–719 nutrition impact on strains and BMD in spaceflight–923 Exercise countermeasures

in-flight exercise and nutrition impact on BMD–923 metabolic cost of NMES vs. walking–523 sweat loss and exercise modality–623

Exercise testing, cardiopulmonary, and high G tolerance–911

Exploration-class missions—See also Long-duration space missions IMPACT 1.0 medical conditions list–550

IV fluid resuscitation use on–596, E1(Aug)

MEDEVAC risks on–875

Extended reality, applications for space health–122

Extravehicular activity (EVA), surface, performance risks during-34

F

F/A-18 Hornet simulator, drowsiness after hypoxia training in-715 Facial nerve palsy, transient, in aviation-404 Fatalities crew fatality considerations on ISS-705 remains management during spaceflight-368 role of aeronautical decision-making in-807 Fatigue caffeine effect on pilots' performance-750 HEV light for day to night shifts in aviators-66 waiver for sleep apnea in a USAF pilot-648 Fiber posts, bond strength in hypobaric pressure changes-508 Fighter pilots—See also Military pilots +G_z standards for Indian Air Force-780 acute myocardial infarction in a bodybuilder-719 cervico-thoracic pain risk factors in-500 delayed drowsiness after hypoxia training-715 hearing protection and skin pathology in-396 high G atelectasis and altitude-3 high G tolerance and cardiopulmonary reserve function-911 measuring isometric neck muscle strength-480 neuro-cardiovascular response to +Gz acceleration-761 team situation awareness in air combat-429 Fitness to fly-See Safety, aviation; Aeromedical disposition; and Waivers Flight performance, in facing unexpected events-18 Flight simulation-See Simulated flight Flight training—See Training Force measurements, neck muscle strength in fighter pilots-480 Forced inspiratory vital capacity, high G atelectasis and altitude-3

Forensic pathology, in crew fatality aboard the ISS-705

Fractures, facial, from night vision goggle impact-827

G

G forces, autonomic modulation and $+G_{z}$ in fighter pilots-761 G tolerance +G, standards for Indian Air Force-780 CBF-based modeling of G₂-induced effects-409 G-LOC testing in Korean Air Force cadets-384 grating stimulus as visual endpoint for-894 high, and cardiopulmonary reserve function in aviators-911 Galvanic vestibular stimulation, noisy, and performance in lunar landing simulation-770, E1(Oct) Gender, in teams for long duration spaceflight-457 General aviation accident analysis in Hawaii-131 accidents during agricultural aviation operations-852 role of aeronautical decision-making in-807 Genetic processes, human limits to long-term spaceflight-444 German Air Force, coronary artery disease management in-917 Glial fibrillary acidic protein (GFAP), biomarker of hypobaric decompression stress-738 Glioblastoma multiforme, presenting as headache-949 Grating loss, as visual endpoint for G tolerance in centrifuge research-894 Gravity-See also Microgravity human limits to long-term spaceflight-444 Grigoriev, Anatoly I., legacy in space medicine-723

Gym workouts, aggressive, myocardial infarction in a fighter pilot after-719

Η

Hawaii, regional aviation accident analysis in-131 Head-down-tilted bed rest, brain changes in space headache-678 Headache due to glioblastoma multiforme-949 in familial cerebral cavernous malformation in pilot-733 space, imaging changes in-678 Health, human on the Moon (NASA Symposium summary)-634 in space, extended reality applications for-122 Hearing protection, skin pathology in fighter aircrew using-396 Heart rate variability, in student pilots during flight training-475, 835 Heat intolerance, body size and return to duty-546 Heat tolerance test-546 Helicopter aircrew cervico-thoracic pain risk factors in-500 cockpit ergonomics and neck pain in-107 Helicopters aviation accident analysis in Hawaii-131 AW159, spatial disorientation training scenarios-377 Helium, USAF Manned Orbiting Laboratory research on-565 Hematology hemophilia A in commercial spaceflight-470 pernicious anemia-796 SSRI effects on, for deep space missions-843 Hemophilia A, in a commercial spaceflight participant-470 High energy visible (HEV) light, for day to night shifts in aviators-66 High-performance aircraft, aviation decompression sickness in-11 History Focus on Aerospace Medicine History-565, 651, 868 space medicine legacy of Anatoly I. Grigoriev-723 This Month in Aerospace Medicine History-51, 100, 142, 419, 420, 568, 654, 736, 804, 872, 952 HIV-associated neurocognitive disorder (HAND)-861 Human centrifuge CPRF and high G tolerance in aviators-911

