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USSR Space Life Sciences Digest

Index to Issues 5–9

Lydia Razran Hooke

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USSR Space Life Sciences Digest

Index to Issues 5–9

Lydia Razran Hooke
Management and Technical Services Company
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The following pages give bibliographic citations and key words for abstracts published in issues 5-9 of the USSR Space Life Sciences Digest grouped according to the topic area categories under which they were originally included. Topic area categories are listed in alphabetical order. Within categories, abstracts are grouped according to the Digest issue in which they appeared. At the beginning of each topic area there is a set of cross references referring the reader to abstracts within other relevant topic areas. For example, the cross reference "Adaptation 4" under the topic area "ENDOCRINOLOGY" indicates that the fourth abstract listed under the topic area "ADAPTATION," is also relevant to the field of endocrinology.

Following this section is a key word index; numbers in this index refer to page numbers in this topic area listing.
ADAPTATION

See also Biological Rhythms 3; Body Fluids 6; Cardiovascular and Respiratory Systems 18; Endocrinology 2, 3, 5; Hematology 4; Human Performance 2, 9, 13; Immunology 1; Life Support Systems 11; Metabolism 2, 11; Morphology and Cytology 1; Musculoskeletal System 5, 13; Neurophysiology 12, 16; Psychology 1.

ISSUE 5

PAPER:


Adaptation, Long-term Service, Seasonal Variations; Psychology, Social Adjustment, Information Processing; Thermal Regulation; Cardiovascular and Respiratory Systems, Functional Parameters Humans, Seamen Environmental Conditions, Long-term Cruise, Optimal Cruise Length, Arctic, Cold

ISSUE 7

PAPER:


Adaptation; Biological Rhythms Theoretical Article Philosophy, Dialectics

ISSUE 8

MONOGRAPH:


Key Words: Adaptation, Biological rhythms, Hypoxia, Hyperthermia, Physical Exertion, Cardiovascular System
ISSUE 9

PAPER:

4. P403(9/86) Khitrov NK, Toloknov AV, Bolshakova TD, Vinnitskaya KB, Panteleyemonov VA.
Mechanisms of adaptation to physical exertion and the effect of excess CO₂ [on its formation.]
Byulleten' Eksperimental'noy Biologii i Meditsiny.
[11 references; 2 in English]
Affiliation: I. M. Sechenov Medical Institute of Moscow, (Departments of Pathophysiology and Problems of Laboratory Biochemistry of Tissue Hormones)

Adaptation; Cardiovascular System; Endocrinology, Norepinephrine;
Neurophysiology, Acetylcholine
Rats, Male
Physical Exercise, Maximum Exercise Capacity, Training; Hypercapnia

BOOK REVIEW:

5. BR10(9/86) Isabayeva VA, Slonim AD.
Review of: Nespetsificheskiye Mekhanizmy Adaptsii Cheloveka
[Non-specific mechanisms of human adaptation].
Leningrad: Nauka; 1984, 146 pages.
Fiziologiya Cheloveka.

Key Words: Adaptation, Human, Long-term, General; Hematology, Leukocytes;
Biological Rhythms
BIOLOGICAL RHYTHMS

See also Adaptation 3, 5; Biospherics 1; Cardiovascular and Respiratory Systems 36, Operational Medicine 3; Psychology 3.

ISSUE 7

PAPER:


Institute of Physiology, Siberian Department, USSR Academy of Medicine

Biological Rhythms, Typology; Human Performance, Work Capacity
Humans, Males and Females
Musculoskeletal System, Muscle Activity

ISSUE 9

PAPER:


Authors' affiliation: Kemerov University (Department of Human Physiology and Anatomy); Institute of Clinical Experimental Medicine (Laboratory of Endocrinology)

Biological Rhythms, Diurnal and Seasonal;
Rats, Male
Endocrinology, Adrenalectomy, Thymus, Liver, 11-Oxycorticoids, Glucose, Glycogen, Free Fatty Acids, Nucleus Containing Cells

MONOGRAPH:

3. M97(9/86) Stepanova SI. Bioritmologicheskiye aspekty problemy adaptatsii [Biological rhythm aspects of the problem of adaptation]. Moscow: Nauka; 1986. [244 pages; 5 tables; 56 figures; 31 pages of references; ca. 200 in English]

Affiliation: [Book] Interagency Scientific Council of the USSR Academy of Sciences and USSR Academy of Medical Sciences on the Fundamental Problems of Medicine

Key Words: Biological Rhythms; Adaptation; Personnel Selection, Cosmonauts
BIOSPHERICS

See also Exobiology 3, 11; Microbiology 1.

ISSUE 5

MONOGRAPHS:


   Key Words: Biospherics, Solar Activity; Radiobiology, Ionizing Radiation; Magnetic Fields; Microbiology; Botany; Neurophysiology; Cardiovascular and Respiratory Systems; Hematology; Morphology and Cytology; Psychology; Immunology; Biological Rhythms.

2. M64(2/86) Grigor'yev AA. Antropogennyye vozdeystviya na prirodnuyu sredu po nablyudeniyam iz kosmosa [Using observations from space to study anthropogenic effects on the environment]. Leningrad: Nauka; 1985. [239 pages, 39 figures, no tables; 277 references; 125 in English]. USSR Geographical Society, USSR Academy of Sciences

   Key Words: Biospherics, Space Surveys, Remote Sensing, Human Impact, Forest, Plant Cover, Land Use, Ecology, Archaeology

ISSUE 6

PAPERS:


   Biospherics, Remote Sensing Data
   Forests, Forest Management
   Cost Effectiveness Estimation
On the potential for using remote laser data to assess the state of agricultural crops on the basis of their luminescence.

Issledovaniye Zemli iz Kosmosa

[3 references; none in English]

N.G. Kholodnyy Institute of Botany, Ukrainian Academy of Sciences, Kiev
Center for Automated Scientific Research and Meteorology, Moldavian Academy of Sciences

Key Words: Biospherics, Laser-induced Luminescence
Wheat, Rye
Chlorophyll Content, Fertilization, Biomass

MONOGRAPHS:

5. M69(4/86) Svirezhev YuM.
Mathematicheskoye modelirovaniye biogeotsenoticheskikh protsessov
[Mathematical modeling of ecological (literally, biogeocoenotic) processes].
Moscow: Nauka; 1985.
[126 pages]

Key Words: Biospherics, Ecological Processes and Prediction;
Mathematical Modeling, Ecosystems; Oxygen Cycle, Forests, Swamps, Cotton

Kosmicheskiy monitoring biosfery
[Monitoring the biosphere from space].
[ca. 145 pages; 8 tables; 46 illustrations; 109 references]
Working Group on Monitoring of the Biosphere from Space, Monitoring Section, Council on Biospheric Problems, USSR Academy of Sciences

Key Words: Biospherics, Remote Sensing, Ecological Monitoring, Ecosystems, Anthropogenic Effects; Cybernetics and Data Processing, Automated Remote Sensing Data Processing
BIOSPHERICS

ISSUE 7

MONOGRAPHS:


Key Words: Biospherics, Anthropogenic Effects, Nuclear War, Climate, Biogeochemical Cycles; Mathematical Models, Simulations


Key Words: Biospherics, Aerospace Monitoring, Remote Sensing, Vegetation, Soil, Wildlife, Ecosystems, Nature Preserves


Key Words: Biospherics, Evolution of the Biosphere, Space Factors, Anthropogenic Effects, Ecology; Radiobiology


ISSUE 8

MONOGRAPHS:


Key Words: Biospherics, Geographical Predictions, Climate, Ecology
CONFERENCE REPORT:


Key Words: Biospherics, Interkosmos, Remote Sensing, Multispectral Photographs, Salyut-6, Salyut-7
BODY FLUIDS

See also Life Support Systems 8.

ISSUE 5

PAPER:


Body Fluids, Fluid Electrolyte Balance; Also Endocrinology, Hormonal Regulation; Metabolism Humans, Athletes Physical Exercise, Endurance Limits

ISSUE 6

PAPERS:


Body Fluids, Fluid-Electrolyte Balance Humans, Males Immersion, Dry


Body Fluids, Calcium Balance, Heart, Blood, Liver, Feces Rats Psychology, Emotional Stress, Pain
ISSUE 7

PAPER:

4. P305(6/86)* Grigor’yev AI, Verigo VV.
**Mathematical modeling of the processes of fluid-electrolyte exchange.**
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[12 references; 4 in English]

Body Fluids, Fluid-Electrolyte Exchange
Mathematical Model
Extreme Conditions, Provocative Tests

ISSUE 8

PAPER:

5. P348(8/86) Terenozhkina NP.
**The effect of natriuretic hormone on ion transport through the erythrocyte membrane.**
Kardiologiya.
[14 references; 7 in English]
Affiliation: Department of Pharmacology, Chernovits Medical Institute.

Body Fluids, Ion Transport; Cytology, Cell Membrane
Dogs
Endocrinology, Natriuretic Hormone

MONOGRAPH:

6. M88(8/86) Gazenko OG. Grigor’yev AI, Natochin YuV.
Vodno-Solevoy Gomeostaz i Kosmicheskij Polet.
[Fluid-Electrolyte Balance and Space Flight].
Volume 54 in Series: Problemy Kosmicheskoy Biologii [Problems in Space Biology]
Moscow: Nauka; 1986.
[63 tables; 64 figures; 22 pages of illustrations]

**Key Words:** Fluid-electrolyte Metabolism, Endocrinology, Spaceflight, "Yoskhod," "Soyuz," "Salyut," "Kosmos," Adaptation, Weightlessness Simulation, Countermeasures, Renal Function

Body Fluids, Electrolyte Concentration, Tissue Hydration
Rats
Psychology, Stress, Emotional-Pain
BOTANY

See also Biospherics 1; Life Support Systems 3, 6, 9, 10, 11; Radiobiology 16, 17; Space Biology and Medicine 2.

