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Index to Issues 10–14

Lydia Razran Hooke

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Index to Issues 10–14

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Lockheed Engineering and Management Services Company
Washington, D.C.

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TOPIC AREA LISTING FOR USSR SPACE LIFE SCIENCES DIGEST ISSUES 10-14

The following pages give bibliographic citations and key words for abstracts published in issues 10-14 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.

Following this section is a key word index; numbers in this index refer to page numbers in this topic area listing. Cross referenced among topic areas (e.g., a reference relevant to ENDOCRINOLOGY which is listed in the ADAPTATION category area) can be found by looking for additional page referenced to a category in the key word index.

Cardiovascular and Respiratory Systems, Gas Exchange, Ventilation, Hypoxia Tolerance; Hematology, Blood Biochemistry; Human Performance, Physical Work Capacity
Humans, Males, Individual Differences
Adaptation, High Altitude, Hypoxia


Authors' affiliation: A.A. Bogomolets Institute of Physiology, Ukrainian Academy of Sciences, Kiev.

Cardiovascular and Respiratory Systems, Gas Exchange, Ventilation, Hypoxia and Hypercapnia Tolerance; Hematology, Blood Biochemistry; Human Performance, Physical Work Capacity
Humans, Males
Adaptation, High Altitude, Hypoxia


Affiliation: Book: Scientific Committee on Multidisciplinary/Comprehensive Problems in Human and Animal Physiology, Physiology Division, USSR Academy of Sciences; Chief Editors: Institute of Biomedical Problems, USSR Ministry of Health

KEY WORDS: Adaptation, Stress, Hypoxia, Physical Exercise, Cold, Heat, Injury; Psychology, Memory, Conditioned Responses; Operational Medicine; Cardiovascular and Respiratory Systems; Musculoskeletal System; Metabolism; Gastrointestinal System
ADAPTATION

ISSUE 12

PAPERS:

4. P509(12/87) Vartbaronov RA, Glod GD, Uglova NN, Rolik IS, Krasnykh IG, Novikov VG, Gaydamakin NA.
Adaptive and cumulative effects of regular exposure to +GZ acceleration in dogs.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[14 references; 4 in English]

Adaptation; Cardiovascular and Respiratory Systems
Dogs
Acceleration, +GZ, Repeated Exposure

5. P544(12/87) Zatstepina GN, Il'in YeA, Lazarev AO, Novikov VYe.
Static electrical field of rats during adaptation to functional unloading of the hind limbs.
Fiziologicheskiy Zhurnal SSSR im. I. M. Sechenova.
[11 references; 2 in English]

Adaptation, Electrical Field
Rats
Musculoskeletal System, Suspension, Unloading

ISSUE 14

PAPERS:

6. P617(14/87) Ushkalova VN, Kadochnikova GD.
Use of lipid peroxidation parameters to study human adaptation to new climatic and geographic conditions.
Byulleten' Eksperimental'noy Biologii i Meditsiny.
[10 references; none in English]

Authors' affiliation: Dept. of Organic Chemistry, Tyumen' Medical Institute

Metabolism, Lipid Peroxidation; Hematology, Erythrocytes
Humans, Age Differences
Adaptation, North; Biological Rhythms, Seasons

Some parameters of human adaptation to extreme conditions in the Arctic.
Gigiyena i Sanitariya.
[10 references; none in English]

Authors' Affiliation: Rostov Medical Institute

Body Fluids, Renal Function
Humans, Males
Adaptation, Arctic, Long-term; Biological Rhythms, Diurnal Differences, Seasons
AVIATION PHYSIOLOGY

ISSUE 11

PAPER:

1. P496 (11/87)* Rudnyy NM, Bodrov VA. 
Current problems in aviation physiology. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[11 references; none in English]

Aviation Physiology, Review Article 
Personnel Selection; Human Performance, Pilots 
Adaptation, Hypoxia, Acceleration; Psychology, Work-rest Schedules, 
Fatigue, Biofeedback, Pharmacological Countermeasures; Neurophysiology, 
Vestibular System; Perception, Light
ISSUE 10

PAPERS:

1. P408(10/87) Stepanova SI.
   **Major trends in the use of biological rhythms for cosmonaut selection.**
   In: M97(Digest Issue 9) Stepanova SI. Biologicheskiye aspekty problemy adaptatsii
   [Biological aspects of the problem of adaptation].
   Moscow: Nauka; 1986.
   Part II, Chapter 2, pages 165-171.

   Biological Rhythms, Sleep-wakefulness Schedules; Human Performance, Work
   Capacity
   Humans; Personnel Selection, Cosmonauts
   Adaptation, Space Flight

2. P418(10/87)* Alpatov AM, Klimovitskiy VYa.
   **The splitting of the body temperature rhythm of monkeys undergoing hypokinesia with head-down tilt**
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [12 references; 4 in English]

   Biological Rhythms, Body Temperature, Diurnal Rhythms
   Primates, Rhesus Monkeys
   Hypokinesia, Head-down Tilt

ISSUE 12

PAPER:

3. P545(12/87) Turova NV, Oranskiy IYe.
   **Diurnal rhythm of parameters of bioelectric activity of the brain.**
   Fiziologiya Cheloveka.
   [11 references; 5 in English]
   Affiliation: Sverdlovsk Scientific Research Institute of Health Resort
   Treatment and Physical Therapy

   Biological Rhythms, Diurnal Rhythms
   Humans, Patients, Cerebral Arteriosclerosis
   Neurophysiology, EEG Parameters
4. P560(13/87)* Galichiy VA. Analysis of biological rhythms in parameters of pulmonary ventilation during tilt tests.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[15 references; 1 in English]

Biological Rhythms; Cardiovascular & Respiratory Systems, Pulmonary Ventilation
Humans, Males
Tilt Tests; Individual Differences, Orthostatic Intolerance, Adaptation
ISSUE 10

MONOGRAPHS:


ISSUE 11

BOOK REVIEW:

ISSUE 11

PAPER:

1. P450(11/87)* Smirnova TM, Kozyrevskaya GI, Lobachik VI, Zhidkov VV, Abrosimov SV.
Individual differences in fluid-salt metabolism under exposure to a 120-day period of hypokinesia with head-down tilt and the efficacy of prophylactic measures.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[9 references; 1 in English]

Body Fluids, Metabolism, Fluid-Electrolyte Metabolism
Humans, Males, Individual Differences
Hypokinesia, Head-down Tilt; Countermeasures, Drugs; Musculoskeletal System, Physical Exercise; Nutrition, Vitamin D

ISSUE 12

PAPER:

2. P510(12/87)* Panferova NYe, Kabesheva TA.
Fluid dynamics in human limbs in different body positions.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[9 references; 7 in English]

Body Fluids, Limbs
Humans, Males
Body Position, Horizontal, Head-down Tilt

ISSUE 13

PAPERS:

3. P555(13/87)* Vartbaronov RA, Glod GD, Uglova NN, Rolik IS.
Hypovolemic reactions in humans and animals in response to exposure to +Gz acceleration increasing in intensity.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[18 references: 10 in English]

Body Fluids, Blood and Plasma Volume, Hypovolemia
Dogs, Humans, Males
Fluid Loading, +Gz Acceleration, Anti-g Suit
4. P557*(13/87) Degtyarev VA, Kaplan MA, Andriyako LYa, Bubeyev YA, Remizov YuI
Blood redistribution in humans in response to lower body negative pressure.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina
[13 references; 9 in English]

Body Fluids, Blood Redistribution
Humans, Males
LBNP

ISSUE 14

PAPER:

5. P624(14/87) Grigro'yev AI, Ushakov AS, Popova IA, Dorokhova BR, Ivanovna SM,
Davydova NA, Afonin BV.
Fluid-electrolyte metabolism and renal function [in Salyut-6 prime crews].
In: Gurovskiy NN, editor.
Rezul'taty meditsinskikh issledovaniy vypolnennykh na orbital'nom nauchno-
issledovatel'skom komplekse "Salyut-6"-"Soyuz" [Results of medical research
performed on board the "Salyut--6"-"Soyuz" orbital scientific research
complex].
[See Digest issue 13: Space Medicine: M112.
Moscow: Nauka; 1986; pages 145-149. Note: the portion of this chapter
dealing with other metabolic factors will be abstracted in a subsequent
Digest issue.
[79 references; 27 in English]

Body Fluids, Fluid-electrolyte Metabolism, Renal Function
Humans, Cosmonauts
Space Flight, Long-term, "Salyut-6"
ISSUE 10

PAPERS:

1. P436(10/87) Podluts'kiy, AG.
Cytochemical localization of Ca$^{2+}$-ATPase under normal conditions and during clinostatting.
Ukrainian Botanical Journal
43(4): 82-84; 1985
Author's affiliation: M.G. Kholodnoy Botanical Institute, Uk. Academy of Sciences
[9 references; 7 in English]

Botany, Cytochemical Localization, Ca$^{2+}$-ATPase
Pea Plants, Roots
Clinostatting
[Note: original in Ukrainian; Russian abstract was translated.]

2. P437(10/87) Vasilenko OI.
Changes in level of ATP in cultures of Haplopappus gracilis (Nutt) A. Gray in the initial stages of clinostatting.
Ukrainian Botanical Journal.
Author's affiliation: M.G. Kholodnoy Botanical Institute, Ukrainian Academy of Sciences
[6 references; 2 in English]

Botany, ATP; Cytology
Haplopappus
Clinostatting
[Note: original in Ukrainian; Russian abstract was translated.]