in a spaceflight participant with hemophilia A-470 Human immunodeficiency virus (HIV), and syphilis in an air traffic controller-861 Human performance-See also Cognitive performance accidents in agricultural aviation operations-852 aeronautical decision-making and accidents-807 caffeine effect on pilots after extended wakefulness-750 cockpit performance evaluation techniques-696 operational, in laypersons in simulated spaceflight-584 sensory noise effects on lunar landing simulation-770, E1(Oct) surface EVA performance risks-34 Human remains containment units, for use in spaceflight-368 Human-computer interaction, cockpit performance evaluation techniques-696 Hydration, voluntary urine retention and cognitive performance-79 Hydrazines, recovery from acute inhalation during spaceflight-532 Hyperbaric medicine, aviation decompression sickness in-11 Hypergolic fluids, acute inhalation in spaceflight-532 Hypergravity layperson tolerance and performance-594 tolerance in subject with hemophilia A-470 Hyperlipidemias in military airmen-604 Hyperventilation cardiorespiratory responses to-59 lingering altitude effects in simulated cockpit-135 Hypobaric chamber, sudden neurological symptoms in attendant-558 Hypobaric pressure changes, bond strength of fiber posts in-508 Hypobaric stress, biomarkers for-738 Hypogonadism, in a military pilot-800 Hypoxemia, wearable devices for SpO₂-42, E1(Jan) Hypoxia cardiorespiratory responses to-59 in COPD patients during air travel-102, E1(Mar) detecting tolerance to at high altitude-485 lingering altitude effects in simulated cockpit-135 residence at moderate altitude vs. sea level-887 Hypoxia training, drowsiness after, in an F/A-18 hornet simulator-715 Hypoxia-inducible factor (HIF-1), in detecting hypoxia tolerance-485

grating stimulus as visual endpoint for G tolerance-894

layperson spaceflight participants in-584

Imaging 3D ultrasound of jugular vein on ISS-466 brain changes in space headache-678 functional MRI, brain changes in space headache-678 MRI in familial cerebral cavernous malformation-733 x-rays in simulated parabolic flight-786 Immersive technology, applications for space health-122 Immune system, human limits to long-term spaceflight-444 Immunology, request for COVID-19 vaccination aboard ISS-645 IMPACT 1.0 medical condition list-550 Impact injuries, facial fracture from night vision goggles-827 Implantable collamer lens, in short-duration spaceflight-48 In memoriam, Dr. Frank Pettyjohn-52 In-flight incapacitation, abdominal crunch syndrome in a pilot-86 In-flight medical emergencies, training for general medical community-94 (Letter)

I

Indian Air Force, +G_z standards for-780 Inertial exercise trainer, and BMD in spaceflight-923 Infections, AI applications for space medicine-610 Ingress, cockpit performance evaluation techniques-696 Innova cone contrast test-54 Insect bites, centipede envenomation-944 International Space Station (ISS) biomedical research on (NASA Symposium)-634 crew fatality considerations-705 denosumab countermeasure for osteopenia-389 request for COVID-19 vaccination aboard-645 SMAC for ethyl acetate-25 Interval exercise, in space, sweat loss and-623 Intravenous fluids, use in simulated reduced gravity-596, E1(Aug) Isolation

exercise effect on mental health in quarantine–686 human limits to long-term spaceflight–444

J

Joint position error, cervical, and cockpit ergonomics-107

K

Ketamine, vs. SSRIs for deep space missions–843 Konan Medical cone contrast test–54

L

Laypersons spaceflight participants with hemophilia A-470 tolerance and performance in hypergravity-584 License suspension, due to temporary incapacitation in airline pilots-113 Light, HEV, for day to night shifts in aviators-66 Light conditions, aviation accident analysis in Hawaii-131 Lithium-ion batteries, cellphone burn during a parachute jump-793 Living in space, human physiological limitations to-444 Long-duration space missions SSRIs and other modalities for-843 denosumab as osteopenia countermeasure-389 human physiological limitations in-444 IMPACT 1.0 medical conditions list-550 IV fluid resuscitation use on-596, E1(Aug) team composition for-457 Loss of consciousness (LOC) G-LOC test results in Korean Air Force cadets-384 gravity induced, high G tolerance and-911 Low-Earth orbit crew fatality considerations on ISS-705 human remains containment during-368 Lunar missions human health on (NASA Symposium)-634 sensory noise and performance during simulated landing-770, E1(Oct) surface EVA performance risks-34