ISSUE 5

PAPERS:

1. P209(2/86)* Berkovich YuA, Korbut VA, Pavlovskiy VI.
   **Greenhouses with curved planting surfaces.**
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [7 references; none in English]
   Botany, Growth Conditions
   Higher Plants
   Spacecraft Equipment and Methodology, Greenhouse

2. P221(2/86) Palladina TO, Kordyum YeL, Bilyavska NO.
   **Activity and localization of transport adenosine triphosphatases in pea sprout root cells under conditions of hypogravity.**
   Ukrayins'kiy Botanichnyy Zhurnal. NB: Original in Ukrainian
   [11 references; 10 in English]
   Institute of Plant Physiology of the Ukrainian Academy of Sciences;
   M.G. Kholodnyy Botanical Institute Ukrainian Academy of Sciences
   Botany, ATPase Activity
   Higher Plants, Pea, Sprouts, Roots
   Weightlessness, "Dynamic," Simulation, Clinostat

3. P222(2/86) Cherevchenko TM, Shmyhov'ska VV, Kosakivs'ka IV, Chernyad'yev II.
   **Effects of long-term weightlessness on Orchidacea proteins.**
   Dopovidi Akademii Nauk URSR. Seriya geologichni, khimichni ta biologichni nauky. NB: Original in Ukrainian.
   1984(5): 75-77.
   [3 references; 1 in English]
   Central Republic Botanic Garden, UkSSR Academy of Sciences, Kiev;
   Institute of Biochemistry, USSR Academy of Sciences.
   Botany, Protein
   Higher Plants, Orchids
   Weightlessness, "Dynamic," Long-term,
4. P223(2/86) Taibrekov MG, Devyatko AV. 
Plant metabolism under weightlessness. 
Doklady Akademii Nauk SSSR. Biofizika. 
[10 references; 1 in English] 
Institute of Biomedical Problems, Moscow

Botany, Metabolism 
Higher Plants, Corn, Sprouts 
Space Flight, Cosmos-1514; Weightlessness

ISSUE 6

PAPERS:

5. P235(4/86)* Kostina LN, Anikeyeva ID, Vaulina EN. 
Experiments with developing plants on the "Salyut-5," "Salyut-6" and "Salyut-7" orbital space stations. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[12 references; 3 in English]

Genetics, Chromosome Aberrations, Mutations 
Botany, Crepidis capillaris, Arabidopsis thaliana, Air-dried seeds, shoots 
Space flight, Long-term, Salyut-5, Salyut-6, Salyut-7

6. P247(4/86)* Levinskikh MA. 
Changes in photosynthesis rate of Cladopus acicularis var. africana Hind. as a function of concentration of oxygen in the atmosphere. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[13 references; 11 in English]

Botany, Photosynthesis, Rate; Life Support Systems, CELSS 
Seaweed, Cladopus acicularis 
Oxygen Concentration

ISSUE 7

PAPERS:

7. P281 (6/86) Merkis AI, Laurinavichyus RS, Shvyagzhdene, DV. 
Gravitational sensitivity and growth of plants in weightlessness 
Izvestiya Akademii Nauk SSSR: Seriya Fizicheskaya 
[33 references; 18 in English]

Botany, Growth and Tropisms, Viability 
Lettuce, Sprouts; Arabidopsis, Seeds 
Space Flight Conditions, Salyut-7; Artificial Gravity, Centrifugation
ISSUE 7

Modification of the cytogenetic and physiological effects of space flight 
factors by biologically active compounds. 
Zhurnal Obshchey Biologii. 
[27 references; 5 in English] 
V.L. Komarov Botanical Institute, Azerbaydzhan Academy of Sciences, Baku; 
All-Union Scientific Research Institute of Biotechnology, Moscow. 

Botany, Germination Rate, Mitotic Index, Growth Rate; Genetics, 
Chromosome Aberration 
Welsh Onion, Seeds 
Space Flight Factors, Salyut-7; Biologically Active Compounds, 
Alpha-tocopherol, Auxin, Kinetin

ISSUE 8

PAPERS:

9. P312(8/86) Vaulina, EN, Anikeyeva ID, Kostina LN. 
The viability and mutability of plants after space flight. 
In: Kovrov BG, Kordyum VA, editors. 
Mikroorganizmy v iskusstvennykh ekosistemakh. 
[Microorganisms in artificial ecosystems]. 
Moscow: Nauka; 1985. 
[Pages 5-10; 10 references; 4 in English] 
See also Digest Issue 7: M78; Digest Issue 6: P235. 

Botany, Viability; Genetics, Mutability 
Arabidopsis thaliana, Crepis capillaris 
Space Flight, "Salyut-6," "Salyut-7"

The morphological and functional state of the photosynthetic system of 
plant cells grown for varying periods under space flight conditions. 
In: Kovrov BG, Kordyum VA, editors. 
Mikroorganizmy v iskusstvennykh ekosistemakh. 
[Microorganisms in artificial ecosystems]. 
Moscow: Nauka; 1985. 
Pages 29-32. 
See also Digest Issue 4: P181; Digest Issue 5: P221, P222. 

Botany, Photosynthesis System, Cells 
Peas, Orchids 
Space Flight
The ultrastructure of the root cap of *Arabidopsis* plants under normal conditions and microgravity.

In: Kovrov BG, Kordyum VA, editors. Mikroorganizmy v iskusstvennykh ekosistemakh. [Microorganisms in artificial ecosystems]. Novosibirsk: Nauka; 1985. See Digest Issue #7, M78. [pp. 23-28; 11 references; 3 in English]

Botany, Morphology and Cytology, Ultrastructure, Root Cap Higher Plants, *Arabidopsis* 
Spaceflight, "Salut-6", Clinostat
CARDOVASCULAR AND RESPIRATORY SYSTEMS

See Adaptation 1, 3, 4; Biospherics 1; Hematology 6; Human Performance 13; Metabolism 11; Neurophysiology 12, 17; Operational Medicine 3; Space Biology and Medicine 1, 2.

ISSUE 5

   Cardiovascular and Respiratory Systems, Circulation, Carotid Sinus Humans, Males Hypokinesia, Head-down Tilt

   Kirgiz Scientific Research Institute of Cardiology, Frunze Cardiovascular and Respiratory Systems, Hemodynamics, Central, Cardiac Humans, Males Lower Body Negative Pressure

   Cardiovascular and Respiratory Systems, Hypoxia Humans Countermeasures, Drugs, Training Program

   Cardiovascular and Respiratory Systems, Tolerance; Personnel Selection Humans, Males; Diagnostic Prediction Tilt Tests, Water Loading, Centrifugation
5. **P196(2/86)** Këtkov VYe, Pravetskiy NV.  
*Cerebral circulation and oxygen supply in healthy humans performing graded physical exercise in a head-down position.*  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.  
[13 references; 9 in English]

Cardiovascular and Respiratory Systems, Cerebral Circulation;  
Metabolism, Tissue  
Humans  
Head-down Tilt, Exercise

6. **P198(2/86)** Asyamolova NM, Shabel'nikov VG, Baranov VM, Kotov AN, Volkov MYu.  
*Parameters of forceful expiration in healthy individuals under simulated weightlessness.*  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.  
[15 references; 7 in English]

Cardiovascular and Respiratory Systems, Forceful Expiration  
Humans, Males  
Weightlessness Simulation, Immersion

7. **P204(2/86)** Mirrakhimov MM, Khamzamulin RO, Lar'kov VA.  
*The state of the cardiovascular system in acute altitude sickness.*  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.  
[17 references; 9 in English]

Cardiovascular and Respiratory Systems  
Humans, Males, Typology  
Altitude Sickness, Acute

8. **P206(2/86)** Stazhadze LL, Ventslavskaya TA, Korzhova VV.  
*Experimental arrhythmia and its prevention.*  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.  
[18 references; 1 in English]

Cardiovascular and Respiratory Systems, Arrhythmia, Experimental  
Rats, Mice  
Countermeasures, Drugs, Selenium

Cardiovascular and Respiratory Systems, Fluid Shifts, Cranial Humans, Males Exercise, Head-down


Cardiovascular and Respiratory Systems Monkeys, Macaca mulatta Instrumentation, Electrocardiographs, Bipolar Leads

MONOGRAPH:


Key Words: Cardiovascular and Respiratory Systems, Pulmonary Function, Ventilation, Circulation, Gas Exchange; Mathematical Modeling; Gravitational Effects, Biomechanics

ISSUE 6:

PAPERS:


Cardiovascular and Respiratory Systems, Regulation of Circulation Humans, Pilots Human Performance, Job Demands
Certain human reactions to a seven-day period of hypokinesia with head-down tilt.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[19 references; 6 in English]
Cardiovascular and Respiratory Systems, Hemodynamics; Neurophysiology,
Vestibular Tolerance, Acceleration Tolerance; Psychology,
Cognitive Functioning, Emotional State
Humans, Males
Hypokinesia, Head-down Tilt

Human central hemodynamics during leg decompression.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[5 references; 23 in English]
Cardiovascular and Respiratory Systems, Central Hemodynamics
Humans, Males
LBNP, Leg Decompression

15. P240(4/86)* Vereshchagin VK, Gayevyy MD.
The effect of dibazol and its imidazoline analogs on tolerance of animals for hypergravity and on the development of post-ischemic cerebrovascular phenomena.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[20 references; 2 in English]
Cardiovascular and Respiratory Systems, Tolerance, Acceleration,
Ischemia
Rats, Cats
Hypergravity, Centrifugation; Countermeasures, Dibazol, Imidazoline

On using acceleration to model the physiological effects of weightlessness.
In Kedrov BM and Kosmodem'yanskii AA, editors,
Nauchnoye tvorchestvo K.E. Tsiolkovskogo i sovremennoy razvitiye ego idey.
[The scientific work of K.E. Tsiolkovskiy and modern development of his ideas].
Moscow: Nauka; 1984: 64-66.
Cardiovascular and Respiratory Systems, Hemodynamic Effects
Humans; Personnel Selection, Cosmonauts
Weightlessness Simulations, G_x Acceleration
ISSUE 6

17. P268(4/86) Toloknov AV, Bol'shakova TD, Vinnitskaya KB, Panteleymonov VA, Khitrov NK.
Characteristics of sympathetic and parasympathetic mechanisms of cardiac regulation in rats undergoing conditioning and deconditioning with respect to physical exercise.
Fiziologicheskiy Zhurnal SSSR imeni I.M. Sechenova.
[13 references; 7 in English]
First Moscow Medical Research Institute, Moscow

Cardiovascular and Respiratory Systems, Cardiac Regulation; Neurophysiology, Sympathetic and Parasympathetic Systems, Mediators, Norepinephrine, Acetylcholine
Rats
Physical Exercise, Conditioning, Deconditioning

18. P269(4/86) Meyerson FZ, Katkova LS.
The effect of preliminary adaptation to short-term stress on resistance of spontaneous myocardial contractility to induced lipid peroxidation.
Byulleten' Eksperimental'noy Biologii i Meditsiny.
[11 references; 3 in English]

Cardiovascular and Respiratory Systems, Myocardia, Auricle; Metabolism, Lipid Peroxidation
Rats
Countermeasures, Pre-adaptation, Stress, Short-term

ISSUE 7

PAPERS:

19. P287(6/86)* Doroshev VG.
Venous pressure in the jugular veins and the effectiveness of return of blood to the right heart during a 120-day period of hypokinesia with head-down tilt.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[7 references; 1 in English]

Cardiovascular and Respiratory System, Venous Pressure, Jugular, Blood Return, Right Heart
Humans, Males
Hypokinesia, Head-down Tilt, Long-term
20. P288(6/86)* Bystrov VV, Zhernavkov AF, Savilov AA.
Human cardiac function during the first hours and days of hypokinesia with head-down tilt (on the basis of echocardiographic data). Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 20(2): 42-46; 1986.
[25 references; 11 in English]
Cardiovascular and Respiratory Systems, Echocardiography
Humans, Males
Hypokinesia, Head-down Tilt

21. P292(6/86)* Demin AN, Belkaniya GS, Dartsmeliya BA.
[16 references; none in English]
Cardiovascular and Respiratory Systems, Central Hemodynamics, Impedance Plethysmography
Primates, Rhesus Monkeys, Typology
Horizontal and Upright Positions

22. P308(6/86)* At'kov OYu.
[4 references; 3 in English]
All-Union Cardiological Scientific Center.
Cardiovascular and Respiratory Systems, Echocardiography, Hemodynamics Humans, Cosmonauts
Space Flight, "Salyut-7", LBNP, Physical Exercise

MONOGRAPH:
23. M81(6/86) Ozolin' PP.
Adaptatsiya sosudistoy sistemy k sportivnym nagruzkam
[Adaptation of the vascular system to athletic training [literally, athletic loading]]
[134 pages; 44 figures; 16 tables; 307 references; 129 in English]
Latvian Ministry of Public Health; Latvian Scientific Research Institute of Experimental and Clinical Medicine
Key words: Cardiovascular and Respiratory Systems, Vascular Adaptation; Physical Exercise, Athletes; Musculoskeletal System
ISSUE 8

PAPERS:


Cardiovascular and Respiratory Systems, Respiration; Neurophysiology, Neural Regulation
Humans, Males
Impeded Respiration


Cardiovascular and Respiratory Systems, Kinetocardiogram, Right Heart
Humans, Males; Patients, Myocardial Infarction
Operational Medicine, Diagnosis


Cardiovascular and Respiratory Systems, Blood Pressure Measurement
Monkeys
Measurement Technique, Rheotacho-oscillography


Cardiovascular and Respiratory Systems, Contractility
Rats
Hypokinesia, Long-term; Psychology, Stress
ISSUE 8

28. P331(8/86)* Gansburgskiy AN, Potapov PP.
Morphometric analysis of the endothelium of the aorta and serum lipids in rats undergoing hypokinesia.
Kosmitcheskaya Biologiya i Aviakosmicheskaya Meditsina.
20(3): 82-83; 1986.
[9 references; 1 in English]

Cardiovascular and Respiratory Systems, Aorta Endothelium, Serum Lipids Rats Hypokinesia, Immobilization; Psychology, Stress

ISSUE 9

PAPERS:

29. P366(9/86) Bunyatin AM.
Electrical instability of the heart in animals exposed showing different degrees of tolerance of immobilization stress.
Fiziologicheskiy Zhurnal SSSR im. I. M. Sechenova.
[17 references; 7 in English]
Affiliation: Laboratory of Experimental Cardiology, I.P. Anokhin Scientific Research Institute of Normal Physiology, USSR Academy of Medicine, Moscow

Cardiovascular and Respiratory Systems, Heart, Electrical Instability Rats, Species and Individual Differences Immobilization Stress, Tolerance

30. P376(9/86)* Agadzhanyan NA, Krasnikov NP, Naydich SI.
Use of gas mixtures containing increased amounts of oxygen and CO₂ to normalize external respiration and acid-base balance in the blood in fatigue caused by physical exertion.
Kosmitcheskaya Biologiya i Aviakosmicheskaya Meditsina.
[25 references; 11 in English]

Cardiovascular and Respiratory System, External Respiration; Hematology, Acid-base balance Humans, Athletes Fatigue, Physical Exertion; Countermeasures, Hyperoxia, Hypercapnia

31. P386(9/86)* Fomichev VI, To Nam Zen.
Central hemodynamic parameters during dry immersion of patients with borderline arterial hypertension.
Kosmitcheskaya Biologiya i Aviakosmicheskaya Meditsina.
[4 references; 3 in English]

Cardiovascular and Respiratory Systems, Central Hemodynamics Humans, Males, Patients, Arterial Hypertension Hypokinesia, Immersion, Dry
32. P387(9/86) Belkaniya GS, Dartsmeliya VA. The relationship between individual somatometric characteristics [i.e., body measurements] and functional characteristics of the cardiovascular system in horizontal and upright positions in healthy individuals and patients with arterial hypertension. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 20(4): 75-77; 1986. [29 references; 2 in English]

Cardiovascular and Respiratory System, Functional Characteristics, Body Measurements
Humans, Males, Healthy, Patients, Arterial Hypertension
Horizontal and Upright Positions


Cardiovascular and Respiratory Systems, Heart Rhythm
Primates, Macaca Mulatta
Postural Effects, Orthostatic Position

34. P393(9/86) Simonov LG, Gelffenbeyn MS. [The potential for] Ultrasound measurement of hemodynamic parameters of the cardiocerebrovascular system Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 20(4): 8-16; 1986. [64 references; 24 in English]

Cardiovascular and Respiratory System, Hemodynamic Parameters, Head Review and Discussion Paper
Ultrasound Methodology

35. P399(9/86) Navakatikyan AO, Buzunov VA, Tile V, Frentsel' Kh. The effect of hypodynamia and emotional stress on the physical work capacity for the circulatory and respiratory systems during physical exertion. Fiziologicheskiy Zhurnal. 32(3): 278-284. [19 references; 2 in English]

Authors' affiliation: Institute of Industrial Hygiene and Occupational Diseases, Ukrainian Ministry of Health; and E.M. Arndt University, Greiswald, GDR

Cardiovascular and Respiratory Systems, Physical Work Capacity, Exertion
Humans, Workers
Hypodynamia; Psychology, Emotional Stress

Authors' affiliation: Patrice Lumumba University of Friendship among Peoples

Cardiovascular and Respiratory Systems, Sudden Cardiac Death, Synchronization of Parameters; Biological Rhythms

Chinchillas, Male

Radiobiology, Electromagnetic Indices


Authors' affiliations: Laboratory of Cardiac Pathophysiology, Institute of General Pathology and Pathophysiology, USSR Academy of Medicine, Moscow; Department of Biochemistry, Orenburg Medical Institute.

Cardiovascular and Respiratory Systems, Cardiac Damage, Resistance

Rats

Physical Exercise, Overloading, Countermeasures, Antioxidant, Ionol
COSMONAUT TRAINING

ISSUE 8

See Human Performance 6, 12; Nutrition 4; Psychology 4.

DEVELOPMENTAL BIOLOGY

ISSUE 6

See also Musculoskeletal System 8; Radiobiology 9.

ISSUE 7

PAPER:

[15 references; 2 in English]

Developmental Biology, Viability; Life Support Systems, CELSS Quail, Eggs Longterm Storage, Vibration; Radiobiology, Ionizing Radiation

ISSUE 9

PAPERS:

[25 references; 11 in English]

Developmental Biology; Psychology, Behavioral Responses; Neurophysiology, Prenatal Cortical Development Rats, Fetus Spaceflight, "Kosmos-1514"

[2 references; 1 in English]

Developmental Biology, Musculoskeletal System, Skeletal Development Rats, Embryos, Neonates Spaceflight, "Kosmos-1514"
ENDOCRINOLOGY

See also Adaptation 4; Biological Rhythms 2; Body Fluids 1, 5, 6; Metabolism 3, 5, 6; Musculoskeletal System 10, 14; Neurophysiology 5, 12; Radiobiology 8, 11, 18; Reproductive Biology 1.

ISSUE 5

PAPER:


Endocrinology, Thyroid, C-cell System; Morphology and Cytology
Rats
Artificial Gravity, Centrifugation

ISSUE 6

PAPERS:


Endocrinology, Corticosterone; Morphology, Adrenal Cortex
Rats, Female
Hypokinesia, Long-term, Adaptation, Immobilization Stress


Endocrinology, Adrenal Glands, Corticosterone; Thymus; Morphology
Rats, Male
Hypokinesia, Long-term, Adaptation, Stress, Immobilization
ISSUE 6

Individual and typological characteristics of the functioning of
the sympathetic adrenal system as prognostic indicators of the functional
state of the body under complex environmental conditions.
Fiziologiya Cheloveka.
[26 references; 2 in English]
Affiliate of the Scientific Research Institute of Naval Hygiene, USSR
Ministry of Health, Odessa.

Endocrinology, Sympathetic Adrenal System
Humans, Sailors, Typology, Personnel Selection
Human Performance, Stress, Monotony

ISSUE 9

PAPERS:

5. P390(9/86)* Kalita NF, Tigranyan RA.
Endocrine status of cosmonauts after long-term space flights.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
20(4): 84-86.
[6 references; 2 in English]

Endocrinology, Hormone Levels, Hypothalamus, Hypophysis, Adrenal
Humans, Cosmonauts
Spaceflight, Long-term Flights; Adaptation, Readaptation

6. P384(9/86)* Alekseyev YeI.
Functional state of adenohypophysial somatrophs of rats undergoing
hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[21 references; 6 in English]

Endocrinology, Hypophysis; Cytology, Somatrophs
Rats
Hypokinesia, Immobilization Stress

7. P385(9/86)* Pchelenko LD.
Regulation by norepinephrine of heat production and ATP utilization in a
single muscular contraction under normal conditions and hyperoxia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[10 references; 4 in English]

Endocrinology, Norepinephrine, ATP Utilization; Musculoskeletal System,
Muscle Contraction
Rats
Hyperoxia

27
ENZYMEOLOGY

See Exobiology 9; Gastrointestinal System 1; Nutrition 2; Radiobiology 23

ISSUE 6

PAPER:

1. P247(4/86)* Drozdova TYe, Vetrova YeG.
   Enzymes in blood serum in response to a 7-day period of immersion.
   Kosmicheskoy Biologiya i Aviakosmicheskoy Meditsina.
   [4 references; none in English]

   Enzymology, Enzyme Activity
   Humans, Males
   Hypokinesia, Dry Immersion

ISSUE 7

PAPERS:

2. P300(6/86)* Medkova IL, Nikolayeva NM, Smirnov KV, Surinov BP.
   A method for measuring the activity of phospholipases in duodenal contents.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [10 references; 3 in English]

   Enzymology, Phospholipase Activity
   Measurement Technique, Substrate
   Duodenal Contents

3. P290(6/86)* Popova IA.
   Activity of blood serum enzymes in healthy men during simulated weightlessness.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [9 references; 5 in English]

   Enzymology, Alkaline Phosphatase, Cholinesterase, Leucine Aminopeptase,
   Glutamytransferase, Glutamate dehydrogenase
   Humans
   Simulated Weightlessness, Hypokinesia, Head-down Tilt, Horizontal

28
The functional state of the pancreas during long-term bedrest.
Fiziologiya Cheloveka.
[9 references; 3 in English]

Enzymology, Pancreas
Humans, Males
Hypokinesia, Head-down Tilt, Bed rest
NOTE: THIS IS A NEW CATEGORY BEGINNING WITH ISSUE 8

See also Cardiovascular and Respiratory Systems 10, 26; Endocrinology 2; Habitability and Environment Effects 2; Human Performance 1, 14; Life Support Systems 2; Metabolism 8; Musculoskeletal System 7, 11; Neurophysiology 18; Radiobiology 10.