3. P438(10/87) Zhad'ko SI.
Early reactions of pea shoots to clinostatting.
Ukrainian Botanical Journal.
Author's affiliation: MG Kholodnoy Botanical Institute, Ukrainian Academy of Science.
[10 references; 2 in English]

Botany, Growth; Lipid Peroxidation, Antioxidation
Peas, Shoots
Clinostatting
[Note: original in Ukrainian; Russian abstract was translated.]
The ultrastructure and physiological characteristics of the photosynthesis system of shoots of garden peas grown for 29 days on the "Salyut-7" space station.
[11 references; 3 in English]
Botany, Ultrastructure, Photosynthesis System Peas, Shoots Space Flight, "Salyut-7"

5. P441(10/87) Tayrbekov MG, Grif VG, Barmicheva YeM, Valovich YeM.
Cytomorphology and ultrastructure of the root meristem of corn in weightlessness.
[21 references; 10 in English]
Authors' affiliation: Institute of Biomedical Problems, USSR Ministry of Health; V. L. Komarov Botanical Institute, USSR Academy of Sciences, Leningrad

Botany, Morphology and Cytology Corn, Root Meristem
Space Flight, "Cosmos-1514"

ISSUE 11

PAPER:

6. P504(11/87) Anikeyeva ID, Balayeva AV, Vaulina EN, Vikhrov AI, Kostina LN, Maksimova YeN, Nevzgodina LV, Potapov YuV.
Radiobiologiya.
[10 references; 5 in English]
Authors' Affiliation: N.I. Vavilova Institute of General Genetics, USSR Academy of Sciences, Moscow; Institute of Biomedical Problems, USSR Ministry of Health, Moscow

Genetics, Plant Genetics, Mutations, Chromosome Damage Botany, Arabidopsis thaliana (L) cress, Crepis capillaris (L) Wallr hawk's bear Lactuca sativa L lettuce
Radiobiology, Accelerated Carbon Ions
7. P529(12/87)* Miller AT, Nevzgodina LV.
Changes in growth response of lettuce (*Lactuca Sativa L.*) as a function of duration of exposure of seeds to space flight on board the "Salyut-7" manned space station.
*Izvestiya Akademii Nauk Latviyskoy SSR.*
1986(4): 75-78.
[18 references; 4 in English]
Affiliation: Institute of Biology, Latvian Academy of Sciences; Institute of Biomedical Problems; USSR Ministry of Health
Botany, Development, Growth
Lettuce, Seeds
Space Flight, "Salyut 7," Duration; Radiobiology, Cosmic Radiation

8. P530(12/87)* Miller AT, Nevzgodina LV, Akatov YuA.
[A study of physiological processes in lettuce seeds after damage by high energy high mass ions]
*Izvestiya Akademii Nauk Latviyskoy SSR.*
1986(4): 79-86.
[22 references; 11 in English]
Affiliation: Institute of Biology, Latvian Academy of Sciences; Institute of Biomedical Problems; USSR Ministry of Health
Botany, Development, Growth
Lettuce, Seeds
Space Flight, "Salyut 7;" Radiobiology, HZE, Recovery

9. P531(12/87) Zaslavskiy VA, Fomicheva VM.
Functional state of chromatin and proliferation of meristem cells in pea sprouts exposed to varying rates of clinostatting.
See abstract M106, issue 11.
[8 references; 1 in English]
Affiliation: N.G. Kholodnyy Botanic Institute, Ukrainian Academy of Science, Kiev
Botany, Chromatin, Cell Proliferation
Pea, Sprouts
Clinostatting, Fast and Slow

Botany, Plant Cell Reproduction; Biological Rhythms; Adaptation


Botany; Life Support Systems, CELSS

Orchids, Epiphyte

Space Flight Factor Tolerance

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PAPERS:


Metabolism, Plant and Insect

Botany, Corn, Seeds; Developmental Biology, Flies

Space Flight, Cosmos-1514, -1667
[7 references; 2 in English]

Botany, Bioeffects, Simulation, Viability, Mitosis, Aberration
Lettuce, Seeds
Radiobiology, HZE, Impact Wave
PAPERS:


Cardiovascular and Respiratory System, Respiratory Function Humans Positive Intrapulmonary Pressure, Counterpressure


Cardiovascular and Respiratory Systems, Orthostatic Intolerance Humans, Review Article Space Flight, Pharmacological Countermeasures, Hemodynamics

3. P447(10/87) Gansburgskiy AN. The state of the endothelium of the aorta under conditions of hypodynamia [hypokinesia]. Arkhiv Anatomii, Gistologii i Embriologii. XCI(8): 13-17; 1986. [14 references; 3 in English]

Affiliation: Department of Histology, Embryology and Cytology, Yaroslavl Medical Institute

Cardiovascular and Respiratory Systems, Aortal Endothelium; Cytology Rats Hypokinesia, Psychology, Immobilization Stress

MONOGRAPH:


Affiliation: Book: USSR Academy of Sciences; Editor: USSR Academy of Medicine

KEY WORDS: Cardiovascular and Respiratory System, Circulation, Regulation; Metabolism, Vascular Tonus; Endocrinology, Epinephrine, Vasopressin, Angiotensin, Hypothalamus; Neurophysiology, Conditioned Reflexes, Cerebral Cortex; Postural Responses; Exercise, Acceleration, Weightlessness, Hypoxia, Hyperoxia, Temperature Changes, High Altitudes, Hyperbaria, Hypokinesia; Psychology, Stress, Experimental Neuroses; Mathematical Modeling
Bioelectric cardiac activity and blood electrolytes in healthy men undergoing 120 days of hypokinesia with head-down tilt.
[22 references; 6 in English]
Cardiovascular and Respiratory Systems, Bioelectric Cardiac Activity; Body Fluids, Blood Electrolytes
Humans, Males
Hypokinesia with Head-down Tilt, Longterm

6. P467(11/87)* Rumyantsev VV, D'yachenko AI.
The mechanism through which local negative pressure applied to the human body affects central circulation.
[9 references; 3 in English]
Cardiovascular and Respiratory Systems, Central Circulation; Mathematical Modeling
Humans, Males
Negative Pressure, Lower Body, Local

7. P481(11/87)* Yarullin KhKh, Artamanova NP.
Responses to [Literally: Characteristics of] the atropine test in individuals varying in age.
[13 references; none in English]
Cardiovascular and Respiratory Systems, EKG Parameters
Humans, Males, Age Differences
Atropine

8. P486(11/87)* Kazakova RT, Krotov VP, Girysyeva ID/
Central hemodynamics in monkeys in a post-operative period as a function of preoperative living conditions.
[4 references; 1 in English]
Cardiovascular and Respiratory Systems, Central Hemodynamics, Contractile and Pumping Function
Primates, Rhesus Monkeys
Immobilization; Operational Medicine, Surgery, Electrode Implantation

Cardiovascular and Respiratory Systems, Intracranial Blood Flow and Pressure; Operational Medicine, Ultrasound Scanning of the Brain Humans, Neurosurgical Patients; Primates, Rhesus Monkeys Neurophysiology, Cerebrospinal Fluid, Reserve Spaces


Cardiovascular and Respiratory System, Central Hemodynamics, Myocardial Contractility, Ventrical Wall Tension; Operational Medicine, Diagnosis, Latent Cardiac Insufficiency Humans, Males, Athletes, Patients, Ischemic Heart Disease, Hypertension Physical Exercise

ISSUE 12

PAPERS:


Cardiovascular and Respiratory Systems, Functional Parameters Humans, Males Hypokinesia, Head-Down Tilt, Long-term


Cardiovascular and Respiratory Systems, Stroke Volume; Endocrinology, Adrenergic System Rats, Males Hypokinesia, Immobilization
13. P514(12/87)* Kuznetsov VI, Pruss GM. Adaptive capacities of the heart of rats exposed to hypokinesia to surgically increased workload and the role of neural regulation. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 21(2): 55-58; 1987. [8 references; none in English]

Cardiovascular and Respiratory System, Capacity; Neurophysiology, Regulation Rats, Male Adaptation, Increased Workload, Hypokinesia


Cardiovascular and Respiratory System, Vectorcardiograms; Equipment and Instrumentation. Computer Analysis Humans, Cosmonauts Operational Medicine, Space Flight, "Salyut-7"

15. P524(12/87)* Gora YeP. The effects of voluntary changes in respiration on the functioning of the cardiorespiratory system in exposure to hypoxic hypoxia. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 21(2): 86-87; 1987 [5 references; 1 in English]

Cardiovascular and Respiratory System, Function Humans, Males Voluntary Changes, Hypoxia

MONOGRAPH:


KEY WORDS: Cardiovascular and Respiratory Systems, Respiration, Ventilation, Cerebral Circulation; Musculoskeletal System, Motor Activity, Physical Exercise; Neurophysiology, Autonomic Nervous System; Human Performance, Biofeedback, Relaxation, Noise; Hypodynamia, Head-down Tilt, Orthostatic Tolerance
ISSUE 13

PAPERS:

17. P553(13/87)* Bayevskiy RM, Chatterjee PS, Funtova II, Zakatov MD (USSR, India).
Cardiac contractility in weightlessness measured by spatial ballistocardiography.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[8 references; 1 in English]

18. P559(13/87)* Chinkin AS.
Characteristics of and mechanisms underlying the effects of epinephrine and norepinephrine on cardiac pumping function in hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[14 references; 5 in English]

Variation in blood pressure and flow in the common carotid artery of a monkey flown on board the "Cosmos-1514" biosatellite.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[7 references; none in English]

20. P564(13/87)* Breslav IS, Shmeleva AM, Normatov AT.
Use of biofeedback control of alveolar $P_{CO2}$ to avoid hypercapnia in humans exposed to hypoxia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
(19 references; 3 in English)
21. P572(13/87) Chinkin AS.
The effect of blockade and stimulation of adrenoreceptors on the pumping function of the heart in animals with or without adaptation to physical exercise.
Fiziologicheskiy Zhurnal SSSR im. I. M. Sechenova
[18 references; 11 in English]
Author's affiliation: State Pedagogical Institute, Kazan

Cardiovascular and Respiratory Systems, Pumping Function
Rats, Male
Endocrinology, Adrenoreceptors; Adaptation, Physical Exercise

22. P576(13/87) Altukhov VG, Grebenik MA, Shapovalov AA.
The effect of elevated concentration of oxygen and carbon dioxide in the atmosphere on the cardiorespiratory system.
Voyenno-mediitsinskiy Zhurnal.
[Citations not listed.]
Authors' affiliation: Military Medical Corps