Μ

Machine learning, AI applications in space medicine–610 Magnetic resonance imaging (MRI) in familial cerebral cavernous malformation–733 functional, brain changes in space headache–678 Mars missions MEDEVAC risks on–634 medical care on (NASA Symposium)–639 Maxillary fractures, from night vision goggle impact–827 Medical conditions, in spaceflight, IMPACT 1.0 list–550 Medical disqualification-See also Aeromedical disposition of pilot applicants to British Army Air Corps-939 Medical evacuation (MEDEVAC), risks in space exploration-875 Medical Risk Assessment and Airworthiness Matrix-314 Medications for acute urinary retention-90 SSRIs for deep space missions-843 Mental health AI applications for space medicine-610 exercise effect on in isolation-686 SSRIs for deep space missions-843 Mental rotation test, assessing pilots' spatial visualization ability-422 Metabolic cost, of NMES spaceflight countermeasure vs. walking-523 Metabolic syndrome, in military airmen-604 Methemoglobinemia, acute hydrazine inhalation in spaceflight-532 Mice, moderate-altitude vs. sea-level-887 Microgravity postmortem remains containment in-368 x-ray imaging in parabolic flight-786 Migraines, in altitude chamber attendant-558 Military aircrew cervico-thoracic pain risk factors in-500 coronary artery disease management in-917 DCS in high-altitude parachutist dispatchers-666 hyperlipidemias in-604 metabolic syndrome in-604 osteopathic manipulative treatment to prevent motion sickness-934, E1(Dec) responses to hyperventilation during hypoxia-59 Military personnel facial fracture from night vision goggle impact-827 heat intolerance, body size and return to duty-546 Military pilots-See also Fighter pilots caffeine effect on pilots after extended wakefulness-750 CBF-based modeling of G_n-induced effects-409 cockpit ergonomics and neck pain in-107 diagnosing decompression sickness in-11 medical attrition for pilot applicants-939 osteopathic manipulative treatment to prevent motion sickness-934, E1(Dec) paroxysmal atrial fibrillation in-97 team situation awareness in air combat-429 testosterone replacement treatment and hypogonadism-800 waiver for sleep apnea in USAF pilot-648 Modeling, CBF-based modeling of G_z-induced effects-409 Moderate altitude, residence at, vs. sea-level-887 Monitoring responses to hyperventilation during hypoxia-59 wearable devices for SpO₂-42, E1(Jan) Monomethylhydrazine, acute inhalation in spaceflight-532 Mood, exercise effect on mental health in quarantine-686 Moon missions human health on (NASA Symposium)-634 sensory noise and performance in lunar landing-770, E1(Oct) surface EVA performance risks-34 Morphometric differences, residing at moderate altitude vs. sea level-887 Motion sickness, osteopathic manipulative treatment for-934, E1(Dec) Musculoskeletal disorders, cervico-thoracic pain risk in military aircrew-500 Myocardial infarction acute, in bodybuilder fighter pilot-719 management in military aircrew-917

Ν

National Aeronautics and Space Administration (NASA) MEDEVAC risks in space exploration-875 Spaceflight for Everybody symposium-634 Nationalities, in teams for long duration spaceflight-457 Near-infrared spectroscopy, of COPD patients during simulated air travel-102, E1(Mar) Neck muscles, in fighter pilots, measuring strength of-480 Neck pain, cockpit ergonomics impact on-107 Necrotizing fasciitis, after centipede envenomation-944 Nerve palsy, facial, in aviation-404 Neurocardiovascular system, responses to $+G_{z}$ in fighter pilots-761 Neurocognitive concerns in case of HIV and syphilis-861 with SSRIs for deep space missions-843 Neurological symptoms headache, in familial cerebral cavernous malformation-733 headache, in glioblastoma multiforme-949 sudden, in altitude chamber attendant-558 Neuromuscular electrical stimulation (NMES), metabolic cost of-523 Neurotoxicity, acute hydralazine exposure during spaceflight-532 Night flying, caffeine effect on pilots after extended wakefulness-750 Night shiftwork, HEV light for day to night shifts in aviators-66 Night vision goggles, facial fracture injury from impact-827 Noise auditory white, and performance in a lunar landing simulation-770, E1(Oct) dermatitis in fighter aircrew using hearing protection-396 Nordstrom cone contrast test-54 Nutrition, and exercise impact on BMD in spaceflight-923

