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# USSR Report

## LIFE SCIENCES

## BIOMEDICAL AND BEHAVIORAL SCIENCES

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JPRS-UBB-86-013 (CORRECTED)

29 JULY 1986

# USSR REPORT

# LIFE SCIENCES

# BIOMEDICAL AND BEHAVIORAL SCIENCES

## CONTENTS

AGROTECHNOLOGY

Conference on Economic and Ecologic Problems in Intensification of Agriculture
(M.F. Lupashku, I.I. Libershteyn, et al.; IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR: SERIYA BIOLOGICHESKIKH I KHIMICHESKIKH NAUK, No 4, Jul-Aug 85)..... 1

Breeding Disease- and Pest-Resistant High-Harvest Crops
(N.N. Balashova; IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR: SERIYA BIOLOGICHESKIKH I KHIMICHESKIKH NAUK, No 4, Jul-Aug 85)..... 1

Effect of Soil and Water Salinity on Transfer of $^{90}Sr$ and $^{137}Cs$ To Rice Harvest
(V.S. Shevchenko, I.D. Dergunov; UZBEKSKIY BIOLOGICHESKIY ZHURNAL, No 4, Sep-Oct 85)..... 2

Changes in Biochemical Indices in Cotton Pollen Under Effects of Electromagnetic Field
(M.M. Akhmedova, Khossayn Tofazzal, et al.; UZBEKSKIY BIOLOGICHESKIY ZHURNAL, No 4, Sep-Oct 85)..... 3

Effect of Mineral Nutrition on Lipoprotein Metabolism in Cotton Seeds
(O.D. Dzhurayev; UZBEKSKIY BIOLOGICHESKIY ZHURNAL, No 4, Sep-Oct 85)..... 3

Agrochemical Principles for Programming Crop Capacity of Winter Wheat
(V.K. Tevzadze, O.G. Oniani, et al.; DOKLADY VASKhNIL, No 1, Jan 86)..... 4

Distribution of Antioxidants Among Flowering Herbaceous Plants in Primorye Kray
(O.B. Maksimov, P.G. Gorovoy, et al.; RASTITELNYYE RESURSY, No 4, Oct-Dec 85)..... 4

Spring Wheat Crop Obtained Under Various Ecologic Conditions as a Function of Morphologic Indices
(G.Z. Biyashev, T.V. Dobrotvorskaya, et al.; IZVESTIYA AKADEMII NAUK KAZAKHSKOY SSR: SERIYA BIOLOGICHESKAYA, No 1, Jan-Feb 86)..... 5

Effect of Cytokinins on Cold Resistance and Heat Resistance of Actively Vegetating Plants
(A.F. Titov, S.N. Drozdov, et al.; FIZIOLOGIYA I BIOKHIMIYA KULTURNYKH RASTENIY, No 1, Jan-Feb 86)..... 6

Productivity and Biological Characteristics of Black-Patched and Hybrid Dairy Cattle
(Ya. Lebengarts; MOLOCHNOYE I MYASNOYE SKOTOVODSTVO, No 1, Jan-Feb 86)..... 6

BIOCHEMISTRY

Yeast Biomass Accumulation on Lucerne Brown Juice Prepared by Different Methods of Protein Coagulation
(V.M. Boguslavskiy, D.I. Atamanyuk, et al; IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR: SERIYA BIOLOGICHESKIKH I KHIMICHESKIKH NAUK, No 4, Jul-Aug 85)..... 8

BIOTECHNOLOGY

Lysine Supplement Neglected in Armenian Animal Husbandry
(V. Musayelyan; KOMMUNIST, 11 Apr 86)..... 9

ENVIRONMENT

Some Problems of Hygienic Standardization of Levels of Harmful Substances in Bodies of Water in Uzbekistan
(Sh.T. Atabayev; MEDITSINSKIY ZHURNAL UZBEKISTANA, No 7, Jul 85)..... 10

EPIDEMIOLOGY

Danger of Brucellosis
(K. Omuraliyev; SOVETSKAYA KIRGIZIYA, 26 Mar 86)..... 11

Study of Halophilic Vibrions as Possible Pathogens of Toxic Infections in Turkmenian SSR
(E.V. Friauf, L.F. Zykin, et al.; ZDRAVOOKHRANENIYE TURKMENISTANA, No 2, Feb 85)..... 11