Cardiovascular and Respiratory Systems; Life Support Systems
Humans
Hypokinesia, Artificial Atmosphere, Increased O₂ and CO₂, Exercise

ISSUE 14

PAPERS:

23. P594(14/87)* Sokolov VI, Yarullin KhKh, Vikharev ND, Sazonova MV, Degterenkova NV.
Circulatory response to hypokinesia with head-down tilt in males aged 45-52.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[23 references; 8 in English]

Cardiovascular and Respiratory Systems, Circulation, Central and Regional, Brain
Humans, Males, Older, Arterosclerois, Neurocirculatory Distonia
Hypokinesia, Head-down Tilt

24. F595(14/87)* Gansburgskiy AN.
Morphometric analysis of aortic endothelium of rats exposed to long-term hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[9 references; 2 in English]

Cardiovascular and Respiratory Systems, Aortic Endothelium, Morphometry
Rats, Male
Immobilization, Psychology, Stress

Cardiovascular and Respiratory Systems, Hemodynamics, Central, Regional, Humans, Males Immersion


Cardiovascular and Respiratory Systems, Diagnosis, Myocardium Humans EKG Changes, Provocative Tests

27. P622(14/87) Yegorov AD, Itsekhovskiy OG, Alferova IV, Turchaninova VF, Polenova AP, Golubchikova ZA, Domracheva MV, Lyamin VR, Turbasov VD. [Study of the cardiovascular system of Salyut-6 prime crews.] In: Gurovskiy NN, editor. Rezul'taty meditsinskikh issledovaniy vypolnennykh na orbital'nom nauchno-issledovatel'skom komplekse "Salyut-6"-"Soyuz" [Results of medical research performed on board the "Salyut-6"-"Soyuz" orbital scientific research complex]. See Digest issue 13: Space Medicine: M112. Moscow: Nauka; 1986; pages 89-114. [86 references; 33 in English]

Cardiovascular and Respiratory Systems, Cardiovascular Parameters Human, Cosmonauts Space Flight, Long-term, "Salyut-6"
ISSUE 13

MONOGRAPH:

1. M114(13/87) Korchemnyy PA. 
Psikhologiya Letnogo Obucheniya 
[Psychology of Flight Training].
Moscow: Voyennoye Izdatel'ztvo; 1986.
[136 pages; 5 tables; 5 figures; no references]

KEY WORDS: Cosmonaut Training, Flight Training, Pilots, Psychology, Human Performance

ISSUE 14

MONOGRAPH:

2. M115(14/87) Beregovoy GT, Grigorenko VN, Bogdashevskiy RB, Pochkayev IN, 
Kosmicheskaya Akademiya [Space Academy].
Moscow: Mashinostroyeniye; 1987.
[152 pages; 13 tables; 10 figures; numerous photographs; 113 references; 4 in English]

KEY WORDS: Cosmonaut Training, Personnel Selection, Psychology, Human Performance, Small Groups, Space Crews

KEY WORDS: Cytology, Weightlessness, Spaceflight, Cosmos-1514, -1667, Hypergravity, Hypokinesia; Neurophysiology; Developmental Biology, Embryology; Genetics; Immunology, Lymphocytes; Musculoskeletal System, Osteoclasts, Osteoblasts; Hematology, Erythrocytes; Mathematical Modeling; Equipment and Instrumentation; Metabolism
PAPER:

1. P482(11/87)* Shakhmatova YeI, Lavrova YeA, Natochin YuV, Serova LV, Denisova LA.
Concentration of fluid and electrolytes in pregnant rats and their offspring after flight in the "Cosmos-1514" biosatellite.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[15 references; 7 in English]

Developmental Biology; Body Fluids, Fluid and Electrolyte Balance
Rats, Pregnant, Fetus, Neonate
Space Flight, Cosmos-1514

PAPERS:

2. P561(13/87)* Serova LV.
The mother-fetus system in the study of the mechanisms underlying the physiological effects of weightlessness.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[29 references; 10 in English]

Developmental Biology, Fetal Development; Reproductive Biology
Rats, Female, Pregnant
Space Flight, Cosmos 1514; Adaptation; Genetics

3. P562(13/87)* Komolova GS, Makeyeva VF, Yegorov IA, Serova LV.
Nucleic acids in spleen lymphocytes of pregnant rats flown in space and their offspring.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[7 references; none in English]

Developmental Biology; Hematology, Spleen Lymphocytes
Rats, Female, Pregnant; Neonates
Space Flight, Cosmos 1514
PAPER:

[20 references; 11 in English]

Developmental Biology, Morphogenesis; Neurophysiology, Brain; Endocrinology, Pituitary, Hypothalamus; Enzymology

Rats
Space Flight, Cosmos 1514
ENDOCRINOLOGY

ISSUE 10

PAPERS:

1. P411(10/87)* Afonin BV, Grigor'ev AI, Pavlova YeA.
[13 references; 4 in English]
Endocrinology, Renin, Angiotensin, Aldosterone, Prostaglandin, Cyclic Nucleotides; Body Fluids; Humans, Cosmonauts; Space Flight, Soyuz

2. P433(10/87)* Davydova NA, Shishkina SK, Korneyeva NV, Suprunova YeV, Ushakov AS.
[18 references; 4 in English]
Endocrinology, Neurohumoral Systems, Cholinergic, Sympathetic Adrenal; Neurophysiology; Humans, Males; Hypokinesia, Head-Down Tilt, Long-Term

3. P439(10/87) Noskov VB, Katkov VYe, Afonin BV, Chestukhin VV, Sukhanov YuV.
[13 references; 9 in English]
Endocrinology, Hormonal Regulation; Body Fluids, Fluid Shifts; Cardiovascular and Respiratory Systems, Central Venous Pressure; Humans, Males; Head-down Tilt; Diuresis
ENDOCRINOLOGY

ISSUE 11

PAPERS:

[27 references; 19 in English]

Endocrinology, ACTH, Angiotensin, Aldosterone, Renin, Thymus, Adrenal Gland; Neurophysiology, Cerebellum, Vestibular System; Morphology
Rats, Males
Artificial Gravity, Centrifugation

[12 references; 2 in English]

Endocrinology, Sympathetic Adrenal System; Physical Work Capacity
Rats, Males
Radiobiology, Magnetic Field, Constant; Physical Exercise

[17 references; 9 in English]

Endocrinology, Hormones, Aldosterone, Testosterone, Hydrocorisone, T3, T4; Body Fluids, Blood Electrolytes; Metabolism, Blood Sugar
Humans, Men, Age Groups
Hypodynamia; Life Support Systems, Hermetically Sealed Quarters; Physical Exercise

ISSUE 13

PAPERS:

[10 references; 4 in English]

Endocrinology, Hormones; Psychology, Stress Subjects, Cosmonauts
Space Flight, Soyuz, Soyuz-T
PAPERS:

8. P608(14/87)* Pribylova NN.
The effect of steroid hormones on the level of biogenic amines in the lungs during the development of pulmonary hypertension in rats under conditions of chronic hypobaric hypoxia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[16 references; 1 in English]

9. P618(14/87) Arefolov VA, Malikova LA, Val'dman AV.
Morphometric study of the ultrastructure of cells containing epinephrine and norepinephrine in the adrenal glands of rats subjected to immobilization stress varying in duration.
Byulleten' Eksperimental'noy Biologii i Meditsiny.
[8 references; 2 in English]

Affiliation: Institute of Pharmacology, USSR Academy of Medicine, Moscow

Endocrinology, Adrenal Glands; Cytology and Morphology, Cell Ultrastructure
Rats
Psychology, Immobilization Stress
ISSUE 10

PAPER:


Enzymology, Proteolytic Enzymes; Neurophysiology, Parasympathetic Nervous System
Humans, Males
Hypoxia, Hypobaria

ISSUE 11

PAPER:

2. P495(11/87)* Serebrovskaya TV, Krasyuk AN, Fedorovich VN. Isoenzyme composition of lactate dehydrogenase in the blood in humans in response to repeated exposure to acute hypoxia and its relationship to level of physical work capacity. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 21(1): 87-89; 1987. [20 references; 5 in English]

Enzymology, Lactate Dehydrogenase, Isoenzyme Spectrum
Humans, Males
Adaptation, Hypoxia; Physical Exercise

ISSUE 14

PAPERS:


Affiliation: Central Research Laboratory, Tashkent Medical School

Enzymology, Monooxygenase System, Liver
Rats
Psychology, Immobilization Stress; Endocrinolgy, Adrenalectomy

Enzymology, Succinic Dehydrogenase, Cytochrome Oxidase, Brain, Myocardium, Rats, Immobilization
1. P494(11/87)* Drozhzhin VM. 
*Automation of research on operator performance.*
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[2 references; none in English]

Equipment and Instrumentation, Automated Research System
Humans, Operators
Human Performance, Tracking; Cardiovascular and Respiratory System, EKG Parameters
1. P538(12/87) Shvedova MK, Goryunov AV, Engbrekht II, Seleznev SA, Mikhaylov AI.
Modeling abiogenetic synthesis of amphipathic molecules and mechanisms of formation of photomembranes.
Zhurnal Evolyutsionnoy Biokhimii i Fiziologii.
[9 references; 7 in English]
Affiliation: Institute of Chemical Physics, USSR Academy of Sciences, Chernogolovka; Medical Institute, Tselinograd.