0

Obesity, excessive daytime sleepiness in pilots-815 Obstructive sleep apnea syndrome aviators' residual sleepiness risk-74 pilot obesity and excessive daytime sleepiness-815 waiver for, in a USAF pilot-648 Occupational exposure acute inhalation of hydrazines in spaceflight-532 revisions to SMACs for benzene-544 SMAC for ethyl acetate-25 Occupational health, temporary pilot medical incapacitation-113 Off-gassing, SMAC for ethyl acetate-25 Operational medicine, hearing protection and skin pathology in fighter aircrew-396 Ophthalmology AI applications for SANS-610 cone specific color vision tests-54 implantable collamer lens use in space-48 physiological changes due to SANS-634 Salzmann's nodular degeneration-400 Orbit injury fractures, from night vision goggle impact-827 Organ system dysfunction, human limits to long-term spaceflight-444 Orthostatic intolerance, postflight, AI applications for space medicine-610 Osteopathic manipulative treatment to prevent motion sickness in military aircrew, 934, E1(Dec) Osteopenia, denosumab in long-duration spaceflight-389

Osteoporosis, countermeasures on long-duration spaceflight-389 Oxidative stress, biomarkers for exertional hypobaric-738

Р

Pachychoroid pigment epitheliopathy, implantable collamer lens use in space–48 Pain

cervico-thoracic, risk factors in military aircrew-500 neck, cockpit ergonomics impact on-107 Parabolic flight, x-ray imaging in simulated-786 Parachuting cellphone burn injury during-792 high-altitude, DCS in dispatchers-666 Parachutist dispatchers, DCS after repeated high altitude exposure-666 Passengers, airline with COPD-102, E1(Mar) transient facial nerve palsy in-404 Performance enhancement, caffeine effect on pilots after extended wakefulness-750 Permanent license suspension, in commercial airline pilots in UAE-113 Personality, in teams for long duration spaceflight-457 Pharmacology, SSRIs for deep space missions-843 Physical activity-See also Exercise effect on mental health in quarantine-686 Physical fitness, G-test results in Korean Air Force cadets-384 Physiological events to hyperventilation during normobaric hypoxia-59 lingering altitude effects in synthetic cockpit-135 residing at moderate altitude vs. sea level-887 in spaceflight (NASA Symposium)-634 Pilots-See also Commercial airline pilots; Helicopter aircrew; and Military pilots acute abdominal pain in-86 aero-otitis media in, qualification after-629 aeronautical decision-making role in accidents-807 cockpit performance evaluation metrics-696 cone specific color vision tests for-54 facing unexpected events-18 HEV light for day to night shifts-66 obesity and excessive daytime sleepiness in-815 with obstructive sleep apnea syndrome-74 recertification post-COVID-19-728 spatial visualization ability assessment-422 student, heart rate variability in flight training-475, 835 wearable devices for SpO₂-42, E1(Jan) Polycythemia, due to testosterone replacement treatment-800 Postmortem containment, of remains during spaceflight-368 Precision piloting, lingering altitude effects in simulated-135 Pressure equalization tubes, facial nerve palsy in aviation-404 Proprioception, cervical, cockpit ergonomics influence on-107 Prosthodontics, fiber post bond strength in hypobaric pressure changes-508

- Protein supplements, myocardial infarction in a bodybuilder fighter pilot-719
- Psychological health, AI applications for space medicine–610 Psychosis, corticosteroid-induced–561 Pulse oximeter, wearable devices in varying conditions–42, E1(Jan) Pyridoxine, acute inhalation in spaceflight–532

Q

Quality of life issues, allergic rhinitis in railway employees-821 Quarantine, exercise effect on mental health in-686 R