FOOD TECHNOLOGY

Operational Production Registry Based on Mini-Computers in Food Industry
(N.F. Vasilev, Y.M. Kvalyardi, et al.; MASLO-ZHIROVAYA PROMYSHLENNOST, No 2, Feb 86)..... 13

Nuclear Filters in Ultrafiltration Concentration of Raw Milk Products
(A.P. Chagarovskiy, M.A. Grishin, et al.; IZVESTIYA VYSSHYKH UCHEBNYKH ZAVEDENIY: PISHCHEVAYA TEKNOLOGIYA, No 1, Jan-Feb 86)..... 13

IMMUNOLOGY

Mass Producing New Immunological Preparations
(N. Lazareva; NEDELYA, No 15, 7-13 Apr 86)..... 15

Soviet Vaccine Development Affected by Sloppy Control Measures
(M. Kushtapin; SOVETSKAYA ROSSIYA, 10 Apr 86)..... 16

LASER BIOEFFECTS

New Institute of Laser Surgery
(VECHERNYAYA MOSKVA, No 100, 29 Apr 86)..... 17

$CO_2$ Laser Therapy of Urinary Bladder Tumors
(A.D. Nikolskiy, B.V. Dmitriyev, et al.; SOVETSKAYA MEDITSINA, No 11, Nov 85)..... 18

Laser Therapy in Diseases of Veins of Lower Extremities
(G.I. Dudenko, V.I. Zalyubovskiy; KLINICHESKAYA KHIRURGIYA, No 7, Jul 85)..... 18

Treatment of Anaerobic Paraproctitis with Laser Scalpel
(Kh.B. Babayev, B.N. Tachmuradov; KHIMICHESKAYA KHIRURGIYA, No 2, Feb 86)..... 19

MEDICINE

Ultrasonic Probe for Brain Examinations and Surgery
(TRUD, No 96, 23 Apr 86)..... 20

Gas-Liquid Chromatography in Non-Clostridial Anaerobic Infection
(L.L. Shimkevich, A.A. Vishnevskiy, et al.; SOVETSKAYA MEDITSINA, No 1, Jan 86)..... 21

Emergency Care in Large General Hospital
(M.N. Petrov; SOVETSKAYA MEDITSINA, No 8, Aug 85)..... 21

Fiber Optic Instruments for Low-Intensity Laser Focus in Otorhinolaryngology
(Yu.D. Berezin, V.Sh. Berikashvili, et al.; MEDITSINSKAYA TEKHNIKA, No 6, Nov-Dec 85)..... 22

Treatment of Depressed Skull Fractures
(G.F. Rybakov, A.A. Dyusembayev; VOPROSY NEYROKHIRURGII, No 6, Nov-Dec 85)..... 23

Reducing Mortality After Combined Chest and Skull Traumas
(A.O. Likhtenshteyn, V.Ye Krylov, et al.; SOVETSKAYA MEDITSINA, No 9, Sep 85)..... 23

Neuromotor Components of Accuracy-Aiming Motions
(A.V. Ivoylov, V.A. Furman, et al.; TEORIYA I PRAKTIKA FIZICHESKOY KULTURY, No 2, Feb 86)..... 24

Plastic Surgery of Mandible in Primary Surgical Treatment of Facial Gunshot Wounds
(S.D. Sidorov; VESTNIK KHIRURGII, No 11, Nov 85)..... 25

Non-Infective Pathology of Population of Developing Countries of Asia
(A.A. Rozov, T.V. Kuznetsova; SOVETSKOYE ZDRAVOOKHRANENIYE, No 2, Feb 86)..... 25

Thermography in Dispensarization of Population
(L.I. Ginzburg, L.I. Lindenbraten; MEDITSINSKAYA RADIOLOGIYA, No 10, Oct 85)..... 26

MICROBIOLOGY

Organization of Bacteriological Observation of Epidemic Process of Staphylococcus Infection in Obstetric Hospital
(Ye.G. Stepanyan, N.N. Nepesova, et al.; ZDRAVOOKHRANENIYE TURKMENISTANA, No 2, Feb 85)..... 27