2. P539(12/87) Kuzicheva YeA.
Photochemical transformations of nucleic acid components in the presence of lunar soil.
Zhurnal Evolyutsionnoy Biokhimii i Fiziologii.
[15 references; 3 in English]
Affiliation: Institute of Cytology, USSR Academy of Sciences, Leningrad

3. P540(12/87) Boychenko YeA.
Metallic compounds in plants in the evolution of the aerobic biosphere.
Seriya Biologicheskaya.
1987(2): 237-244.
[32 references; 12 in English]
Affiliation: V.I. Vernadskiy Institute of Geochemistry and Analytic Chemistry, USSR Academy of Sciences, Moscow

Exobiology: Biospherics; Evolution of Biosphere
Algae, Higher Plants
Metal Components
GASTROINTESTINAL SYSTEM

ISSUE 11

PAPERS:

   [9 references; none in English]

   Gastrointestinal System, Bile Acids and Lipids; Metabolism, Calcium
   Humans, Males
   Hypokinesia with Head-Down Tilt, Long-term; Countermeasures, Physical
   Exercise, Drugs

   [9 references; 2 in English]

   Gastrointestinal System, Intestine, Hydrolysis and Transport; Metabolism,
   Carbohydrates; Endocrinology, Pancreas
   Rats
   Immobilization Stress

ISSUE 12

CONFERENCE REPORT:


   KEY WORDS: Gastrointestinal System, Secretions, Pancreas, Liver, Hydrolysis,
   Carbohydrate, Protein; Metabolism, Lipids; Microbiology, Intestinal
   Microflora; Psychology, Stress; Space Flight, Hypokinesia, Exercise

ISSUE 14

PAPER:

   [4 references; none in English]

   Gastrointestinal System, Intestinal Flora
   Humans, Cosmonauts
   Isolation, Countermeasures, Bacterin, Bifid??, Hypokinesia, Head-down Tilt
1. P466(11/87)* Terelyak Yan (Poland).

Group dynamics and performance efficiency under extreme conditions.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[9 references; 9 in English]

Group Dynamics, Psychology, Aggression; Human Performance, Cognitive
Efficiency and Fatigue
Humans
Adaptation, Social Adaptation, Isolation, Antarctica
HABITABILITY AND ENVIRONMENT EFFECTS

ISSUE 10

PAPERS:

1. P427(10/87)* Popov IG, Blodavets VV, Chizhov SV, Sinyak YuYe, Shikina MI, Vinogradova LA, Kolesina NB.
   Investigation of the causes of the formation of hydrogen sulfide in reclaimed water.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [3 references; none in English]

   Habitability and Environment Effects; Life Support Systems, Reclaimed Water Microbiology, Microflora
   Hydrogen Sulfide

ISSUE 13

PAPERS:

2. P571(13/87)* Pak ZP, Lobacheva GV.
   Physiological and biochemical aspects of the toxic effects on humans of environmental (air, water) oxidants.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [111 references; 59 in English]

   Habitability and Environmental Effects, Toxicity
   Humans
   Life Support Systems, Environmental Oxidants

3. P586(13/87) Zaloguyev SN.
   Human habitability conditions on the space station: Major goals of the sanitary and hygienic studies; Microclimate and atmosphere of the cabin.
   In: Gurovskiy NN, editor.
   Rezultaty Meditsinskikh Issledovaniy Vypolnennykh na Orbital'nom Nauchno-issledovatel'skom Komplekse "Salyut-6"-"Soyuz"
   [Results of Medical Research Performed on the "Salyut-6"-"Soyuz" Space Station Complex.]
   Pages: 36-39; [42 references; 3 in English (whole chapter)]

   Habitability and Environmental Effects, Microclimate, Cabin Atmosphere;
   Life Support Systems; Thermal Regulation
   Humans
   Space Flight, Salyut-6
4. P587(13/87) Savina VP, Solomin GI, Mikos KN. Human habitability conditions on the space station: Toxicological and hygienic description of the environment.

5. P588(13/87) Zaloguyev SN, Viktorov AN, Gorshkov VP, Novikova ND. Human habitability conditions on the space station: Sanitary/Microbiological description of the environment.

In: Gurovskiy NN, editor. Rezultaty Meditsinskikh Issledovaniy Vypolnennykh na Orbital'nom Nauchno-issledovatel'skom Komplekse "Salyut-6"-"Soyuz" [Results of Medical Research Performed on the "Salyut-6"-"Soyuz" Space Station Complex.] Moscow: Nauka; 1986. Abstract: Space Medicine: M112, this Digest Issue. Pages: 46-50; [42 references; 3 in English (whole chapter)]
HEMATOLOGY

ISSUE 10

PAPERS:

1. P409(10/87)* Kuznetsova IV. 
[A study of the] state of the hemostasis system in air traffic controllers 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[14 references; none in English]

Hematology, Hemostasis 
Humans, Air Traffic Controllers 
Human Performance, Workload

2. P443(10/87) Meyerson FZ, Frolov BA, Stadnikov AA. 
Characteristics of the megakaryocyte-thrombocyte system in mice experiencing immobilization stress. 
Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya. 
[18 references; 3 in English]

Hematology, Megakaryocyte-Thrombocyte System; Morphology and Cytology 
Mice 
Immobilization Stress

3. P449(10/87) Konovalov SV. 
Adaptation of the rheological characteristics of blood to the effects of maximal physical exertion. 
Teoriya i Praktika Fizicheskoy Kul'tury. 
1986(8): 54-55. 
[15 references; 4 in English]

Affiliation: Orenburg Medical Institute

Hematology, Rheological Characteristics of Blood; Adaptation 
Humans, Males, Athletes 
Physical Exercise, Maximal

ISSUE 11

PAPERS:

4. P474(11/87)* Kalandarova MP. 
The effects of space flight factors on hemopoiesis. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[111 references; 34 in English]

Hematology, Hemopoieses, Hemoglobin, Erythrocytes; Musculoskeletal System, Bone Marrow, Bone Degeneration 
Review Paper, Humans, Cosmonauts, Animals 
Adaptation, Space Flight Factors
HEMATOLOGY

5. P502(11/87) Agafonova NA, Lunina NV. 
The effect of alpha-tocopherol acetate on the response of the lysosome system of neutrophilic leukocytes to immobilization stress. 
Fiziologicheskiy Zhurnal. 
[20 references; 5 in English] 
Authors' affiliation: T.G. Shevchenko Pedagogic Institute, Voroshilovgrad

Hematology, Lysosomes, Neutrophilic Leukocytes 
Rabbits 
Psychology, Immobilization Stress, Countermeasures, Alpha-tocopherol

ISSUE 12

PAPERS:

6. P523(12/87) Tenchova VB, Pantev TP (Bulgaria). 
Change in hemopoiesis in rats as a result of the combined effects of acceleration, irradiation, and anti-radiation measures. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[2 references; none in English]

Hematology, Hemopoiesis 
Rats 
Acceleration, Irradiation, Antiradiation Measures

7. P541(12/87) Agafononva NA, Lunina NV. 
The effects of alpha-tocopherol acetate on response of the lysosome apparatus of neutrophilic leukocytes to immobilization stress. 
Fiziologicheskiy Zhurnal. 
[20 references; 5 in English] 
Affiliation: T.G. Shevshchenko Pedagogical Institute, Voroshilovgrad

Hematology, Lysosome, Neutrophilic Leukocyte 
Rabbits 
Psychology, Immobilization Stress; Metabolism, Lipid Peroxidation, Alpha-tocopherol

ISSUE 13

PAPERS:

8. P565(13/87)* Ivanov KP, Chuykin AYe, Samsonov GV, Kuznetsova NP. 
The role of hemoglobin's affinity for oxygen in [determining] the efficiency of the respiratory function of the blood. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[5 references; 1 in English]

Cardiovascular and Respiratory Systems, Respiratory, Efficiency 
Rats 
Hematology, Hemoglobin, Oxygen Affinity
HEMATOLOGY

9. P569(13/87)* Andreyeva OI, Pukhov VV, Daniyarov SB. Differentiation of stem hemopoietic cells during adaptation to high altitudes. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 21(3): 90-91; 1987. [5 references; 3 in English]

Hematology, Stem Hemopoietic Cells, Differentiation
Mice
Adaptation, High Altitude

ISSUE 14

PAPERS:


Hematology, Acid-Base Balance, Oxygen Affinity
Rats
Hyperbaric Oxygenation
ISSUE 10

PAPER:


Human Performance, Reliability
Humans, Air Traffic Controllers
Psychology, Frustration, Tolerance

MONOGRAPH:

2. M100(10/87)* Matyukhin VA, Krivoshchekov SG, Demin DV. Physiology of human dislocation and watch* work. Novosibirsk: Nauka (Sibirskoye Otdeleniye); 1986. [196 pages]
Affiliation: [Book] USSR Academy of Sciences (Siberian Division); USSR Academy of Medicine (Siberian Division)

ISSUE 11

PAPERS:


Human Performance, Information Processing, Cognitive Performance, Efficiency
Humans, Pilots, Patients
Psychology, Motivation, Effort

4. P491(11/87)* Denisov AF. Psychological state during job performance in air traffic control. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 21(1):76-78. [12 references; none in English]

Psychology, Psychological State
Humans, Air Traffic Controllers
Human Performance, Workload, Performance Quality
5. P498(11/87) Kolpakov SP, Rumyantseva AG.
Comprehensive method for correcting psychophysical state in people whose work involves constant eye strain.
Fiziologiya Cheloveka.
[23 references; 3 in English]
Authors' affiliation: P.K. Anokhin Scientific Research Institute for Normal Physiology, Moscow

Human Performance, Psychophysiological State
Humans, Industrial Workers
Perception, Visual System, Eye Strain; Countermeasure, Exercises, Massage

ISSUE
PAPERS:

On the psychological regulation of state under prolonged exposure to $+G_z$ acceleration.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[9 references; 4 in English]

Human Performance, Signal Detection; Perception; Visual; Psychology, Regulation; Attention
Humans, Operators
Acceleration, Prolonged, Positive, Countermeasures

7. P515(12/87)* Skrypnikov AI, Yepishkin AK.
Psychosomatic correction of operator performance during prolonged, uninterrupted work.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[8 references; none in English]

Human Performance, Uninterrupted Cognitive Work, Sleep Deprivation, Fatigue;
Neurophysiology, EEG Parameters
Humans, Operators
Psychology, Autogenic Training

8. P520(12/87)* Petrenko YeT, Yermukhametova LA.
A technique for increasing the resistance to noise of operator performance.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[5 references; none in English]

Human Performance, Noise Tolerance
Humans, Operators, Pilots
Equipment and Instrumentation
MONOGRAPH:

[79 pages; 25 figures; 3 tables; 85 references]
Affiliation (Book): Institute of Higher Nervous Activity and Neurophysiology, USSR Academy of Sciences