ISSUE 8

PAPER:

1. P328(8/86)* Gritsuk AI, Danilova IG.
A cage for simulating long-term hypokinesia in rats.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 20(3): 75-78; 1986.
[13 references; none in English]

   Equipment and Instrumentation, Hypokinesia, Immobilization Cage, Rats Metabolism; Musculoskeletal Systems. Tissue Respiration, Oxidative Phosphorylation

ISSUE 9

PAPERS:

2. P388(9/86)* Magedov VS, Koryakov YuS.
A special purpose device for magnetic recording of physiological information for experiments on biosatellites.
[7 references; 2 in English]

   Equipment and Instrumentation, Magnetic Tape Recording Device Physiological Signals Biosatellites
EXOBIOLOGY

See also Space Biology and Medicine 2.

ISSUE 5

PAPER:

1. P189(2/86) Loginova LG.
   Extremely thermophilic bacteria living at temperatures greater than 100°.
   Seriya Biologicheskaya.
   [27 references; 23 in English]
   Institute of Microbiology, USSR Academy of Sciences, Moscow.

   Exobiology
   Microbiology, Bacteria, Thermophilic
   High Temperatures

MONOGRAPHS:

2. M63(2/86) Rubtsov VV, Ursul AD.
   Problema vneznemnykh tsivilizatsii (Filosofsko-metodologicheskiye aspekty)
   [The problem of extraterrestrial civilizations (Philosophical and
   methodological aspects.])
   [262 pages]
   Moldavian Academy of Sciences

   Key Words: Exobiology, SETI, Theoretical Discussion, Interstellar
   Communication

3. M56(2/86) Zavarzin GA.
   Bakterii i sostav atmosfery.
   [Bacteria and the composition of the atmosphere].
   Moscow: Nauka; 1984.
   [199 pp.]
   USSR Academy of Sciences

   Key Words: Exobiology, Origin of Life; Microbiology, Bacteria;
   Biochemistry, Atmospheric Components; Biospherics, Ecology

CONFERENCE REPORT:

4. CR1(2/86) Report on All-Union Conference on "Contemporary Problems in
   Evolutionary Biochemistry and the Origin of Life"
   Ortoshchenko VA.
   In: Uspekhy Sovremmennoy Biologii.
ISSUE 6

MONOGRAPHS:


Key Words: Exobiology, Molecular Evolution; Genetics, Origin of Molecular-Genetic Systems; Mathematical Modeling


Key Words: Exobiology, Planetary Environments, Planetary Atmospheres, Planetary Surfaces, Mars, Jupiter, Saturn, Venus, Mercury, Planetary Satellites, Spectrometry

ISSUE 7

PAPER:


Exobiology, Origin of Life
Uridine Nucleotides, Nonbiological Synthesis
Space Flight, "Salyut-7"; Radiobiology, Ultraviolet Radiation
ISSUE 8

PAPERS:

8. P342(8/86) Boychenko, Ye A.
The participation of iron-sulphur proteins in the evolution of carbon dioxide reductases.
Zhurnal Evolyutsionnoy Biokhimii i Fizioligii.
22(3): 221-225; 1986.
[15 references; 7 in English]
Affiliation: V.I. Vernadskiy Institute of Geochemistry and Analytic Chemistry, USSR Academy of Sciences, Moscow

Key Words: Exobiology, Evolution, Aerobiosis
Carbon Dioxide Reductases
Iron-sulphur Proteins

Recombination and selection of active duplicated structure as a possible path of prebiological evolution of enzymes.
Zhurnal evolyutsionnoy biokhimii i fiziologii.
[15 references; 3 in English]
Affiliation; Department of Molecular Biotechnology; Lensovet Technological Institute, Leningrad

Key Words: Exobiology
Enzymes
Evolution, Prebiological

On the taxonomic classification of microorganisms isolated from the stratosphere and mesosphere.
MiikrobioLOGiya.
[20 references; 12 in English]
Affiliation: Institute of Microbiology, USSR Academy of Sciences. Moscow; M.V. Lomonosov Moscow State University

Key Words: Exobiology, Life in Space
Microbiology, Conidia, Fungi, Bacteria
Stratosphere and Mesosphere

MONOGRAPH:

11. M92(8/86) Belenkina NS.
Arena biologicheskoy evolyutsii. Sbornik. (Novoye v zhizni, nauke, tekhnike. Ser. "Biology")
Moscow: Znaniye; 1986.
[64 pages]

Key Words: Exobiology, Biospherics, Genetics, Evolution of Life
GASTROINTESTINAL SYSTEM

See also Radiobiology 14, 22

ISSUE 8

PAPER:

1. P344(8/86) Smirnov KV.
[13 references; none in English]

Gastrointestinal System, Enzymology, Proteolytic Enzymes
Rats
GENETICS

See also Botany 5, 8, 9; Exobiology 11; Radiobiology 3, 16, 17, 19.

ISSUE 8

PAPERS:

1. P315(8/86) Bobkova NN.
Frequency of sister chromatid exchange in blood cells during long-term hypokinesia.
Fiziologiya Cheloveka.
[25 references; 12 in English]

Genetics, Sister Chromatid Exchange, Hematology, Leukocytes
Humans, Males
Hypokinesia, Head-down Tilt, Long-term; Countermeasures, Exercise, Isometric

2. P329(8/86)* Chabala LI.
Functional and structural transformation of chromosomes in various proliferating hemopoietic cells in the bone marrow of white rats.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[14 references; 8 in English]

Genetics, Chromosome Transformation; Hematology, Hemopoietic Cells,
Bone Marrow
Rats
Splenectomy, Hypoxia
See also Human Performance 6.

ISSUE 5

PAPER:

1. P215(2/86)* Terelkin Ya (Poland).
   Dynamics of informal structure of small dedicated groups under conditions of stress due to social isolation in the fields.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [18 references; 7 in English]

   Group Dynamics, Informal Structure; Psychology
   Small Isolated Group, Polar Expedition Members
   Interpersonal Rating Scales

ISSUE 8

PAPER:

2. P345(8/86) Tsukanova YeV.
   Experimental investigation of impeded communication under conditions of time pressure. Part II. Types of creative personal communication arising during interaction in the presence of extreme factors.
   In: Novyye issledovaniya v psikhologii. [New research in psychology].
   Affiliation: N.V. Gogol' State Pedagogic Institute, Nezhin??.

   Group Dynamics, Communication
   Humans, Individual Differences, Extroversion, Neurosis
   Extreme Conditions, Time Pressure
HABITABILITY AND ENVIRONMENT EFFECTS

See also Adaptation 1; Immunology 2.

ISSUE 5

PAPERS:

1. P207(2/86)* Dubinin DM, Naydina VP, Zaloguyev SN.
Using chromatography to evaluate the status of human skin in a hermetically sealed living space.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[18 references; 7 in English]

Habitability and Environment Effects, Hermetically Sealed Environment; Life Support Systems
Humans, Males
Skin Oils

2. P208(2/86)* Ushakov VF, Solomin GI, Tikhonova GP, Gorshunova AI, Lyubarskaya II, Marchenko LV, Chukhnoy EI, Ostashova NYe, Demchenko YeA, Pashin SS.
Evaluation of the toxicity of gases emitted by heated thermally stable tetrafluorethylene-based polymers.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
19(6): 73-77.
[8 references; 2 in English]

Habitability and Environment Effects; Toxicity
Mice, Rats
Polymers, Tetrafluorethylene-based, Heated

3. P216(2/86)* Solomin GI.
A multicriterion approach to the toxicological and hygienic evaluation of polymers used in construction.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[28 references; 6 in English]

Habitability and Environment Effects, Toxicity
Review Article
Polymers, Spacecraft Cabins, Heated
ISSUE 6

PAPER:


Habitability and Environment Effects, Microflora Growth, Microbiology, Bacteria, Polymer Materials, Environmental Moisture

ISSUE 7

PAPER:


Habitability and Environmental Effects, Hermetically Sealed Environment, Humans, Dogs, Microbiology, Microflora

ISSUE 8

PAPER:


Habitability and Environment Effects, Hypoxia, Mice, Countermeasures, Morphine-like Substances, Agonists and Antagonists
ISSUE 9

PAPERS:


Habitability and Environment Effects, Visual Distortion
Humans, Operators
Windows, Lens Defects


Habitability and Environment Effects, Atmospheric Contaminants
Methodology Evaluation
Sampling and Concentration
HEALTH AND MEDICAL TREATMENT

NOTE: STARTING WITH ISSUE 8, MATERIAL PREVIOUSLY INCLUDED IN THIS CATEGORY IS INCLUDED IN A NEW CATEGORY CALLED "OPERATIONAL MEDICINE"

See also Radiobiology 6; Space Medicine and Biology 1, 2.

ISSUE 5

MONOGRAPH

1. M57(2/86) Mizun YuG, Mizun PG. Kosmos i zdorv'ye. [Space and health]. Moscow: Znaniye; 1984. [144 pp.] Laboratory of Polar Geophysics, USSR Academy of Sciences (first author); Uzhgorod University Medical School (second author)

Key Words: Health and Medical Treatment, Bioeffects; Space Factors, Magnetic Fields and Storms, Solar Storms; Radiobiology, Radiation

PAPER:


Key Words: Health and Medical Treatment, Hyperthermia, Monitoring Humans, Cosmonauts Equipment and Instrumentation, Measurement Techniques
HEMATOLOGY

See also Adaptation 5; Biospherics 1; Cardiovascular and Respiratory Systems 30; Genetics 1, 2; Radiobiology 7, 11, 14; Space Biology and Medicine 1.