Virulence of Fixed Strain Rabies Virus Towards Laboratory Animals
(I.L. Kvasov; IZVESTIYA AKADEMII NAUK KAZAKHSKOY SSR: SERIYA BIOLOGICHESKAYA, No 4, Jul-Aug 85)..... 28

Botulism (Clinical Aspects, Diagnosis, Treatment)
(Prof. P.L. Novikov, P.K. Zubritskiy; ZDRAVOOKHRANENIYE BELORUSSII, No 7, Jul 85)..... 28

Method of Seroidentification of Salmonellae with Aid of O- and N-Immunoindicator Pencils
(Yu.N. Roshchin, V.M. Nikitin; ZDRAVOOKHRANENIYE, No 4, Jul-Aug 85)..... 29

Transformation of Organic Substance from Bituminous Origin by Microscopic Fungi
(M.K. Kanatchinova; IZVESTIYA AKADEMII NAUK KAZAKHSKOY SSR: SERIYA BIOLOGICHESKAYA, No 1, Jan-Feb 86)..... 29

NIEMR

Activity of Acid and Alkaline Phosphatase in Guinea Pigs Exposed to Static Magnetic Fields
(E. Gorczynska, R. Wegrzynowicz; JOURNAL OF HYGIENE, EPIDEMIOLOGY AND IMMUNOLOGY, No 2, 1985)..... 31

Effect of Polygradient Magnetic Fields on Some Physicochemical and Biophysical Characteristics of Plant Cells
(N.F. Bondarenko, L.A. Misyuk, et al.; DOKLADY VASKhNIL, No 1, Jan 86)..... 32

PHARMACOLOGY AND TOXICOLOGY

Cellular-Immunity Stimulator 'Timalin' in Production
(TRUD, No 97, 24 Apr 86)..... 33

Active Treatment Methods for Acute Toxic Mushroom Poisoning
(I.I. Shimanko, S.G. Musselius, et al.; SOVETSKAYA MEDITSINA, No 1, Jan 86)..... 34

System of Indices and Method of Combined Evaluation of Results of Activity of Pharmacies
(V.F. Gorenkov; ZDRAVOOKHRANENIYE BELORUSSII, No 7, Jul 85)..... 35

Effects of Triazine Herbicides on Soil Dehydrogenase Activity
(S.P. Ilyinskiy, A.S. Usataya, et al.; IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR: SERIYA BIOLOGICHESKIKH I KHIMICHESKIKH NAUK, No 4, Jul-Aug 85)..... 35

Gliftor Intoxication
(A.I. Buklan, A.F. Kravets; SUDEBNO-MEDITSINSKAYA EKSPERTIZA, No 1, Jan-Mar 86)..... 36

Chromatographic-Mass Spectrometric Study of Aerostimulants of Plant Origin
(M.T. Dmitriyev, Ye.G. Rastyannikov, et al; RASTITELNYYE RESURSY, No 1, Jan-Mar 86)..... 36

History, Status and Prospects for Utilizing Alkaloid Plants from Central Asia. Research Tasks
(K. Tayzhanov; RASTITELNYYE RESURSY, No 1, Jan-Mar 86)..... 37

Steroidal Sapogenins from Yucca Gloriosa L. Inflorescence
(T.A. Pkheidze, M.M. Benidze, et al.; RASTITELNYYE RESURSY, No 4, Oct-Dec 86)..... 37

Diagnosis of Preclinical Stages in Chronic Pesticide Intoxication
(F.N. Nurivinova; MEDITSINSKIY ZHURNAL UZBEKISTANA, No 7, Jul 85)..... 38

Slow Filtration Without Reagents as Means for Purifying Water of Combined Agrochemical Plus Surfactant Contamination
(I.Ye. Ilin; MEDITSINSKIY ZHURNAL UZBEKISTANA, No 7, Jul 85)..... 38

Toxicologic and Sanitary-Chemical Evaluation of New Furan Polymers Such as 'Furitol'
(V.V. Tarasov, G.M. Apollonova, et al.; MEDITSINSKIY ZHURNAL UZBEKISTANA, No 7, Jul 85)..... 39