KEY WORDS: Human Performance, Job Performance, Man-Machine Systems, Reliability, Monotony; Psychology, Psychophysics, Emotional Stress, Eye Movements, Speech Parameters, Biofeedback; Musculoskeletal System
ISSUE 10

PAPERS:

1. P450(10/87) Apanasen'ko GL, Nedopryadko DM.
   The role of autoimmune responses in the recovery period after strenuous physical exercise.
   Teoriya i Praktika Fizicheskoy Kul'tury.
   [29 references; 5 in English]
   Affiliation: A. A. Bogomolets Medical Institute, Kiev

   Immunology, Autoimmune Responses
   Humans, Athletes
   Adaptation, Physical Exercise

ISSUE 12

PAPER:

2. P546(12/87) Mirrakhimov MM, Kitayev MI. Tokhtabayev AG.
   Human immunological competence in adaptation to high-altitude hypoxia.
   Fiziologiya Cheloveka.
   [27 references; 11 in English]
   Affiliation: Kirghiz Scientific Research Institute of Cardiology, Kirghiz SSR Ministry of Health, Frunze

   Immunology, Immune Competence, B- and T-cells
   Humans, Males
   Adaptation, High Altitude

ISSUE 13

PAPER:

13. P575(13/87) Kut'kova ON, Kuznets YeI, Yakovleva EV, Shal'nova GA, Bobrov AF, Yastrebov PT, Nevinnaya AD, Utekhin BA.
    Changes in immunological protection factors in humans undergoing simulated weightlessness.
    [Papers from the XVII and XIXth lectures dedicated to the development of the scientific heritage and further advancement of the ideas of K.E. Tsiolkovskiy, Kaluga: 1983-1984].
    Space Biology: M113; this Digest issue.
    Pages: 40-45.
    [7 references; none in English]

   Immunology, Cellular and Humoral Immunity Parameters
   Humans
   Hypokinesia, Head-down Tilt; High Temperatures
14. P602(14/87)* Mukhamedyeva LN, Konstantinova IV, Zhuravlev VV. 
Physiological and immunological aspects of human adaptation to heat in a 
hermetically sealed environment. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[22 references; 6 in English]

Immunology; Adaptation
Humans
Sealed Environment, Heat, Humidity

15. P610(14/87)* Kitayev MI, Goncharov AG. 
Mononuclear phagocytes in high altitude adaptation of healthy individuals. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[12 references; 3 in English]

Immunology, Mononuclear Phagocytes
Humans, Males, Individual Differences
Adaptation, High Altitude

16. P623(14/87) Konstantinova VI. 
Immunological research [on "Salyut-6" prime crews]. 
In: Gurovskiy NN, editor. 
Rezultaty Meditsinskikh Issledovaniy Vypolnennykh na Orbital'nom Nauchno-issledovatel'skom Komplekse "Salyut-6" -"Soyuz" [Results of Medical Research Performed on the "Salyut-6"-"Soyuz" Space Station Complex.] 
[25 references; 16 in English]

Immunology, Epidemiology, Immunological Reactivity, T-lymphocytes, 
Immunoglobulin
Humans, Cosmonauts
Space Flight, Long-term, Salyut-6
PAPERS:

1. P429(10/87)* Drugova NA, Yunusova LS, Shaydorov YuI.
   [Properties of] the formation of a microbial complex in nutrient solutions
   of higher plants using products of straw mineralization.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [10 references; 2 in English]

Life Support Systems, CELSS, Microbiology, Microflora
Botany, Lettuce
Straw Mineralization Products, Ecotol

PAPERS:

2. P463(11/87)* Grishayenkov BG, Vasil'yev VK, Zorina NG, Zhukov AK.
   Derivation of working equations for a gas mixture of CO₂-CO-H₂O-H₂-N₂ for
   cathode space of an electrolyzer with a solid electrolyte with oxygen
   extraction accounted for.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [1 reference; none in English]

Life Support System, Gas Mixture Regeneration System
Equation Derivation
Thermodynamics, Equilibrium

3. P464(11/87)* Grishayenkov BG, Zorina NG, Vasil'yev VK.
   Computation of equilibrium concentrations of components of the gas mixture
   CO₂-CO-H₂O-H₂-N₂ for the cathode space of an electrolyzer with a solid
   electrolyte and appropriate theoretical values for voltage of dissociation.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [no references]

Life Support System, Gas Mixture Regeneration System
Equation Derivation
Thermodynamics, Equilibrium

4. P484(11/87)* Grishayenkov BG, Zorina NG.
   Thermodynamic state of a multicomponent gas mixture CO₂=CO=H₂O=H₂=N₂ in
   an electrolyzer with a solid electrolyte.
   Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [no references]

Life Support System, Gas Mixture Regeneration System
Equation Derivation
Thermodynamics, Equilibrium

44
PAPER:


Life Support Systems, Hermetically Sealed Space Microbiology, Microflora Water, Atmospheric Condensate, Cooling, Freezing

MONOGRAPH:


KEY WORDS: Life Support Systems, Space Suits; Equipment and Instrumentation

ISSUE 13:

PAPERS:


Life Support Systems; Nutrition, Eggs Quails CELSS


Life Support Systems, Regenerated Water, Hermetically Sealed Environment Microbiology, Microflora Silver Compounds
The effects of weightlessness on microorganisms and plants: One-celled algae.

Life Support Systems, CELSS, Photoautotrophic Component, Growth Conditions Microbiology, Botany, Chlorella, Scenedesmus, Active and Inactive Cultures Space Flight, Salyut-6


Life Support Systems, Water System; Habitability and Environment Effects Humans, Cosmonauts Space Flight, Salyut-6-Soyuz

ISSUE 14

PAPERS:


Life Support Systems, Organic Compounds Equipment and Instrumentation, Chromatmass Spectrometer, Computer Human Wastes


Life Support Systems, Physiological and Behavioral Effects Mice, Rats Hermetically Sealed Environments, Acetic Acid, Toxicology
ISSUE 11

PAPER:

1. P460(11/87)* Kondrachuk AV, Shchekin IYe, Sirenko SP.
A mathematical model of the otolith.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[15 references; 6 in English]

Mathematical Modeling
Mammals
Neurophysiology, Otolith

ISSUE 12

PAPERS:

2. P512(12/87)* Titunin PA, Sveshchinskiy ML, Chudimov VF, Zerov SF.
An approach to the quantitative evaluation of mechanisms regulating
central hemodynamic response to upright position.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[19 references; none in English]

Cardiovascular and Respiratory Systems, Hemodynamics
Humans, Males
Mathematical Modelling, Upright Position

3. P519(12/87)* Kharchenko VI, Golovleva NV, Konakhevich YuG, Lyapin VA, Mar' in
AV, Petlyuk VKh, Sholpo LN.
Mathematical modeling of the kinematics of a pilot's head in ejection into
the air stream.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[no references]

Mathematical Modeling, Head Movement
Humans, Pilots
Ejection, Aircraft

ISSUE 14

PAPER:

4. P614(14/87) Palets BL, Popov AA, Tikhonov MA, Panchenko VS.
Regulation of hemodynamics in simulation of transition to weightlessness.
Fiziologiya Cheloveka.
[7 references; 3 in English]
Authors affiliation: Institute of Cybernetics, Ukrainian Academy of Sciences

Mathematical Modeling, Cardiovascular and Respiratory System, Hemodynamics
Humans
Weightlessness, Initial Response; Countermeasures, LBNP, Hypovolemia
1. P413(10/87)* Smirnov KV, Medkova IL, Zhiznevskaya OV, Bychkov VP, Mosyakina LI, Khokhlova OS. Lipid metabolism parameters in men exposed to hypokinesia with head-down tilt, and means of normalizing these parameters. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 20(5): 34-37; 1986. [14 references; 3 in English]


4. P542(12/87) Yershikov SM. Rate of gluconeogenesis and concentration of carbohydrates in liver tissue of rats undergoing hypokinesia. Voprosy Meditsinskoy Khimii. XXXIII(2): 87-89; 1987. [20 references; 6 in English] Affiliation: Department of Biochemistry, Yaroslavl Medical Institute

Metabolism, Lipids, Hypokinesia, Head-Down Tilt; Countermeasures, Nutrition, Linoleic, Linolenic Acids

Metabolism, Gluconeogenesis, Renal Cortex, Rats, Psychology, Immobilization, Stress

Metabolism; Endocrinology, Hormonal Status; Body Fluids, Fluid-Electrolyte Homeostasis, Humans, Males, Adaptation, Far North; Physical Exercise

ISSUE 12

PAPER:

4. P542(12/87) Yershikov SM. Rate of gluconeogenesis and concentration of carbohydrates in liver tissue of rats undergoing hypokinesia. Voprosy Meditsinskoy Khimii. XXXIII(2): 87-89; 1987. [20 references; 6 in English] Affiliation: Department of Biochemistry, Yaroslavl Medical Institute

Metabolism, Gluconeogenesis, Carbohydrates, Liver, Rats, Hypokinesia, Immobilization
ISSUE 13

PAPERS:


Metabolism; Cardiovascular and Respiratory Systems, Peripheral Circulation Humans, Males Hypokinesia, Head-down Tilt, Short- and Long-Term


Metabolism; Nutrition, Trace Elements; Enzymology Humans, Review Article Hypoxia; Musculoskeletal System, Physical Exercise

ISSUE 14

PAPERS:


Metabolism, Metabolic Parameters Human, Parachute Jumpers Psychology, Stress; Nutrition


Authors' affiliation: S.M. Kirov Academy of Military Medicine

Metabolism, Lipid; Enzymology, Catecholamines Humans Adaptation; Psychology, Stress; Human Performance, Physical Exercise
MONOGRAPH:

[Space Biology and Biotechnology: A Collection of Scientific Works].
[72 pages; 29 figures; 10 tables; 130 references for all articles]
Affiliation (book): Institute of Molecular Biology and Genetics, Ukrainian Academy of Sciences.