Radiation, space AI applications for acute radiation sickness-610 human limits to long-term spaceflight-444 physiological changes due to-634 Radiography, in simulated parabolic flight-786 Railway employees, allergic rhinitis in-821 Rectus abdominis syndrome, in a pilot-86 Remains, human containment during spaceflight-368 management aboard the ISS-705 Remote environments, acute urinary retention in-90 Republic of Korea Air Force Academy, G-test results in cadets-384 Resin cement, fiber post bond strength in hypobaric pressure changes-508 Resistance exercise, and BMD in spaceflight-923 Respiration rate, lingering altitude effects in simulated cockpit-135 Resuscitation, IV fluid use in space-596, E1(Aug) Retention of learning, by astronauts-902 Return to work, after temporary incapacitation in airline pilots-113 Reviews acute hydrazine inhalation in spaceflight-532 AI applications in space medicine-610 cockpit performance evaluation metrics-696 denosumab in long-duration spaceflight-389 exercise, nutrition, and BMD in spaceflight-923 exercise effect on mental health in quarantine-686 extended reality applications for space health-122 human physiological limits in space-444 ISS fatality considerations-705 SMAC for ethyl acetate-25 SSRIs for deep space missions-843 surface EVA performance risks-34 team composition for long-duration spaceflight-457 Rheumatoid arthritis, seronegative, in a military aviator-488 Risk assessment for MEDEVAC in space exploration missions-634 on the Moon and beyond (NASA Symposium)-634 of pilot applicants to British Army Air Corps-939 USAF Medical Risk Assessment and Airworthiness Matrix-314 Risk factors, for cervico-thoracic pain in military aircrew-500 Root canals, fiber post bond strength in hypobaric pressure changes-508 Rotary-wing aircraft—See also Helicopters spatial disorientation training for AW159-377 S Safety, aviation cellphone burn to skin during parachute jump-792 abdominal crunch syndrome in a pilot-86 caffeine effect on pilots after extended wakefulness-750 HEV light for day to night shifts in aviators-66 pilots and unexpected events-18 Salzmann's nodular degeneration-400 Screening, of pilot applicants to British Army Air Corps-939 Sea level, residence at moderate altitude vs.-887 Selective serotonin reuptake inhibitors (SSRIs), for deep space missions-843 Self-reported prevalence, allergic rhinitis in railway employees-821 Sepsis, AI applications for space medicine-610 Shift work, caffeine effect on pilots' performance-750 Simulated flight delayed drowsiness after hypoxia training-715 HEV light for day to night shifts in aviators-66 lingering altitude effects in-135

spatial disorientation scenarios in AW159 helicopter-377 team situation awareness in air combat-429 Simulated spaceflight-See also Spaceflight additive sensory noise effects and performance-770, E1(Oct) brain changes in space headache-678 IV fluid resuscitation in-596, E1(Aug) layperson tolerance and performance in-584 in a subject with hemophilia A-470 x-ray imaging in parabolic flight-786 Simulator sickness, hypoxia training in an F/A-18 hornet simulator-715 Situation awareness, of teams in simulated air combat-429 Skin graft, full-thickness, after centipede envenomation-944 Sleep apnea aviators' residual sleepiness risk-74 waiver for, in USAF pilot-648 Sleep issues in aviators with obstructive sleep apnea syndrome-74 HEV light for day to night shifts in aviators-66 Sleepiness excessive daytime, role of pilot obesity in-815 residual, in aircrew with sleep apnea-74 Smartphones, burn injury due to during parachute jump-792 Soldiers-See also Military personnel heat intolerance, body size and return to duty-546 Sopite syndrome, after hypoxia training in F/A-18 hornet simulator-715 Space health-See Spaceflight Space medicine-See also Spaceflight legacy of Anatoly I. Grigoriev in-723 Spaceflight maximum allowable concentrations (SMAC) benzene-544 ethyl acetate-25 Spaceflight-See also Commercial spaceflight and Simulated spaceflight 3D ultrasound of jugular vein during-466 3D-printed portable sterilizer for surgery in-857 acute hydralazine exposure-532 AI applications in space medicine-610 Behavioral Health and Human Interactions in Space (Kanas)-644 crew fatality considerations on ISS-705 denosumab as osteopenia countermeasure-389 for everybody (Symposium summary)-634 exercise and nutrition impact on BMD in-923 extended reality applications for-122 human physiological limitations in long-term-444 human remains containment during-368 IMPACT 1.0 medical condition list-550 implantable collamer lens use in-48 MEDEVAC risks in-875 medications for acute urinary retention-90 metabolic cost of NMES countermeasure vs. walking-523 revisions to SMACs for benzene-544 SMAC for ethyl acetate-25 space headache, brain changes during-678 SSRIs for deep space missions-843 surface EVA performance risks-34 team composition for long duration-457 USAF Manned Orbiting Laboratory research on-565 Spaceflight-associated neuro-ocular syndrome (SANS) AI applications for-610 physiological changes (NASA Symposium)-634 Spatial disorientation, AW159 helicopter training scenarios-377 Spatial visualization ability, virtual reality assessment of-422 Stanford Torus, human limits in long-term spaceflight-444 Sterilizer, 3D-printed, for surgery in space-857 Stochastic resonance, sensory noise and lunar landing-770, E1(Oct) Strains, exercise-induced, nutrition impact on in spaceflight–923 Stress, exercise effect on mental health in quarantine–686 Stroke, waiver for pilot with supratentorial–864 Student pilots, heart rate variability in flight training–475, 835 Surgery, in space