Results and Prospects of Possibility of Use of Data Obtained in Short-Term Experiment for Predicting Threshold Levels of Chronic Effect of Chemical Compounds
(I.V. Sanotskiy, I.P. Ulanova, et al.; ZHURNAL GIGIYENY, EPIDEMIOLOGII, MIKROBIOLOGII I IMMUNOBIOLOGII, No 3, 1985)... 40

Physicochemical Properties of Fatty Oils from Some Species of Valerianaceae Family
(V.S. Dolya; RASTITELNYYE RESURSY, No 1, Jan-Mar 86)..... 40

PHYSIOLOGY

Determination of Fatty Acid Spectrum of Total Blood Lipids During Physical Exertion
(S.P. Anikeyeva, M.L. Troyanovskaya; TEORIYA I PRAKTIKA FIZICHESKOY KULTURY, No 2, Feb 86)..... 42

Glutamate Decarboxylase and γ-Aminobutyric Acid Transaminase Activity in Brain Structures During Action of High Concentrated Sulfide Gas on a Background of Hypo- and Hypercalcemia
(G.K. Kadyrov, A.M. Aliyev; IZVESTIYA AKADEMII NAUK AZERBAYDZHANSKOY SSR: SERIYA BIOLOGICHESKIKH NAUK, No 6, Nov-Dec 85)..... 42

PUBLIC HEALTH

Moscow Party Committee Orders Action on Drug Addiction Program
(MOSKOVSKAYA PRAVDA, No 87, 10 Apr 86)..... 44

Medical Academy's General Assembly and Tasks for 1986-1990
(MEDITSINSKAYA GAZETA, No 31, 16 Apr 86)..... 44

Mass Health Examination of Population and Scientific and Technical Revolution
(G.Z. Demchenkova, M.L. Polonskiy, et al.; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 8, Aug 85)..... 46

Some Social-Hygiene Aspects of Preventing Drunkenness and Alcoholism
(Zh.K. Kispayeva; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 8, Aug 85)..... 47

First Day Death Rate of Children Less Than One Year Old in Rural Areas
(A.V. Frolov; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 8, Aug 85)..... 47

Work of Rehabilitation Offices in Far North
(A.A. Bezrodnikh, G.N. German, et al.; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 8, Aug 85)..... 48

Some Problems of Lifestyle of Poultry Plant Workers and Its Relationship to Their Health
(V.L. Krasnenkov, D.P. Derbenev, et al.; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 1, Jan 86)..... 49

Study of Attitude Toward Their Health of Female Workers in Large Industrial Enterprise
(S.I. Stegunin, L.A. Zenina, et al.; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 1, Jan 86)..... 50

Sex Education in Schools
(V.K. Yuryev; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 1, Jan 86)..... 50

Some Specifics of Infant Mortality in New City
(A.A. Bova; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 1, Jan 86)..... 51

Organization of Specialized Medical Assistance for Rural Multiparous Mothers
(B.L. Basin, Yu.I. Chulovskiy; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 3, Mar 86)..... 52

Some Problems of Improvement of Neurologic Services for the Population of a Large Industrial City
(V.N. Yevseyev; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 3, Mar 86)..... 52

Utilization of Ambulatory Traumatologic Services by Working Population
(L.A. Pastykhov; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 3, Mar 86)..... 53

Organization of Mass Health Examination of Urban Population Using Central Rayon Hospital
(L.G. Mikhneva, V.P. Bondarev; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 3, Mar 86)..... 54

Experience in Strengthening Public Health Personnel in Rural Areas
(F.G. Grigoryev; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 3, Mar 86)..... 54

Major Indicators of Development of Public Health in RSFSR
(V.N. Ivankina; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 3, Mar 86)..... 55

Organization of Operation of Territorial Shop Polyclinic Under Conditions of Transfer to Annual Physical Examination [Dispensarization]
(D.I. Norok; ZDRAVOOKHRANENIYE, No 4, Jul-Aug 85)..... 56

Work Experience in Prevention of Infectious Diseases in Village
(Z.N. Chebotar; ZDRAVOOKHRANENIYE, No 4, Jul-Aug 85)..... 57