ISSUE 5

PAPER:

1. P190(2/86) Abdraymova SM, Koshkenbayev BKh, Maksimenko VB, Tazhibayev ShS.
   Hypokinesia, nutrition and lipid metabolism. The effects of protein and vitamin deficiencies on blood serum lipids and lipoproteins during exposure to hypokinesia.
   Voprosy meditsinskoy khimii.
   [12 references; 7 in English]
   Kazakh Affiliate of the Institute of Nutrition, USSR Academy of Medical Sciences, Alma-Ata

   Hematology, Lipids, Lipoproteins; Metabolism
   Rats
   Nutrition, Deficiencies, Protein, Vitamin; Hypokinesia

2. P199(2/86)* Vlasova TF, Miroshnikova YeB, Ushakov AS.
   The effect of diminished motor activity on the concentration of alanine in human blood plasma.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [19 references; 9 in English]

   Hematology, Alanine
   Humans, Males
   Hypokinesia, Head-down Tilt

ISSUE 6

PAPERS:

   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [23 references; 15 in English]

   Hematology, Erythropoiesis, Cyclic Processes; Metabolism
   Humans
   Mathematical Modeling
HEMATOLOGY

ISSUE 6


Department of Biochemistry and Laboratory for Ecological Adaptation of Animals to Extreme Environmental Factors, Rostov University, Rostov-na-Donu.

Hematology, Erythrocyte Membrane, Permeability Rats Adaptation, Cold; Pharmacology, Countermeasures, Arginine

ISSUE 7

PAPER:


Hematology, Blood Toxicity, Paramecium Test Humans Weightlessness, Simulated, Hypokinesia, Head-down Tilt, Immersion

ISSUE 8

PAPERS:


Hematology, Blood Lipids, Hyperlipemia Humans, Flight Crews, Cardiovascular Disorders Operational Medicine, Diagnosis

42
HEMATOLOGY

ISSUE 8

7. P321(8/86)* Goncharov IB, Ivanov AP, Davydkin AF, Kudryashova ZhM.
The effect of hemodialysis on the rheological properties of blood during a
7-day period of hypokinesia with head-down tilt and in in vitro studies.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[13 references; 4 in English]

Hematology, Hemorheology
Humans, Males
Hemodialysis, Hypokinesia, Head-down Tilt

ISSUE 9

PAPERS:

Lactic acid concentration in the blood and erythropoiesis as a response to
hypoxia
Fiziologicheskiy Zhurnal SSSR im. I.M. Sechenova.
[20 references; 3 in English]
Affiliation: Institute of High Altitude Physiology and Experimental
Pathology, Kirghiz SSR Academy of Sciences, Frunze

Hematology, Lactic Acid, Erythropoiesis
Rats, Males
Hypoxia, Anemic, High Altitude

9. P382(9/86)* Kiselev RK, Chayka AM, Legen'kiv VI.
The effects of coamide [a cobalt derivative] and folicobalamine [a mixture
of vitamin B_{12} and folic acid] on erythropoiesis under normal living
conditions and during hypokinesia with head-down tilt.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[11 references; 4 in English]

Hematology, Erythropoiesis
Humans, Males
Hypokinesia, Head-down Tilt: Countermeasures, Coamide, Nutrition,
Vitamin B_{12}, Folic Acid Cosmonaut Rations
HUMAN PERFORMANCE

See also Biological Rhythms 1; Cardiovascular and Respiratory Systems 12; Life Support Systems 8; Metabolism 5; Musculoskeletal System 9; Neurophysiology 15; Operational Medicine 3; Perception 1; Psychology, all entries.

HUMAN PERFORMANCE

ISSUE

PAPERS:

1. P209(2/86)* Karpov BA, Pudov AI.
An apparatus for investigating simultaneous performance of visual tracking and verbal communication tasks.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[1 reference; none in English]

Human Performance, Visual Tracking, Verbal Tasks; Psychology
Humans, Cosmonauts and Pilots
Equipment and Methodology

2. P219(2/86) Nazhivin YuS, Volkov VP.
Characteristics of self-regulation and work capacity in the human operator during long-term exposure to psychological and physical stress.
In: Zabrodin YuM, editor.
Problemy diagnostiki i upravleniya sostoyaniyem cheloveka-operatora
[Problems in diagnosis and control of the state of human operators].
Abstracts of scientific papers of an All-Union Conference.
Moscow: Tsentral'nyy Sovet Obshestva Psikhologov SSSR
[Central Committee of the USSR Society of Psychologists]; 1984.

Human Performance, Self-regulation, Work Capacity
Humans, Operators, Men and Women
Stress, Long-term, Psychological and Physical, Exercise; Adaptation

MONOGRAPH:

3. M61(2/86) D'yachenko MI, Kandybovich LA, Ponomarenko VA.
Gotovnost' k deyatelnosti v napryazhennykh situatsiyakh:
Psikhologicheskii aspekt.
[Readiness to act in stressful situations: The psychological component].
[206 pages; 10 tables; no figures; 50 references; none in English]
Affiliation: Not available

Key Words: Human Performance, Pilots, Stress; Psychology
ISSUE 6

MONOGRAPH:

Metodika i tekhnika issledovaniy operatorskoy deyatelnosty
[Methodology and technology in the study of operator performance].
Moscow: Nauka; 1985.
[102 pages; 2 tables 37 illustrations; 113 references]
Institute for Higher Nervous Activity and Neurophysiology, USSR Academy
of Sciences

Key Words: Human Performance, Operator Performance, Operator Learning;
Psychology, Psychophysics, Psychometrics, Stress, Biofeedback;
Neurophysiology

ISSUE 7

PAPER:

5. P286(6/86)* Kornilova LD, Smirichevskiy LD, Trutnev AV, Chekanova SL,
Yakovleva IIa, Kravchenko SL.
Job performance (literally: professional work capacity) and functional
state of an operator exposed to repeated optokinetic stimulation and head-
down tilt.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[12 references; 1 in English]

Human Performance, Job Performance; Perception; Psychology, Functional
State
Humans, Operators
Optokinetic Stimulation, Head-down Tilt; Neurophysiology, Vestibular
Tolerance

CONFERENCE REPORT:

6. CR2(6/86) Report on XV Gagarin Lectures -- Problems in Space and
Aviation Psychology.
Krylova NV.
In: Psikhologicheskiy Zhurnal.
7(2): 158-161.

Key Words: Human Performance, Cosmonaut Performance, Performance
Evaluation, Information Processing, Pursuit Tracking; Psychology,
Space Psychology, Functional States, Psychophysical Assessment,
Autogenic Training, Cosmonaut Training; Perception, Spatial Orientation,
Signal Detection; Personnel Selection; Small Groups, Crew Compatibility
ISSUE 8

PAPERS:


Human Performance, Tracking
Humans, Operators, Males, Typology
Hypokinesia, Head-down Tilt; Neurophysiology, Central Nervous System


Human Performance, Work Capacity, Assembly Line Task
Humans, Operators
Monotony


Human Performance, Psychology, Functional State; Neurophysiology, EEG
Humans, Operators
Adaptation, Special Conditions, Fatigue, Sleep Deprivation

MONOGRAPHS:

Affiliation: Institute of Psychology, USSR Academy of Sciences

Key Words: Psychology, Stress, Functional State, Self-regulation, Training, Human Performance, Operators, Extreme Conditions, Work Capacity, Man-machine Systems
Fiziologicheskiye mekhanizmy optimizatsii deyatel'nosti
[Physiological mechanisms for optimizing performance]
[134 pages; 21 tables; 12 figures; 341 references]
Affiliations: Scientific Council of the USSR Academy of Sciences and
Academy of Medicine on Human Physiology; I.M. Sechenov Institute of
Evolutionary Physiology and Biochemistry

Key Words: Human Performance, Man-machine Systems, Job Performance,
Psychophysics, Stress, Fatigue, Personnel Selection

12. M94(8/86) Popovich PR, Gubinskiy AI, Kolesnikov GM.
Ergonomic support of cosmonaut performance.
Moscow: Mashinostroyeniye; 1985.
[272 pages; illustrated]

Key Words: Human Performance, Cosmonauts, Systems Analysis, Man-
machine Systems, Cosmonaut Training, Mathematical Modeling, Personnel
Selection

ISSUE 9

PAPERS:

13. P363(9/86) Bayevskiy RM, Semenova TD.
Evaluation of the functional state of an operator undergoing sensory
deprivation.
Fiziologiya Cheloveka.
[12 references; none in English]

Human Performance, Functional State, Psychological Work Capacity,
Neurophysiology, Autonomic, Sympathetic and Parasympathetic Nervous
Systems; Cardiovascular and Respiratory Systems, Cardiac Parameters;
Adaptation, Monotony
Humans, Operators
Perception, Sensory Deprivation

14. P370(9/86)* Oboznov AA, Boyarskiy AN, Buturlin AI.
Psychophysiological aspects of color coding of flight and navigational
information on on-board (airborne) electronic displays.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[10 references; 5 in English]

Human Performance, Piloting; Psychology, Psychophysical Parameters
Humans, Pilots
Equipment and Instrumentation, Instrument Displays; Perception, Color
Coding
15. P371(9/86)* Epishkin AK, Skrypnikov AI.

**Prediction of operators' work capacity during prolonged uninterrupted work periods.**

Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.


[9 references; none in English]

Human Performance, Sensorimotor, Pursuit and Tracking; Neurophysiology, EEG Parameters
Humans, Operators
Fatigue, Uninterrupted Work, Sleep Deprivation; Countermeasures, Autogenic Training
IMMUNOLOGY

See also Biospherics 1; Radiobiology 9.

ISSUE 6

PAPER:

[19 references; 11 in English]

Immunology, T- and B-lymphocyte Immunity
Humans, Males, Typology
Adaptation, High Altitude, Altitude Sickness

ISSUE 8

PAPER:

[26 references; 15 in English]
Affiliation: All-Union Scientific Research Institute of Physical Culture, Moscow; Lomonosov State University, Moscow

Immunology, Immunity, T-cells, Cell Membrane, Alpha-tocopherol
Humans, Athletes, Skaters, Men and Women
Psychology, Stress; Physical Exercise, Countermeasures; Nutrition

[9 references; 4 in English]
Affiliation: Institute of Sanitation, Hygiene, and Occupational Diseases, Ministry of Health of the Uzbek SSR, Tashkent.