3D-printed portable sterilizer for-857 AI applications for space medicine-610

history of symposia on–868 Suspension, due to temporary incapacitation in airline pilots–113 Sweat loss, exercise modality in spaceflight–623

Symposia

Spaceflight for Everybody-634

on surgical care in space-868

Syphilis, and HIV in an air traffic controller-861

Т

Tamsulosin, for acute urinary retention–90 Task performance, by laypersons in simulated spaceflight–584 Teams

composition, for long duration spaceflight-457 situation awareness in simulated air combat-429

Technical Notes

3D-printed portable sterilizer-857

CBF-based modeling of G_z -induced effects–409 creating the IMPACT 1.0 medical condition list–550 HIF-1 sensor in detecting hypoxia–485 measuring neck muscle strength–480

Temporary license suspension, in commercial airline pilots in the UAE-113

Test pilots, performance facing unexpected events-18

Testosterone replacement treatment, and hypogonadism in a military pilot-800

Three-dimensional (3D) printing, of sterilizer for surgery in space-857

Thromboembolism, with paroxysmal atrial fibrillation-97

Train crewmembers, allergic rhinitis in–821 Training

for cohesive teams for long duration spaceflight–459 flight, heart rate variability in student pilots–475, 835 operational, +G_z standards for Indian Air Force–780 of physicians for in-flight medical emergencies–94 (Letter) for spatial disorientation scenarios in AW159 helicopters–377

Transcranial magnetic stimulation, vs. SSRIs for deep space missions–843

Transfer of learning, by astronauts–902 Trauma

facial fractures from night vision goggle impact-827 IV fluid resuscitation in space-596, E1(Aug)

Travel, air, effects on COPD patients–102, E1(Mar)

Twin-engine aircraft, aviation accident analysis in

Hawaii-131

U

U.S. Air Force—*See also* Military pilots Manned Orbiting Laboratory helium research–565 Medical Risk Assessment and Airworthiness Matrix–314 waiver for sleep apnea in a USAF pilot–648

U.S. Army—See also Military pilots osteopathic manipulative treatment to prevent motion sickness–934, E1(Dec) U.S. Navy—See also Military pilots aviation decompression sickness-11
Ultralight aircraft, water accidents-437
Ultrasonography 3D of jugular vein on ISS-466 transcranial, vs. SSRIs for deep space missions-843
United Arab Emirates, temporary commercial airline pilot incapacitation-113
Urine retention acute, medications for-90 voluntary, effects on performance-79

V

Vaccines, request for COVID-19 vaccination aboard ISS-645 Venous gas emboli biomarkers for exertional hypobaric decompression stress-738 DCS in high-altitude parachutist dispatchers-666 Venous malformations, tortuous, in blue rubber bleb nevus syndrome-415 Venous ultrasound, motorized 3D, of the jugular vein on ISS-466 Virtual reality applications for space health-122 assessing pilots' spatial visualization ability-422 Vision cone specific color vision tests-54 implantable collamer lens use in space-48 Visual changes, as endpoint for G tolerance in centrifuge research-894 Vitamin D, supplementation effect on BMD in spaceflight-923 Volatile organic compounds, SMAC for ethyl acetate-25 W

Waivers after centipede envenomation and skin graft-948 Salzmann's nodular degeneration in a pilot applicant-400 for sleep apnea in a USAF pilot-648 for a USAF pilot with supratentorial stroke-864 Wakefulness caffeine effect on pilots' performance after extended-750 maintenance of, in aircrew with sleep apnea-74 Walking, metabolic cost of NMES in spaceflight vs.-523 Water accidents, with ultralight aircraft-437 Wearable devices, measuring arterial oxygen saturation-42, E1(Jan) Well-being, exercise effect on mental health in quarantine-686 White noise, auditory, and performance in lunar landing simulation-770, E1(Oct) Wilderness medicine, medications for acute urinary retention-90 Wire strikes, in agricultural aviation operations-852

х

x-rays, on simulated parabolic flight-786

Z

Zygomatic fractures, from night vision goggle impact-827