Early Observation of Pregnant Women as Insurance for Safe Deliveries
(Ye.F. Negoitsa; ZDRAVOOKHRANENIYE, No 4, Jul-Aug 85)..... 57

Prospects for Utilization of Thermography for Screening of Breast Cancer in System of Universal Dispensarization of Population
(K.A. Tsybyrne, G.B. Khonelidze, et al.; ZDRAVOOKHRANENIYE, No 5, Sep-Oct 85)..... 58

Social and Hygienic Aspects of Drunkenness and Alcoholism
(I.F. Prisakar, M.S. Chekan; ZDRAVOOKHRANENIYE, No 6, Nov-Dec 85)..... 58

Experience of Operation of Preventive Department of Central Rayon Hospital in Preparation and Conduct of Annual Physical Examination of Rural Population [Dispensarization]
(Ye.I. Samson, M.Yu. Kolomoyets, et al.; VRACHEBNOYE DELO, No 5, May 85)..... 59

Feeding of Patients in Certain Dispensary Groups at Industrial Enterprises
(T.A. Karpenko, G.A. Dunayevskiy, et al.; VRACHEBNOYE DELO, No 5, May 85)..... 60

Factors Unfavorably Affecting Public Health
(N.G. Petrova; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 7, Jul 85)..... 60

Some Problems in Outpatient Clinic Activity of Allergists Working in Municipal Polyclinics
(N.I. Vishnyakov; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 7, Jul 85)..... 61

Physiologic-Hygienic Evaluation of Work of Employees of Dzhizak Cotton Gin
(Kh.N. Nasritdinov, O.T. Alyaviya, et al.; MEDITSINSKIY ZHURNAL UZBEKISTANA, No 7, Jul 85)..... 62

Incomplete Pregnancy Terms and Some Organizational Aspects of Prophylaxis
(E.A. Abdullayeva; IZVESTIYA AKADEMII NAUK AZERBAYDZHANSKOY SSR: SERIYA BIOLOGICHESKIKH NAUK, No 6, Nov-Dec 85)..... 62

Dispensarization of Patients with Coronary Ischemia
(D.A. Bekhbudova, Ye.V. Kokurina, et al.; SOVETSKAYA MEDITSINA, No 1, Jan 86)..... 63

Community Councils at Medical Institutions in Rostov Oblast
(V.I. Pakharin; SOVETSKAYA MEDITSINA, No 11, Nov 85)..... 64

Pesticide-Induced Changes in Color Perception
(Z.A. Aliyeva, M.Yu. Sultanov, et al.; IZVESTIYA AKADEMII NAUK AZERBAYDZHANSKOY SSR: SERIYA BIOLOGICHESKIKH NAUK, No 2, Mar-Apr 85)..... 64

Shortcomings Alleviated in Soviet Occupational Health Care
(I. Borich; ARGUMENTY I FAKTY, 4 Mar 86)..... 65

Situation in Pharmacies
(T. Karyakina, V. Mamontov, et al.; SOVETSKAYA ROSSIYA, 25 Mar 86)..... 65

Medical Care in Kirghizia
(I. Makarova; SOVETSKAYA KIRGIZIYA, 8 Apr 86)..... 66

Health Assessment of One-Year-Olds
(N.N. Yezhova, V.N. Savelyev, et al.; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 5, May 85)..... 66

Cost Effectiveness of Early Diagnosis and Treatment of Hereditary Diseases
(S.P. Maksimova, I.V. Polyakov, et al.; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 5, May 85)..... 67

Planning Cooperative Projects Between Leningrad Sanitary Hygiene Medical Institute and Public Health Authorities
(A.F. Podlevskiy, V.P. Romanyuk; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 5, May 85)..... 68

Analysis of Self-Scheduled Appointments at Municipal Polyclinic
(V.N. Chernov, N.A. Fetisova, et al.; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 5, May 85)..... 68

Current Public Health Problems in RSFSR
(N.T. Trubilin; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 6, Jun 85)..... 69

Outpatient Care of Chronic Alcoholics
(G.L. Gomelskaya, N.V. Lazko; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 6, Jun 85)..... 70

Importance of Consultation and Diagnosis Polyclinics in Mass Health Screening of Population
(R.S. Khachatryan; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 6, Jun 85)..... 70