Immunology, B- and T-lymphocytes
Humans, Males, Patients
Habitability and Environment Effects, Vibration Sickness
ISSUE 9

PAPERS:

4. P401(9/86) Shubik VM, Pul'kov VN, Mashneva NI.
Immunological parameters following physical exercise under chronic exposure to radioactive and non-radioactive toxic chemicals.
Gigiyena i Sanitariya.
[2 references; none in English]
Affiliation: Leningrad Scientific Research Institute of Radiation Hygiene, RSFSR Ministry of Health

Immunology, Non-specific Immunity, Humoral Factors
Mice
Physical Exercise, Stress; Radiobiology, Radioactive Chemicals; Toxic Chemicals
LIFE SUPPORT SYSTEMS

See also Botany 6; Developmental Biology 1; Habitability and Environment Effects 1.

ISSUE 5

PAPER:

1. P211(2/86)* Strogonova LB. Methodological issues relevant to conducting ground tests of thermal regulation systems for manned craft. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 19(6):82-83; 1985. [2 references; none in English]

   Life Support Systems, Thermal Regulation Systems; Mathematical Modeling
   Methodological Issues
   Design, Development, Testing

ISSUE 7

PAPER:


   Life Support Systems, Water Reclamation
   Technique Demonstration
   Reverse Osmosis


   Life Support Systems, CELSS
   Botany, Wheat, Strain Development
   Light Tolerance, Photosynthesis
ISSUE 7

MONOGRAPH:


Institute of Biophysics, Siberian Division, USSR Academy of Sciences

Key Words: Life Support Systems, CELSS, Microbiology, Chlorella, Algae, Closteriopsis, Bacteria, Yeast, Botany, Crepis, Arabidopsis Welsh Onion, Orchid, Pea, Wheat, Space Flights, "Salyut-6," "Salyut-7," Mathematical Modeling

ISSUE 8

PAPERS:


Life Support Systems, CELSS, Viability Microbiology, Chlorella Space Flight Factors, "Salyut-6"


Life Support Systems, CELSS; Nutrition Botany, Higher Plants, Soy, Peas, Cabbage, Broccoli, Dill, Basil, Jerusalem Artichokes, Cell Cultures Cultivation Conditions, Sensory Characteristics, Chemical Composition
7. P354(8/86) Antonyan AA, Sukhova NN.
Evaluating the composition of the biomass of *Chlorella* and its energy content in a model of a "man-algae-mineralization" life support system.
In: Kovrov BG, Kordyum VA, editors. Mikroorganizmy v iskusstvennykh ekosistemakh. [Microorganisms in artificial ecosystems]. Moscow: Nauka; 1985. [pages 134-137; no references]

Life Support Systems, CELLS
Botany, Microbiology, Algae, *Chlorella*
Nutrition, Heat of Combustion

8. M91(8/86) Glushko AA.
Affiliation: Not cited.

Key Words: Life Support Systems, Cosmonauts, Water, Food, Heating;
Metabolism, Homeostasis; Biophysics; Work Capacity, Exercise; Body Fluids, Nutrition

9. P394(9/86) Manukovskiy NS, Abrosov NS, Kosolapova LG.
A mathematical model of the oxygenation of wheat straw by microorganisms.

Life Support Systems, CELSS, Substrate Oxygenation, Cellulose, Lignin
Botany, Wheat Straw; Microbiology, Microorganisms
Mathematical Model
ISSUE 9

10. P393(9/86) Shepelev YeYa, Shaydorov YuI, Popov VV. Microbiological decomposition of plant wastes on a solid substrate under artificial conditions. In: Kovrov BG and Kordyum VA, editors, Mikroorganizmy v iskusstvennykh ekosistemakh [Microorganisms in artificial ecosystems]. Novosibirsk: Nauka; 1986. See Digest Issue # 7 M78. [pages 176-183; 8 references; none in English]

Life Support Systems, CELSS
Botany, Higher Plants, Wheat, Straw; Microbiology, Decomposition Substrate


Life Support Systems, CELSS
Microbiology, Microorganisms, Chlorella; Botany, Haplopappus, Metabolism Adaptation, Microgravity, Clinostatting
MAN-MACHINE SYSTEMS

See also Human Performance 10, 11, 12; Psychology 4.

MATHEMATICAL MODELING

See also Biospherics 8, 10; Body Fluids 4; Cardiovascular and Respiratory Systems 11; Exobiology 5; Hematology 3; Human Performance 12; Life Support Systems 4, 9; Neurophysiology 9, 10.

ISSUE 7

PAPER:

I.P. Pavlov Institute of Physiology, USSR Academy of Sciences, Leningrad

Mathematical Modeling, Computer Simulation, Stabilization System Human Neurophysiology, Otolith Organs, Semicircular Canals

ISSUE 9

PAPER:


Operational Medicine, Kinematic Reactions Mathematical Modeling, Humans Impact
ISSUE 5

PAPERS:

1. P201(2/86)* Sergeyev IN, Afonin BV, Blazheyevich NV, Morukov BV, Belakovskiy MS.
The role of active metabolites of vitamin D$_3$ in the regulation of calcium metabolism in rats undergoing hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[20 references; 13 in English]

   Metabolism, Calcium; Musculoskeletal System
   Rats
   Nutrition, Vitamin D; Hypokinesia

Certain aspects of human amino acid metabolism under high altitude conditions.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[17 references; ten in English]

   Metabolism, Amino Acids
   Humans, Athletes, Mountain Climbers
   High Altitude, Acclimation and Training

MONOGRAPH:

3. M66(2/86) Tigranyan RA.
Metabolicheskie aspekty problemy stressa v kosmicheskom polete
[Metabolic aspects of the problem of stress in space flight].
Volume 52 in "Problemy Kosmicheskoy Biologii [Problems of Space Biology].
Moscow: Nauka; 1985.
[224 pages; 82 figures]
Affiliation: Not available

   Key Words: Metabolism, Stress; Space Flight, Cosmos, Long-term, Weightlessness, Rats; Psychology; Endocrinology
ISSUE 6

PAPERS:


- Metabolism, Amino Acid Level
- Humans, Males
- Psychology, Emotional Stress; Human Performance, Cognitive Demands


- Metabolism, Lipid Peroxidation; Endocrinology, Adrenergic System
- Humans, Operators
- Human Performance, Cognitive Demands; Psychology, Stress


- Metabolism, Humoral Regulation; Endocrinology, Sympathetic-Adrenal System
- Humans, Age Groups
- Hypokinesia, Head-down Tilt; Nutrition; Psychology, Stress; Exercise

ISSUE 7

PAPERS:


- Metabolism, Amino Acids, Blood; Nutrition, Cosmonaut Rations
- Humans, Males
- Hypokinesia, Head-down Tilt
ISSUE 7

8. P301(6/86)* Zezerov AYe, Ivanova SM.
A polarographic method for measuring the products of lipid peroxidation in the plasma and erythrocytes of humans and laboratory rats.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[16 references; 3 in English]

Metabolism, Lipid Peroxidation, Products in Blood
Human, Rats
Measurement, Polarography

MONOGRAPH:

9. M79(6/86) Furduy FI, Khaydarliu SKh, Mamalyga LM.
Kombinirovannyye vozdeystviya na organizm ekstremal'nykh faktorov.
[Effects of combinations of extreme factors on the body].
[142 pages; 15 figures; 11 tables; 407 references; 109 in English]
Institute of Zoology and Physiology, Moldavian Academy of Sciences

Key Words: Metabolism; Hypoxia, Hyperthermia, Hypokinesia;
Radiobiology, Radiation

ISSUE 8

PAPERS:

10. P333(8/86)* Potapov PP, Tikhmirova NA.
Parameters of carbohydrate and lipid metabolism in rats during adaptation after a 30-day period of hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[12 references; 4 in English]

Metabolism, Lipids, Hyperlipemia, Recovery Period
Rats
Hypokinesia, Immobilization; Psychology, Stress

MONOGRAPH:

11. M89(8/86) Zor'kin AA, editor.
Metabolicheskiye protsessy pri nekotorykh ekstremal'nykh sostoyaniyakh
[Metabolic Processes under Extreme Conditions].
[154 pages; 28 tables; 16 figures; 276 references; 44 in English]
Affiliation: Moldavian Ministry of Health

Key Words: Metabolism, Hypokinesia, Psychology, Stress, Hypoxia,
Adaptation, Radiobiology, Cardiovascular and Respiratory Systems,
Musculoskeletal System
MICROBIOLOGY

See also Biospherics 1; Exobiology 1, 3, 10; Habitability and Environment Effects 4, 5; Life Support Systems 4, 5, 7, 9, 10, 11; Radiobiology 3, 15.

ISSUE 7

PAPER:


Microbiology, Bacteria, Agglutination
Bacteria, Salmonella typhosa
Biospherics, Cosmic, Solar and Geophysical Factors, Radiobiology, Neutron Irradiation, Geomagnetic Effects
MORPHOLOGY AND CYTOLOGY:

See also Biospherics 1, Body Fluids 5; Endocrinology 1, 2, 3; Neurophysiology 11; Radiobiology 3, 19.

ISSUE 6

PAPER:

1. P261(4/86) Korzun YeI, Shakhbazov VG, Mailyan TV, Kolupayeva TV, Kovalenko YeA. 
Electrokinetic properties of cell nuclei of the human buccal epithelium in response to hypoxia and motion sickness. 
Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya. 
[7 references; none in English]

Morphology and Cytology, Electronegativity, Cell Nuclei, Buccal Epithelium 
Humans, Personnel Selection 
Neurophysiology, Acceleration Tolerance; Adaptation, Hypoxia Tolerance, Physical Exercise
MUSCULOSKELETAL SYSTEM

See also Biological Rhythms 1; Cardiovascular and Respiratory Systems 23; Developmental Biology 2; Endocrinology 7; Equipment and Instrumentation 1; Metabolism 1, 11; Neurophysiology 4, 6.