KEY WORDS: Microbiology, Space Biology, Biotechnology, Botany, Bacteria, Algae, Pea, Haplopappus, Orchids, Chlorella, Space Flight, "Salyut-7", Weightlessness, Bioconvectivity, Cytology, Clinostatting, Biological Rhythms, Diurnal Rhythms, Vibration, Acceleration, Life Support Systems, Electrophoresis

ISSUE 12

PAPERS:

2. P534(12/87) Manko VG, Kordyum VA, Vorob'yev LV, Konshin NI, Nechitaylo GS.
Changes over time in Proteus vulgaris cultures grown in the ROST-4M2 device on the "Salyut-7" space station.
In: Sytnik KM (editor).
Kiev: Naukova Dumka; 1986; pp 3-10.
See abstract M106, issue 11,
Affiliation: Institute of Molecular Biology and Genetics, Ukrainian Academy of Sciences, Kiev.

Microbiology, Growth Dynamics
Proteus vulgaris
Space Flight, "Salyut-7"

3. P535(12/87) Babskiy VG.
On the role of mass transfer in the growth of microorganisms in weightlessness.
In: Sytnik KM (editor).
[46 references; 27 in English]
Affiliation: Institute of Molecular Biology and Genetics, Ukrainian Academy of Sciences, Kiev.

Microbiology, Mass Transfer, Bioconvection, Growth
Mathematical Modeling
Weightlessness
4. P536(12/87) Popova AF.
Submicroscopic organization of *Anabaena Azollae Strass.*, exposed to space flight.
In: Sytnik KM (editor).
[16 references; 10 English]

Life Support System, CELSS; Submicroscopic Organization
Microbiology, Algae, *Anabaena Azollae*; Botany *Azolla pinnata*
Space Flight, "Salyut-6"

5. P537(12/87) Popova AF, Sidorenko PG, Kimchuk DA, Zhad'ko SI, Martyn GM, Ivanenko GF.
An investigation of the structural and functional characteristics of one-celled algae and higher plant cell cultures in the simulation of various space flight factors.
In: Sytnik KM (editor).
Kiev: Naukova Dumka; 1986; pp 33-41.
[23 references; none in English]
Affiliation: N.G. Kholodnyy Botanical Institute, Ukrainian SSR Academy of Sciences, Kiev

Cytology, Structure and Function; Adaptation
Microbiology, Algae, *Chlorella vulgaris*; Botany, *Haplopappus gracilis*
Vibration, Acceleration, Clinostatting
MUSCULOSKELETAL SYSTEM

ISSUE 10

PAPERS:

1. P426(10/87)* Makarovskiy VV, Khalangot AF, Shafranskiy YuA, Kryzhanovskaya GF.
[Evaluation of] the functional status of the musculoskeletal system on the basis of biochemical blood parameters for people living in a closed life support system.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[18 references; 7 in English]

Musculoskeletal System, Functional Status, Blood Parameters
Humans, Males
Life Support Systems, Closed, Isolation, CELSS

2. P442(10/87) Rogacheva IV.
The effect of calcitonin and retabolil on the condition of the femur in rats undergoing hypokinesia.
Patologicheskaya fiziologiya i eksperimentalnaya terapiya.
[7 references; none in English]

Musculoskeletal System, Femur
Rats
Hypokinesia, Amputation, Countermeasures, Calcitonin, Retabolil

3. P446(10/87) Slesarenko NA.
Structural adaptation of the articular cartilage in fur-bearing animals varying in motor activity.
Arkhiv Anatomii, Gistologii i Embriologii.
XCI(7): 75-79; 1986.
[5 references; 2 in English]
Affiliation: Department of Animal Anatomy, Veterinary Institute, Moscow.

Musculoskeletal System, Cartilage, Articular; Adaptation
Minks, Sables
Hypodynamia

ISSUE 11

PAPERS:

4. P452(11/7) Khristova LG, Gidikov AA, Aslanova IF, Kirenskaya AV, Kozlova VG, Kozlovskaya IB. (Bulgaria, USSR)
The effect of immersion hypokinesia on human muscle potential parameters.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[10 references; 6 in English]

Musculoskeletal System, Muscle, EMG, Potential
Humans
Hypokinesia, Immersion
5. P454(11/87)* Durnova GN, Sakharova ZF, Kaplanskiy AS, Ivanov VM, Khaydakov MS.
Quantitative analysis of osteoblasts and osteoclasts in the bones of rats undergoing simulations of weightlessness.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[15 references; 4 in English]
Musculoskeletal System, Osteoblasts, Osteoclasts
Rats, Males
Immobilization; Psychology, Stress; Tail-suspension

6. P456(11/87)* Rogacheva IV, Polyakov AN, Volozhin AI, Stupakov GP.
The possibility for using Pharmacological measures to counteract regional osteoporosis in non-supporting limbs.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[8 references; none in English]
Musculoskeletal System, Osteoporosis
Rats
Amputation; Countermeasures, Calcitonin, Retabolil

7. P478(11/87)* Grigror'yeva LS, Kozlovskaya IB.
The effect of weightlessness and hypokinesia on muscle velocity-strength relationships in humans.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[8 references; 1 in English]
Musculoskeletal System, Muscle Velocity-Strength Relationships
Humans
Space Flight, "Salyut-7"; Hypokinesia, Long- and Short-term,
Countermeasures; Head-down Tilt, Long-term
Musculoskeletal System, Muscle Velocity-Strength Relationships
Humans
Space Flight, "Salyut-7"; Hypokinesia, Long- and Short-term,
Countermeasures; Head-down Tilt, Long-term

8. P483(11/87)* Kaplanskiy AS, Durnova GN, Sakharova ZF, Morukov BV.
Effects of diphosphonates on development of osteoporosis in rats undergoing hypokinesia.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[11 references; 8 in English]
Musculoskeletal System, Osteoporosis
Rats, Males
Immobilization; Psychology, Stress; Diphosphonates
Changes in the state of tibia bones in humans during hypokinesia with head-down tilt. 
[6 references; none in English] 
Authors' Affiliations: Latvian Scientific Research Institute of Traumatology and Orthopedics, Riga; Institute of Biomedical Problems, USSR Academy of Health, Moscow; A.Ya Pel'she Polytechnical Institute of Riga.

Musculoskeletal System, Biomechanical Properties; Mineral Content; Operational Medicine, Diagnosis Techniques, Ultrasound Scanning, Photon Absortiometry 
Humans, Males Hypokinesia, Head-down Tilt; Countermeasures, Exercise, Drugs

ISSUE 12

PAPER:

[7 references; 1 in English] 
Musculoskeletal System, Isometric Tension, Accuracy 
Humans 
Acceleration, Deceleration, Vibration

ISSUE 13

PAPER:

[8 references; 4 in English] 
Authors' affiliation: Department of Histology, Cytology, and Embryology, I.M. Sechenov First Medical Institute, Moscow

Musculoskeletal System, Striated Fibers; Metabolism; Enzymology 
Humans, Males Hypokinesia, Head-down Tilt; Physical Exercise

Musculoskeletal System, Nucleic Acids
Rats
Immobilization; Psychology, Stress
PAPERS:

1. P420(10/87)* Krasnov IB, D’yachkova LN.  
The ultrastructure of the cortex of the cerebellar nodulus in rats flown on the "Cosmos-1514" biosatellite.  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.  
[18 references; 8 in English]

Neurophysiology, Cerebellar Nodulus; Morphology and Cytology, Ultrastructure  
Rats  
Space Flight, "Cosmos-1514"

2. P421(10/87)* Anichin VF.  
[A study of] the receptor epithelium of the vestibular apparatus and the cochlea under exposure to acceleration and noise.  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.  
[14 references; 5 in English]

Neurophysiology, Vestibular Apparatus, Cochlea, Epithelium; Morphology and Cytology, Ultrastructure  
Rabbits, Guinea Pigs  
Acceleration, Noise

3. P422(10/87)* Yasnetsov VV, Pravdivtsev VA.  
[On] the chemical sensitivity of neurons of the medial vestibular nucleus to enkephalin, acetylcholine, GABA and L-glutamate.  
Kosmicheskaya Biologiya i Aviakosmicheskaya Biologiya.  
[18 references; 10 in English]

Neurophysiology, Vestibular Nucleus, Chemical Sensitivity  
Cats  
Physiologically Active Substances, Opioids, Opioid Antagonists, Neural Transmitters

4. P423(10/87)* Karkishchenko NN, Dimitriadi NA, Molchanovskyi VV.  
Pharmacological correction of the effects of Coriolis acceleration on the central nervous system.  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina  
[10 references; none in English]

Neurophysiology, Central Nervous System, Vestibular System; Human  
Performance, Mental Work Capacity  
Humans, Males  
Acceleration, Coriolis, Countermeasures, Drugs, RNA

Neurophysiology, Nerve Cells, Kinesthetic Sensor, Morphology and Cytology Rats, Males
Vibration, Noise


Neurophysiology, Otoliths
Review Article, Mammals
Mathematical Modeling

Affiliation: USSR Medical Corps

Neurophysiology, Motion Sickness, Vestibular Tolerance Humans, Males
Acceleration, Coriolis; Countermeasures, Electrotranquilization

Affiliation: I. M. Sechenov Institute of Evolution Physiology and Biochemistry (Comparative Circulatory Physiology Laboratory), USSR Academy of Sciences, Leningrad; School of Pediatrics (Department of Pharmacology), Crimean Medical Institute, Simferopol'

Neurophysiology, Brain Cortex; Cardiovascular and Respiratory Systems, Blood Supply; Biological Rhythms, Seasonal Variations; Adaptation Rabbits
Motion Sickness
ISSUE 11

PAPERS:

9. P449(11/87)* Bodrov VA, Fedoruk AG. 
Assessment of the functional state of pilots on the basis of parameters of interhemisphere asymmetry. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[15 references; none in English]

Neurophysiology, Interhemisphere Asymmetry 
Humans, Pilots, Norming Study; Personnel Selection 
Flight Factors, Acceleration, Hypoxia, Tolerance; Human Performance

10. P458(11/87)* Zaritskiy VV, Krylov YuV 
Effects of altered circulation on human nystagmic reactions. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[14 references; 4 in English]