Attempted Organization of Mass Endoscopic Study of Dispensarization Patients
(Yu.P. Spizhenko, A.N. Soroka, et al.; SOVETSKOYE ZDRAVOOKHRANENIYE, No 2, Feb 86)..... 71

Economic Loss Due to Urogenital Diseases
(G.I. Zaborovskiy; SOVETSKOYE ZDRAVOOKHRANENIYE, No 2, Feb 86)..... 72

Organization of Medical Care for Merchandizing Workers
(V.V. Yermakov, G.L. Gomel'skaya, et al.; SOVETSKOYE ZDRAVOOKHRANENIYE, No 2, Feb 85)..... 72

Anthropometric Data on Rural Neonates
(I.K. Kuzmenkova; ZDRAVOOKHRANENIYE BELORUSSII, No 9, Sep 85)..... 73

PSYCHIATRY

Art Therapy as a Component of Psychotherapy
(R.B. Khaykin; MEDITSINSKAYA SESTRA, No 9, Sep 85)..... 74

Scientific Conference Dedicated to Opening of Kiev Branch of All-Union Scientific Institute of General and Forensic Psychiatry Imeni V.P. Serbskiy
(A.D. Revenok, V.B. Pervomayskiy; ZHURNAL NEVROPATOLOGII I PSIKHIATRII, No 11, Nov 85)..... 74

RADIATION BIOLOGY

Chernobyl Evacuees Get Medical, Financial Aid: Hiroshima, Nagasaki Victim Parallels Drawn
(V. Kalita; MEDITSINSKAYA GAZETA, 21 May 86)..... 76

Optimization of Radiation Treatment Conditions and Estimation of Radiobiological Parameters by Analysis of Survival Rate Curve in Cell-Level Experiments
(N.R. Ragimov, S.M. Iskenderov; AZERBAYDZHANSKIY MEDITSINSKIY ZHURNAL, No 3, Mar 85)..... 82

CONFERENCES

All-Russian Conference on Organization and Improvement of Conduct of Annual Physical Examinations of Entire Population (Dispensarization)
(G.P. Skvirskaya; ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 3, Mar 86)..... 83

MISCELLANEOUS

Fire Hazards in Moscow
(VECHERNYAYA MOSKVA, 10 Apr 86)..... 84

AGROTECHNOLOGY

## CONFERENCE ON ECONOMIC AND ECOLOGIC PROBLEMS IN INTENSIFICATION OF AGRICULTURE

Kishinev IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR: SERIYA BIOLOGICHESKIKH I KHIMICHESKIKH NAUK in Russian No 4, Jul-Aug 85 pp 72-74

[Article by M.F. Lupashku, academician, All-Union Academy of Agricultural Sciences and Moldavian SSR Academy of Sciences, I.I. Libershteyn, doctor of agricultural sciences, and V.G. Kholmetskaya, candidate of agricultural sciences]

[Abstract] The 6th Joint Plenary Session of the Soviet and Union-Republics Committees for the "Man and Biosphere" UNESCO Program and the "Conference on Ecologic and Economic Problems of Agricultural Intensification" was held on November 28-30, 1984 in Kishinev. A total 460 participants in the joint session covered every aspect of ecologic and economic problems as they pertain to agricultural development. The variety of topics included discussions of threshold limit values for pesticides, anthropogenic effects on the environment, biological pest control, and improvements in calculations of various cost effectiveness factors. The session concluded with a call to ascribe greater importance to ecological studies in the agricultural sector and to promote more efficient utilization of natural resources.

12172/12379
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## BREEDING DISEASE- AND PEST-RESISTANT HIGH-HARVEST CROPS

Kishinev IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR: SERIYA BIOLOGICHESKIKH I KHIMICHESKIKH NAUK in Russian No 4, Jul-Aug 85 (manuscript received 10 Oct 84) pp 3-10

[Article by N.N. Balashova]

[Abstract] A discussion is presented of some of the strategies employed in attempts at breeding high-harvest crops combining pest and disease resistance. The general feeling is that such endeavors should be directed at securing plants with highly adaptive metabolic systems, in conjunction with quality and yield considerations. The prevalent opinion holds that breeding for a

combination of both resistance factors will per se yield plants with the highest adaptability potential, whereas breeding for only one factor (resistance, grain quality, productivity) yields less viable varieties. A number of biological indicators have been identified which correlated with positive traits, such as the levels of steroid glycosides in seeds. Another set of factors related to the prevention of plant aging as a result of infection are represented by the levels of antioxidants, which can also be monitored for assessing plant responsiveness to infectious and abiotic stress. At critical development stages plant adaptability and general level of resistance to all types of stress can be controlled by exogenous agents. References 23 (Russian).