ISSUE 5

PAPERS


Musculoskeletal System, Skeletal Muscles, Phosphorylation
Rats
Space Flight, Cosmos-605, 946 and 1129

[17 references; 4 in English]

Musculoskeletal System, Voluntary Movements
Humans
Immersion and Head-down Tilt

[22 references; 7 in English]

Musculoskeletal System, Mechanical Properties
Rats
Space Flight, Cosmos-1129; Weightlessness, Simulated

[16 references; 8 in English]

Musculoskeletal System, Bone Tissues
Rats
Hypokinesia, Horizontal, Head-down Tilt


8. P259(4/86) Tambovtseva RV, Korniyenko IA. The development of various types of fibers of the soleus muscle in postnatal ontogenesis in rats. Arkhiv anatomii, gistologii i embriologii. 90(1): 77-81; 1986. [19 references; 14 in English]
9. P263(4/86) Strongina OM, Kuchma VR.  
Use of ergometric parameters to predict fatigue of the neuromuscular system of the hands.  
Gigiyena Truda i Professional'nyye Zabolevaniya.  
[3 references; none in English]  
I.M. Sechenov Medical Institute, Moscow  
Musculoskeletal System, Muscle Fatigue, Hands  
Humans, Females  
Human Performance, Ergometric Parameters  

10. P274(4/86) Chaikovskii VS, Yevtinova IV, Basharina OB.  
Concentration of steroids and androgen receptors in skeletal muscles during adaptation to physical exercise.  
Voprosy Meditsinskoy Khimii.  
[21 references; 16 in English]  
Scientific Research Institute of Physical Culture, Leningrad  
Musculoskeletal System, Skeletal Muscles, Endocrinology, Testosterone, Estradiol, Androstenedione, Receptor Binding  
Rats, Males and Females; Reproductive Biology, Sex Differences  
Adaptation, Physical Exercise  

11. P242(4/86)* Mel'nichenko VP, Gol'dovskaya MD, Krotov VP, Popov AG, Kondakova IS, Gorbatenkova NV.  
A restraint system for use with conscious Macaca Mulatta monkeys in tilt tests.  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.  
[2 references; none in English]  
Musculoskeletal System, Equipment and Instrumentation, Restraint System  
Monkeys  
Gravitational Effects, Tilt Test  

MONOGRAPH:  

12. M71(4/86) Person RS.  
Spinal'nyye mekhanizmy upravleniya myshechnym sokrashcheniyem [Spinal mechanisms for controlling muscle contraction].  
Moscow: Nauka; 1985.  
[ca. 185 pages; 4 tables; 60 illustration; 21 pages of references]  
Institute for Problems of Information Transmission, USSR Academy of Sciences  
Key Words: Musculoskeletal System, Muscle Contraction, Electromyography; Neurophysiology, Spinal Control, Motor Neurons
MUSCULOSKELETAL SYSTEM

ISSUE 7

PAPERS:


Musculoskeletal System, Skeletal Muscles, Capillaries
Rats
Adaptation, High Altitude, Hypothermia


Musculoskeletal System, Bone Marrow, Osteogenesis
Mice, Male
Endocrinology, Hydrocortisone

ISSUE 8

PAPER:


Musculoskeletal System, Connective Tissue, Skin; Histology, DNA, Collagen
Rats
Hypoxia
The effects of immersion hypokinesia on the characteristic rhythm of motor units in the soleus muscle.

Fiziologiya Cheloveka.
[14 references; 6 in English]
NEUROPHYSIOLOGY

See also Adaptation 4; Biospherics 1; Cardiovascular and Respiratory Systems 13, 17, 24; Developmental Biology 2; Human Performance 4, 5, 7, 9, 13, 14; Mathematical Modeling 1; Morphology and Cytology 1; Musculoskeletal System 12; Personnel Selection 1.

ISSUE 5


   Neurophysiology, Vestibular Function
   Humans, Males, Middle-aged
   Hypokinesia, Head-down Tilt, Bed Rest


   Neurophysiology, Brain Tissue, Impedance
   Rats
   Radiobiology, Magnetic Field

BOOK REVIEW


   Key Words: Neurophysiology, Autonomic Nervous System, Sympathetic, Parasympathetic and Metasympathetic Systems, Neurotransmitters, Homeostasis
NEUROPHYSIOLOGY

ISSUE 6

PAPERS:


Neurophysiology, EEG; Musculoskeletal System, Motor Control Humans Perception, Visual Noise


Neurophysiology, Vestibular System, Motion Sickness, Tolerance Level Humans, Males, Typology Endocrinology, Hormones, ACTH, ADH, Aldosterone


Institute for Problems in Information Transmission, USSR Academy of Sciences, Moscow.

Neurophysiology, Vestibular Stimulation Humans Musculoskeletal System, Voluntary Movements


Institute of Biomedical Problems, USSR Ministry of Health.

Neurophysiology, Motion Sickness Induction, Tolerance Humans, Males, Individual Differences; Personnel Selection Vestibular and Optokinetic Stimulation, Acceleration
NEUROPHYSIOLOGY

ISSUE 6

8. P258(4/86) Gavrilin VK.
The otolithic reflex of ocular counterrolling in healthy individuals
Zhurnal ushnykh, nosovykh i gorlovykh bolezney
[25 references; 9 in English]
Institute of Biomedical Problems, Moscow

Neurophysiology, Ocular Counterrolling
Humans, Males
Individual Differences, Normative Values

MONOGRAPH:

9. M75(4/86) Kondrachuk AV, Sirenko SP.
Dinamika kupula v polikruzhnom kanale vestibulyarnogo analizatora
[The dynamics of the cupula in the semicircular canal of the vestibular system].
[23 pages; 6 figures; 11 references; 4 in English]
Physics Institute, Ukrainian Academy of Sciences

Key Words: Neurophysiology, Vestibular System, Cupula; Mathematical Modeling, Angular Acceleration

ISSUE 7

PAPER:

A mathematical model of the cupulo-endolymphatic system with varying densities of the cupula and endolymph.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[15 references; 9 in English]

Neurophysiology, Vestibular System, Cupulo-endolymph System
Mathematical Modeling
Rotation, Hydromechanics

MONOGRAPHS:

11. M84(6/86) Samoylov MO.
Reaktsii neyronov mozga na gipoksiyu
[Reactions of neurons in the brain to hypoxia.]
[190 pages; 61 figures; 544 references]
I.P. Pavlov Institute of Physiology (Laboratory of Functional Morphology and Physiology of the Neuron), USSR Academy of Sciences

Key Words: Neurophysiology, Brain Neurons, Hypoxia, Ischemia; Cytology, Metabolism, Cellular, Calcium
ISSUE 7

12. M85(6/86) Bulygin IA, editor. Tsentral'nyye mekhanismy neyrogumoral'noy regulyatsiya funktsii v norme i patologii [Central mechanisms of neurohumoral regulation of functions in the norm and in pathology]. Minsk: Nauka i Tekhnika; 1985. [248 pages; 40 tables; 65 figures; 317 references; 85 in English]

Byelorussian Academy of Sciences

Key Words: Neurophysiology, Central Nervous System, Medulla Oblongata, Nuclei, Neural Mediators; Endocrinology; Metabolism, Lipids; Cardiovascular and Respiratory System, Circulation, Systemic and Brain, Ischemia; Adaptation, Rotation, Vibration, Radiation, Thermal Regulation

ISSUE 8

PAPERS:


Neurophysiology, Nystagmus, Asymmetry
Humans, Individual Differences
Vestibular Tolerance


Neurophysiology, Brain, Polyamines
Rats
Spaceflight, Long-term, "Cosmos-1129"; Psychology, Stress


Neurophysiology, Bioelectric Activity; Human Performance
Humans
Psychology, Isolation; Fatigue, Sleep Deprivation

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ISSUE 8

16. P339(8/86) Gorgiladze GI, Samarin GI, Bryanov II.
Interlabyrinth asymmetry, vestibular dysfunction and space motion sickness.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[121 references; 52 in English]

Neurophysiology, Vestibular Dysfunction, Space Motion Sickness; Personnel Selection
Humans, Cosmonauts, Literature Review
Adaptation, Interlabyrinth Asymmetry; Space Flight, "Salyut-6"

17. P341(8/86) Skoromnyy NA, Demchenko IT, Beketov AI, Moskalenko YuYe.
Cerebral circulation and oxygen pressure in conscious rabbits undergoing motion sickness.
Fiziologicheskii Zhurnal SSSR im. I.M. Sechenova.
[15 references; 4 in English]
Affiliations: Medical Institute, Simferopol; Sechenov Institute of Evolutionary Physiology and Biochemistry, USSR Academy of Sciences, Leningrad

Neurophysiology, Cerebral Circulation, Oxygen Pressure; Cardiovascular and Respiratory Systems
Rabbits
Motion Sickness

18. P326(8/86) Karpov BA, Aleksandrov LG.
A technique for calibrating oculograms.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[4 references; 1 in English]

Neurophysiology, Eye Movement
Humans, Males
Calibration Technique
ISSUE 9

PAPERS:

19. P362(9/86) Slavinskiy YeYu, Trinus KF.
Cortical potentials evoked by threshold vertical acceleration in humans.
Fiziologiya Cheloveka.
[10 references; 1 in English]
Affiliation: A.I. Kolomiychenko Scientific Research Institute for
Otolaryngology, Kiev

Neurophysiology, Evoked Cortical Potentials
Humans, Men and Women; Patients, Areflexive?? Labyrinths
Acceleration, Vertical, Threshold

20. P364(9/86) Petrova YeI, Alekseyeva NS.
The nystagmic component of the vestibular response/reaction in diagnosing
vestibular pathology.
Vestnik Otorino-laringologii.
[8 references; 2 in English]
Affiliation: Department of Otolaryngology, I.M. Sechenov Medical
Institute, Moscow; Scientific Research Institute of Neurology, USSR
Academy of Medicine

Neurophysiology, Vestibular System, Nystagmus
Humans, Healthy and Patients, Vestibular Pathology
Rotation

Use of central electroanalgesia to facilitate recovery from motion
sickness.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[17 references; none in English]

Neurophysiology, Motion Sickness
Humans
Countermeasure, Treatment, Electroanalgesia
NUTRITION

See also Hematology 1, 9; Immunology 2; Life Support Systems 6, 7, 8; Metabolism 1, 6, 7.

ISSUE 6

PAPER:

1. P237(4/86)* Belakovskiy MS, Yuzhanskaya MG, Panferova NYe, Pastushkova LKh, Pereverzeva OG, Smirnova AN, Sergeyev IN, Spirichev VB. The effects of various doses of ultraviolet radiation on levels of vitamins in the human body. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 20(1): 56-61; 1986. [15 references; 4 in English]

   Nutrition, Vitamins
   Humans, Males
   Radiobiology, Ultraviolet


   Nutrition, Protein and Vitamin Deficiencies; Enzymology; Metabolism, Lipolysis, Cholesterol
   Rats, Males
   Hypokinesia

ISSUE 7

PAPER:


   Nutrition, Freeze-dried Food, Fat Content
   Chemical Analysis
   Storage, Long-term
ISSUE 8

PAPER:

4. P350(8/86) Bogdanov NG, Gvozdova LG, Belakovskiy MS, Smirnova AN, Blazheyevich NV, Taraban'ko VM, Yuzhanskaya MG, Pastushkova LKh, Zaburkina TG, Pereverzeva OG.

Vitamin levels in cosmonauts during preflight training and after completion of short-term space flights.