Neurophysiology, Nystagmus, Optokinetic Stimulation, Coriolis Acceleration 
Humans, Males 
Cardiovascular and Respiratory Systems, Altered Circulation, Head-down Tilt

11. P459(11/87)* Trinus KF. 
The thresholds of long latency evoked potentials and sensations of movement in humans exposed to linear acceleration. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[10 references; 7 in English]

Neurophysiology, Long Latency Evoked Potentials, Motion Perception 
Humans, Patients, Meniere's Disease, Labyrinthine Areflexia, Neuritis of Auditory Nerve 
Linear Acceleration 
Auditory Nerve

12. P468(11/87)* Kovalev VYu, Tigranyan RA. 
Level of polyamines in the brain of rats undergoing long-term hypokinesia. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[10 references; 5 in English]

Neurophysiology, Polyamines, Cerebrum, Cerebellum, Medulla Oblongata 
Rats 
Immobilization; Psychology, Stress
13. P469(11/87)* Tigranyan RA, Vakulina OP.
Response of the opioid system in sympathectomized rats to immobilization stress.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[14 references; 11 in English]

Neurophysiology, Opioid System, Adrenergic, Catecholaminergic
Rats, Male, Sympathectomized
Immobilization; Psychology, Stress

On the emetic effects of enkephalin, beta-endorphin, and morphine in cats.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[9 references; 7 in English]

Neurophysiology, Endogenous Opioid Peptides, Enkephalin, Beta-endorphin,
Morphine
Cats
Emetic Effects

15. P489(11/87)* Telezhnikov AV, Bazarov VG, Tsygankov VL, Kulikova MV, Mishchanchuk NS.
A spectral representation of vestibular nystagmus.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[3 references; none in English]

Neurophysiology, Vestibular Nystagmus
Humans
Mathematical Modeling, Spectral Analysis

The effect of specific stimulation of the vestibular system on medium latency acoustic evoked potentials.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[No references]

Neurophysiology, Medium Latency Acoustic Evoked Potentials
Humans, Individual Differences
Vestibular Tolerance, Rotation

17. P494(11/87)* Ovsyanik VP, Udovik SL.
Long latency evoked potentials in human exposure to linear acceleration.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
21(1): 82-86; 1987.
[1 reference; none in English]

Neurophysiology, Cerebral Cortex, Long Latency Evoked Potentials
Humans, Patients, Vestibular Disorders
Linear Acceleration
MONOGRAPH:

18. M104(11/87) Meshman VF. 
Vliyaniye vestibulyarnogo apparata na zritel'nyy analizator
[The effect of the vestibular apparatus on the visual system].
[87 pages; 431 references] 
Affiliation: Book: Institute of Higher Nervous Activity and 
Neurophysiology, USSR Academy of Sciences

Key Words: Neurophysiology, Vestibular System; Perception, Visual System, 
Bioelectric Activity, Weightlessness

ISSUE 12

PAPER:

19. P521(12/87)* Podshivalov AA. 
The effect of stimulation of the vestibular apparatus on static physical 
work capacity [i.e., strength].
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
21(2): 83-84; 1986.
[14 references; 1 in English]

Musculoskeletal System, Static Strength 
Humans 
Neurophysiology, Vestibular Stimulation

ISSUE 13

PAPERS:

20. P556(13/87)* Fedorov VP, Ushakov IB.
Karyometric estimation of the reactions of neurons of the cerebral cortex to 
the combined effects of ionizing radiation, longitudinal acceleration, and 
vibration.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[11 references: 3 in English]

Neurophysiology, Sensorimotor Cortex, Neurons 
Rats 
Radiobiology, Gamma-Radiation; Habitability and Environment Effects, 
Vibration, Acceleration, +Gz
21. P561(13/87)* Nalimova TA.
Characteristics of nystagmus in individuals with regular occupational exposure to vibration.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[14 references; 1 in English]

Neurophysiology, Nystagmus
Humans, Workers
Habitability and Environment Effects, Vibration, Long-term; Human Performance, Occupational Exposure

22. P567(13/87)* Matveyev AD.
A history of development of methods for studying space motion sickness.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[59 references; 16 in English]

Neurophysiology, Space Motion Sickness
Humans, Cosmonauts
Review Article, Methods; Equipment and Instrumentation; Space Flight, Soyuz-8, -9, Soyuz-T-7, Soyuz-T-3, Soyuz-37, -38, -39, Salyut-6, -7

23. P585(13/87) Bryanov II, Gorgiladze FI, Kornilova LN, Tarasov IK, Yakovleva Ifa.
Sensory systems [of prime crews on "Salyut-6" flights]: Vestibular function.
In: Gurovskiy NN, editor. Rezultaty Meditsinskikh Issledovaniy Vypolnenyh na Orbital'nom Nauchno-issledovatel'skom Komplekte "Salyut-6"-"Soyuz" [Results of Medical Research Performed on the "Salyut-6"-"Soyuz" Space Station Complex.]
Moscow: Nauka; 1986. Abstract: Space Medicine: M112, this Digest Issue. Pages: 169-185 [58 references; 8 in English (whole chapter)]

Neurophysiology, Vestibular Function
Humans, Cosmonauts
Space Flight, Salyut-6, Soyuz

ISSUE 14

PAPERS:

24. P621(14/87) Viru AA, Tendzegol'skis ZhL, Karel'son KM, Alev KP, Smirnova TA.
Relationship between changes in concentration of beta-endorphin and hormones in the blood during exercise.
Voprosy Meditsinskoy Khimii.
[20 references; 15 in English]

Neurophysiology, Beta-endorphins; Endocrinology, Pituitary, Adrenal Cortex
Humans, Athletes, Patients
Physical Exercise
NUTRITION

ISSUE 10

PAPER:

1. P412(10/87)* Kalandarov S, Bychkov VP, Frenkel' ID.
Nutritional compensation for effects of hypokinesia and emotional stress on levels of histamine and serotonin. [NB: although this is the title of the paper, nutritional compensation is only involved in the second experiment.]
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[14 references; 1 in English]

Neurophysiology, Histamine, Serotonin; Metabolism
Humans
Hypokinesia, Head-Down Tilt, Psychology, Stress; Nutrition, Vitamins, Mineral, Glucose, Phosphatides; Hypobaria

ISSUE 11

PAPERS:

2. P475(11/87) Gazenko OG.
Space Medicine -- new approaches in the theory and practice of general medicine.
Presentation made by the Soviet delegation at the 24th session of the Science and Technology Subcommittee, of the UN Committee on Peaceful Uses of Space.

Translation of speech text.

Key Words: Nutrition, Trophology; Gastrointestinal System; Metabolism; Microbiology, Intestinal Microflora; Enzymology, Endocrinology, Peptide Hormones; Biospherics; Body Fluids; Equipment and Instrumentation; Operational Medicine, Space Medicine

3. P503(11/87) Sergeyev IN, Kim Ren Kha, Blazheyevich NV, Spirichev VB.
The combined effects of vitamin D and E deficiency on calcium metabolism in bone tissue in rats.
Voprosy Pitaniya.
[18 references; 12 in English]

Metabolism, Calcium; Musculoskeletal System, Bone Tissue
Rats, Male
Nutrition, Vitamin D, Vitamin
ISSUE 12

PAPER:

4.P543(12/87)Sergeyev IN, Blazheyevich NV, Kaplanskiy AS, Shvets VN, Belakovskiy MS, Spirichev VB.
A comparative study of the effects of 1,25-dihydroxyvitamin D₃ and 24,25-dihydroxyvitamin D₃ on calcium homeostasis and the state of bone tissue in rats undergoing hypokinesia.
Voprosy Meditsinskoy Khimii.
[20 references; 13 in English]

Musculoskeletal System, Bone Tissue, Calcium Homeostasis; Developmental Biology
Rats, Male
Nutrition, Vitamin D₃; Hypokinesia
PAPERS:


Operational Medicine, Small Pelvis, Prostate
Humans, Males
Acceleration, Long-term, Centrifugation


Operational Medicine, Decompression Sickness, Altitude; EVA Simulation
Humans
Adaptation, Hypobaria

CONFERENCE REVIEW:


Key Words: Operational Medicine, Health, Prediction; Human Performance, Functional Capacities; Adaptation, Extreme Conditions; Biological Rhythms; Biospherics, Environmental Factors; Equipment and Instrumentation; Immunology; Mathematical Modeling; Psychology

PAPER:


Operational Medicine, Medilab
Equipment and Instrumentation
Space Flight, Mir
ISSUE 11

PAPER:

1. P500(11/87) Oshchepkov NA, Lyashchukova SM.
   The effects of light (color and brightness) on the visual system during performance of space craft orienting tasks. 
Pskhologicheskiy Zhurnal. 
[9 references; none in English]

Perception, Visual Recovery Time; Human Performance, Astroorientation Humans, Cosmonauts 
Equipment and Instrumentation, Spacecraft Console, Visual Display, Brightness, Color, Duration

ISSUE 12

PAPERS:

2. P516(12/87)* Dantsig IN, Diyev AV.
   A study of critical flicker fusion frequency in humans exposed to noise. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[11 references; none in English]

Perception, Critical Flicker Fusion Frequency 
Humans, Males 
Habitability and Environment Effects, Noise

3. P528(12/87)* Vorob'yev OA, Ivanov VV.
   The formation of an image of spatial position under influence of illusions of vestibular origin. 
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 
[21 references; 4 in English]

Perception, Spatial Orientation 
Humans, Pilots 
Vestibular Illusions
ISSUE 13

PAPERS:


Perception, Vision; Human Performance
Humans, Cosmonauts
Space Flight, Salyut-6


Perception, Hearing; Human Performance
Humans, Cosmonauts
Space Flight, Salyut-6


Perception, Taste
Humans, Cosmonauts
Space Flight, Salyut-6
7. P609(14/87)* Golobeva TI, Kuz'min MP.
The effect of intermittent exposure to hypercapnia on visual functioning.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[4 references; none in English]

Perception, Visual Functioning; Adaptation
Humans
Hypercapnia
PERSONNEL SELECTION

ISSUE 11

PAPER:

1. P473(11/87)* Vyadro MD, Bryanov II.
Development of the Soviet system for medical selection of cosmonauts
(hospital stage).
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[12 references; 6 in English]

Personnel Selection, Review Article; Cosmonaut Training
Humans, Cosmonauts
Operational Medicine, Medical Criteria, Stress Tests; Psychology, Selection
Tests

ISSUE 12

PAPER:

2. P527(12/87)* Marishchuk VL, Yevdokimov VI.
Theoretical basis for a social psychological selection system for flight
crews.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
21(2): 4-7; 1987.
[26 references; 5 in English]

Personnel Selection
Humans, Flight Crews
Psychology, Social Variables

ISSUE 13

PAPERS:

3. P552(13/87) Yevdokimov VI, Parkhomenko PP.
[(Some aspects of) Social and psychological selection of flight school
applicants.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[9 references; none in English]

Personnel Selection, Flight School; Human Performance
Humans, Pilots
Psychology, Social and Psychological Traits
PSYCHOLOGY

ISSUE 11

PAPER:

MONOGRAPH:

ISSUE 12

PAPERS:

5. P581(13/87) Simonov PV.

Monitoring man's work capacity in aviation and space flight.

Paper delivered at the NASA Space Life Sciences Symposium.

Author's affiliation: Institute of Higher Nervous Activity and Physiology, USSR Academy of Sciences.

Human Performance, Work Capacity, Functional State
Humans, Pilots, Cosmonauts
Psychology, Motivations, Emotion, Stress, Uncertainty, Fatigue, Vigilance
ISSUE 10

PAPERS:

1. P432(10/87)* Sidyakin VG, Temur'yantz NA, Yevstaf'yeva YeV, Biochemical and morphological changes in the blood of rats exposed to a variable magnetic field in the infrared range. Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina. 20(5): 90-91; 1986. [9 references; 1 in English]

Hematology, Biochemical and Morphological Parameters; Adaptation Rats Radiobiology, Magnetic Field, Variable, Infrared


Affiliation: S.M. Kirov Academy of Military Medicine, Leningrad

Radiobiology, Survival Rate Mice, Male Gamma Radiation; Radioprotection, Dose Optimization, APAETP, Mexamine; Mathematical Modeling

MONOGRAPH:

3. M98(10/87) Frenkel' LA, Kalmykov LZ, Lan'ko AI, et al. (Shantyr' VI, editor). Radiobiologiya kostnoy tkani [Radiobiology of bone tissue]. Moscow: Energoatomizdat; 1986. [136 pages; 34 tables; 38 figures; 85 references]

Affiliation: Radiation Biochemistry Laboratory, Khar'kov Scientific Research Institute for Medical Radiology, Ukrainian Ministry of Health

KEY WORDS: Radiobiology; Musculoskeletal System, Bone Tissue, Mineralization; Developmental Biology; Metabolism
PAPER:

4. P462(11/87)* Pantev TP, Minkova MI (Bulgaria).
Direct and indirect effects of a constant magnetic field on biological subjects.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[18 references; 2 in English]

5. P470(11/87)* Minkova MI, Pantev TP (Bulgaria).
Radiosensitivity of intestinal bacilli after exposure to a constant magnetic field.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[9 references; 1 in English]

Antiradiation effect of insoluble polyanion in prolonged exposure to gamma-irradiation.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[4 references; none in English]

7. P484(11/87)* Fedorenko BS, Kabitsyna RA, Krivitskaya GN, Derevyagin VI, Ryzhov NI.
[Study of the]Frequency of morphological changes in neurons in the cerebral cortex of rats exposed to accelerated carbon ions.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[6 references; 2 in English]

Hematology, Spleen, Bone Marrow
Mice, Male
Radiobiology, Gamma-radiation; Radioprotective Effects, Polyanion

Neurophysiology, Cerebral Neurons
Rats, Female
Radiobiology, HZE, Gamma Radiation
8. P517(12/87)* Vinogradova ZA.
Changes over time in metabolism of non-collagen proteins in dogs exposed to 6 years of doses of gamma-radiation.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[13 references; 3 in English]

Metabolism, Protein, Non-collagen; Musculoskeletal System
Dogs
Radiobiology, Gamma-irradiation, Long-term

9. P518(12/87)* Barannikov YuI, Barsykov OA, Gavrilov PF.
Calculation of levels of ionizing radiation along the routes of high altitude aircraft flights.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
[11 references; 2 in English]

Radiobiology, Ionizing Radiation, Dose Rate
Mathematical Modeling
Aircraft, High Altitude Flights

Lethal effects of accelerated heavy ions on mammal cells treated with inhibitors of DNA synthesis.
Radiobiologiya.
[21 references; 12 in English]
Affiliation: Joint Institute for Nuclear Research, Dubna

Cytology, Mammal Cells
Chinese Hamsters
Radiobiology, Gamma-rays, HZE; DNA inhibitors

11. P549(12/87) Zherbin YeA, Lapin BA, Komar VYe, Barkaya VS, Konnova LA, Fedorov BA, Torua RA.
Plasma proteinase inhibitors during the early stages of acute radiation sickness in monkeys.
Radiobiology.
[16 references; 2 in English]
Central Scientific Research X-ray and Scientific Research Institute, USSR
Ministry of Health, Leningrad; Scientific Research Institute of Experimental Pathology and Therapy, USSR Academy of Medicine, Sukhumi

Hematology, Proteinase Inhibitors
Monkeys, Macacus nemestrinus
Radiobiology, Gamma-radiation
ISSUE 13

PAPER:

12. P579(13/87) Akatov YuA, Nevsgodina LV, Sakovich VA (USSR), Feher I, Demesh Sh (Hungary), Khashchegan D (Romania).
Radiation research in flight.
In: Gurovskiy NN, editor.
Rezultaty Meditsinskikh Issledovaniy Vypolnennykh na Orbital'nom Nauchno-issledovatel'skom Kompleks se "Salyut-6"-"Soyuz"
[Results of Medical Research Performed on the "Salyut-6"-"Soyuz" Space Station Complex.]

Radiobiology, Dosimetry, HZE, Gamma-radiation
Botany, Lettuce, Seeds; Humans, Cosmonauts
Space Flight, Salyut-6

ISSUE 14

PAPERS:

13. P611(14/87)* Grigor'ev YuG, Stepanov VS, Batanov GB, Beskhlebnova LI, Mityayeva ZYa, Paramonov AA, Salimov RM.
The combined effects of microwave and ionizing radiation.
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
21(4): 4-9; 1987.
[8 references; 3 in English]

Radiobiology, Bioeffects; Psychology, Behavior, Imprinting; Immunology
Review Paper, Rats, Chicks
Microwaves, Ionizing Radiation, Combined Effects

14. P612(14/87) Fedorenko BS, Savchenko NYa, Vorozhtsova SV, Gerasimenko VN, Kabachenko AN, Portman AI.
Biological effectiveness of helium ions and protons of relativistic energy.
[5 references; none in English]
Authors' affiliation: Institute of Biomedical Problems

Radiobiology, Biological Effectiveness; Hematology, Lymphocytes; Cytology;
Genetics, Chromosome Damage; Reproductive Biology, Spermatosomes
Human Blood, Mice, Rats
Helium Ions, Relativistic Energy
15. P615(14/87) Shubik VM, Levin MYa, Mashneva NI, Pul'kov.  
Combined effects of ionizing radiation and physical exercise on certain parameters of nonspecific protection and immunity.  
Radiobiologiya.  
[1 reference; none in English]  
Authors affiliation: Leningrad Scientific Research Institute of Rational Hygiene, USSR Ministry of Health

Immunology, Non-specific Protection, Humoral, Cellular  
Rats, Mice  
Radiobiology, Ionizing Radiation; Physical Exercise

16. P563(14/87)* Popov AV, Bochenkov AA, Ivnitskiy YuYu, Volkovskiy YuV.  
The effects of pyrocetam on mice's tolerance of hypoxic hypoxia 2-3 months after irradiation with X-rays.  
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.  
[14 references; 4 in English]

Radiobiology, Hypoxia, Tolerance; Neurophysiology, Brain Bioenergetics  
Mice, Male  
Pharmacological Countermeasures, Pyrocetam
SPACE BIOLOGY

ISSUE 13

MONOGRAPH:

1. M113(13/87) No author or editor cited.
   Voprosy biologii v trudakh K.E. Tsiolkovskogo i ikh razvitiye v sovremennoy
kosmonavtike: Trudy XVIII-XIX ochenii, posvyashchennykh razrabotke nauchnogo
nasledii i razvitiiu idey K.E. Tsiolkovskogo (Kaluga, 1983, 1984)
   [Biological issues in the works of K.E. Tsiolkovskiy and their development
in modern cosmonautics: Papers presented at the XVIII-XIXth lecture series
dedicated to further development of the ideas of K.E. Tsiolkovskiy ]
Moscow: 1985.

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2. F592(14/87)* Gazenko OG, Il'in YeA, Savina YeA, Serova LV, Kaplanskiy AS,
Smirnov KV, Konstantinova IV.
   Experiments on rats flown on the "Cosmos-1667" biosatellite: Major goals,
   experimental conditions and results)
Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
   [15 references; 1 in English]

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System, Hematology, Immunology, Metabolism, Musculoskeletal System,
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Rats
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3. CR7(14/87)* Enes AE, Kovalev VYu.
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   In: Kosmicheskaya Biologiya i Aviakosmicheskaya Meditsina.
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Affiliation: Institute of Biomedical Problems, USSR Ministry of Health


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(Numbers listed after key words refer to page numbers in this index where bibliographic citations of relevant abstracts can be found. Category names appear in boldface. Page numbers directly after a category name refer to the listing for that category; other page numbers refer to listings in other categories where category name is cited as a key word.)
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This document provides an index to issues 10-14 of the USSR Space Life Sciences Digest. There are two sections. The first section lists bibliographic citations of abstracts contained in the Digest issues covered grouped by topic area categories. The second section provides a key word index for the same set of abstracts.