Voprosy Pitaniya.


[15 references; 10 in English]

Affiliation: Institute of Nutrition, USSR Academy of Medicine; Institute of Biomedical Problems, USSR Ministry of Health, Moscow

Nutrition, Vitamin Levels
Humans, Cosmonauts
Space flight, Short-term, "Salyut-6," "Soyuz"; Flight Training

ISSUE 9

PAPER:

5. P379(9/86)* Bychkov VP, Vlasova TF, Gryasnova VN, Sedova YeA, Sivuk AK, Tret'yakova VA, Ushakov AS.

The biological value of the protein included in the rations of the crews of the "Salyut" orbital stations.

Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.


[7 references; none in English]

Nutrition, Biological Value; Metabolism, Protein
Humans
Cosmonaut Rations (Salyut), Protein; Hypodynamia, Hermetic Quarters
OPERATIONAL MEDICINE

THIS CATEGORY WAS FIRST USED IN ISSUE 8
SEE ABSTRACTS UNDER HEALTH AND MEDICAL TREATMENT FOR ISSUES 5, 6 & 7

See also Cardiovascular and Respiratory Systems 25; Hematology 6; Mathematical Modeling 2.

ISSUE 8

PAPERS:

   Operational Medicine, Flight Safety
   Humans, Aircraft Crews
   Theoretical Discussion

   [4 references; 2 in English]
   Operational Medicine, Anoxia, Resuscitation
   Animals, (Unspecified)
   Oxygen, Chilling

   [5 references; none in English]
   Operational Medicine; Human Performance, Physical Work Capacity, Remote Measurement; Cardiovascular and Respiratory Systems, EKG
   Humans, Cosmonauts
   Space Flight, "Salyut-6;" Countermeasures, Physical Exercise

   [13 references; 1 in English]
   Operational Medicine, Functional State; Biological Rhythms, Seasonal Rhythms; Reproductive Biology, Menstrual Cycle
   Humans, Men and Women, Sex Differences; Monkeys, Macaques and Rhesus, Species Differences
   Skin Conductivity, Acupuncture Zones
ISSUE 9

PAPERS:

5. P365(9/86) Bodrov, VA.
The problem of flight crew fatigue.
Voyenno-meditsinskiy Zhurnal.
[No references]
Affiliation: [Military] Medical Corps.

Operational Medicine, Fatigue
Humans, Flight Crews
Review Article; Classification System

6. P380(9/86)* Kozlovskiy AP, Lushchikov YeA.
Human tolerance of skin contact with high heat.
Kosmicheskiy Biologiya i Aviakosmicheskaya Meditsina.
[6 references; 1 in English]

Operational Medicine, Tolerance, Skin, Arm
Humans,
High Temperatures
PERCEPTION:

See also Human Performance 5, 6, 13, 14; Neurophysiology 4.

ISSUE 5

PAPER:


   Perception, Spatial Disorientation, Predisposing Conditions
   Humans, Pilots, Flight Crews
   Aircraft Flight; Human Performance

ISSUE 6

PAPER:


   Chair of Theoretical Mechanics, Moscow Physical Technical Institute;
   Also USSR Academy of Sciences

   Perception, Visual Geometry, Spatial Perception
   Humans, Cosmonauts, Pilots
   Psychology, Internal Representations; Space Flight, Soyuz Spacecraft

ISSUE 9

PAPER:


   Perception, Eye Fixations, Instrument Dials
   Humans, Pilots
   Flight Maneuvers, Pitch, Bank
PERSONNEL SELECTION:

See Cardiovascular and Respiratory Systems 4, 16; Endocrinology 4; Human Performance 6, 11, 12; Morphology and Cytology 1; Neurophysiology 7, 16; Psychology 1.

ISSUE 9

PAPERS:


Personnel Selection, Pilots, Cosmonauts
Humans, Age Differences
Neurophysiology, Tolerance, Acceleration, $+G_z$
PSYCHOLOGY

See also Adaptation 1; Biospherics 1; Body Fluids 3, 7; Cardiovascular and Respiratory Systems 13, 18, 27, 28, 35; Endocrinology 2, 3, 4; Group Dynamics, all entries; Human Performance, all; Immunology 2; Metabolism 3, 4, 5, 6, 10, 11; Neurophysiology 14, 15; Perception 2; Space Biology and Medicine 1.

ISSUE 5

PAPER


Psychology, Disadaptation, Prediction, Tests; Human Performance; Personnel Selection
Humans, Operators
Stress, Extreme Conditions

ISSUE 6

PAPERS:


Psychology, Stress Symptoms; Human Factors, Task Performance
Humans, Pilots
Emotional Stress, Simulated Ejection


Affiliate of the Scientific Research Institute for Hygiene in Water Transport, USSR Ministry of Health, Odessa

Psychology; Human Performance
Humans, Seamen
Work and Rest Schedules
ISSUE 6

MONOGRAPH:

4. M67(4/86) Kubasov VN, Taran VA, Maksimov SN. Professional'naya podgotovka kosmonavtov [Professional Training of Cosmonauts.] Moscow: Mashinostroyeniye; 1985. [286 pages; illustrated; 100 references; 17 in English]

Key Words: Psychology, Cosmonaut Training, Human Performance, Man-Machine Systems, Performance Evaluation, Training Simulators

ISSUE 7

PAPER:


Institute of Higher Nervous Activity and Neurophysiology, USSR Academy of Science, Moscow

Human Performance, Cosmonaut Performance
Humans, Cosmonauts
Psychology, Emotions, Stress

ISSUE 8

PAPER:


Psychology, Learned Response
Primates, Rhesus
Hypokinesia, Immobilization Stress
PAPER:

P372(8/86)* Kan YeL, Kupriyanov VA, Korovin KF, Malinovskaya O0.
Biochemical parameters of emotional stress in air traffic controllers.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[17 references; none in English]

Endocrinology, Sympathetic-adrenal System; Metabolism, Lipids
Humans, Air Traffic Controllers
Psychology, Human Performance, Job Stress; Man-machine Systems,
Automation
RADIOBIOLOGY

See also Biospherics 1, 11; Cardiovascular and Respiratory Systems 36; Developmental Biology 1; Exobiology 7; Hematology 1; Immunology 4; Metabolism 9, 11; Microbiology 1; Neurophysiology 2; Nutrition 1.

ISSUE 5

MONOGRAPHS:

1. M59(2/86) Myasnik MN, Skvortsov VG, Sokolov VA. Fotobiologicheskiye aspekty radiatsionnogo porazheniya kletok. [Photobiological aspects of radiation damage to cells]. Moscow: Energoatomizdat; 1985. [152 pages; 22 tables; 43 figures; 151 references; 106 in English] Affiliation: Not available

Key Words: Radiobiology, Ultraviolet Radiation, Cherenkov Radiation, Photoreactivation, Radiation Damage, Dosimetry; Microbiology, Bacteria


Key Words: Radiobiology; Genetics; Morphology and Cytology, Cell Death, Reparation


Key Words: Radiobiology, Radiation Damage, Repair; Cytology, Mammal Cells; Genetics, DNA, Chromosomes

ISSUE 6

PAPERS:


Key Words: Radiobiology, Magnetic Fields, Repeated Exposure; Rats, Males; Performance, Endurance, Work Capacity

Radiobiology, Ionizing Radiation, Bioeffects
Review of Data
Quality Factor


Radiobiology, Ultraviolet Radiation, Deprivation, Long-term Space Flights
Humans, Cosmonauts; Theoretical Article
Health and Medical Treatment, Therapeutic Effects


Radiobiology, Proton Irradiation
Mice, Male and Female
Countermeasures, Protective Effects, Carrageenan; Hematology, Hemapoiesis


Scientific Research Institute for Labor Hygiene and Occupational Diseases, Leningrad; Pavlov Institute of Physiology, USSR Academy of Sciences, Leningrad

Radiobiology, Short-wave Magnetic Field, Intermittent Irradiation
Rats, Male
Endocrinology, Hypothalamus, Pituitary, Adrenal, Thyroid, Testes
The effects of nonionizing microwave radiation on autoimmune responses and the antigen structure of serum proteins.
Radiologiya
XX(6): 840-842; 1985
[7 references; none in English]
A.N. Murzeyev Scientific Research Institute of General and Communal Hygiene, Ukrainian Ministry of Health, Kiev

Radio biology, Microwaves
Rats, Male, Females, Pregnant
Immunology, Autoimmune Responses; Development, Fetal Development

MONOGRAPHS:

10. M74(4/86) Tigranyan RE. Fiziko-tekhnicheskaya praktika biologicheskogo eksperimenta s CVCh islucheniym
[Technological support of /Literally: Physical-technological performance of/ biological experiments using super high frequency radiation].
[130 pages; 3 tables; 69 illustrations; 57 references]
Institute of Biological Physics, Scientific Center for Biological Research, USSR Academy of Sciences

Key Words: Radiobiology, Electromagnetic waves, Super High Frequency Radiation, Bioeffects, Equipment and Instrumentation, Experimental Design

ISSUE 7

PAPERS:

Prostaglandin control of thrombocytic and vascular hemostasis in irradiation.
Byulleten' Eksperimental'nyy Biologii i Meditsiny
[11 references; 6 in English]
Scientific Research Sector of Radiobiology, Armenian Ministry of Health

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Rats
Gamma Irradiation; Countermeasures, ATP
ISSUE 8


Radiobiology, Cell Damage Microbiology, Prokaryotes; Cytology, Eukaryotes Hypoxia, Postirradiation


Genetics, Chromosome Aberrations; Cytology Botany, Crepis capillaris Radiobiology, Gamma-quanta, FUdR


Genetics, Chromosome Aberrations; Cytology Botany, Crepis capillaris Radiobiology, Gamma irradiation, FUdR

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Primates, Baboons, Female
Hypokinesia, Long-Term
SPACE BIOLOGY AND MEDICINE

ISSUE 6

PAPER:


Space Medicine; Health and Medical Treatment; Cardiovascular and Respiratory Systems; Human Performance; Psychology; Hematology
Humans, Males, Cosmonauts
Spaceflight, "Salyut-6"; Countermeasures; Nutrition

MONOGRAPH:


Commission on Development of the Scientific Heritage of K. E. Tsiolkovskiy, Institute of the History of Natural Science and Technology, USSR Academy of Sciences, K.E. Tsiolkovskiy State Museum of the History of Cosmonautics

Key Words: Health and Medical Treatment, Thermal Physiology; Cardiovascular and Respiratory Systems, Acceleration, Weightlessness Simulations; Botany, Weightlessness Effects; Exobiology, CETI; Spaceflight, Salyut-6

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