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EFFECT OF SOIL AND WATER SALINITY ON TRANSFER OF $^{90}Sr$ AND $^{137}Cs$ TO RICE HARVEST

Tashkent UZBEKSKIY BIOLOGICHESKIY ZHURNAL in Russian No 4, Sep-Oct 85 (manuscript received 25 Jun 83) pp 20-22

[Article by V.S. Shevchenko and I.D. Dergunov, Central Asian Scientific Research Institute for Plant Pathology]

[Abstract] Radioactive waste and general precipitation can contribute to soil and water pollution by radioactive isotopes such as strontium 90 and cesium 137. Irrigation is another source of such minerals, but little study has been made of the effect of mineralization of saline soils (which can be used for rice cultivation). The present article reports on study of such factors on test plots at the Central test and Reclamation Station, Syrdar'nskaya oblast', UzSSR. The isotopes were introduced into the soil by either vegetational vessels or by irrigation. Results showed that radioactive strontium entered plants from saline soils in lesser amounts than from sweet soils, and irrigation with mineral-laden water brought a minor reduction in strontium 90 content in the stalks and grain of rice plants. When $^{137}Cs$ was administered in irrigation water, accumulation in straw increased by 8-11 times over that accumulated in the straw, and 4.9-5.5 times over that in grain, compared to the accumulation from the soil. Raising rice on saline soils and spraying of irrigation water both helped to reduce the amount of radioactive isotopes in rice grain. Reference 1: Russian.

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UDC 663.511:631.52:577

CHANGES IN BIOCHEMICAL INDICES IN COTTON POLLEN UNDER EFFECTS OF ELECTROMAGNETIC FIELD

Tashkent UZBEKSKIY BIOLOGICHESKIY ZHURNAL in Russian No 4, Sep-Oct 85 (manuscript received 24 May 84) pp 47-49

[Article by M.M. Akhmedova, Khossayn Tofazzal and I.A. Alasaad, Tashkent Order of the Friendship of Peoples Agricultural Institute]

[Abstract] Little study has been made of the constant environmental factor of the electromagnetic field (EMF) and its effect on living organisms. The present article reports on study of EMF on nucleic and ascorbic acid, protein and peroxidase activity in cotton plants of Tashkent-1 and C-6030 strains. Seeds were subjected to fields of 1000, 1500, 2500 and 5000 oersted units for 20 minutes. After the cultivation of the test seeds, their pollen was analyzed for DNA and RNA features, protein, ascorbic acid and peroxidase activity. Results showed that all variants had more RNA than DNA, and that Tashkent-1 test plants had more DNA than the untreated control plants. Variations in Tashkent-1 test plants and the control were significant, with both DNA and RNA content increasing in proportion to the strength of the EMF administered up to 2500 units; they fell with 5000 oersted units. Ascorbic acid and peroxidase activity were also affected: the latter increased at 1000 and 1500 units, then declined, while ascorbic acid quantities fell sharply at up to 1500 units, then began to increase again. In the S-6030 strain, peroxidase activity increased in proportion to the field. References 9: 6 Russian, 3 Western.

12131/12379
CSO: 1840/2089

UDC 633.511:581.85

EFFECT OF MINERAL NUTRITION ON LIPOPROTEIN METABOLISM IN COTTON SEEDS

Tashkent UZBEKSKIY BIOLOGICHESKIY ZHURNAL in Russian No 4, Sep-Oct 85 (manuscript received 5 Jul 84) pp 53-54

[Article by O.D. Dzhurayev, Institute of Experimental Plant Biology, UzSSR Academy of Sciences]

[Abstract] Study of mineral fertilizer dosage has indicated that where nitrogen predominates over phosphorus, fat content is reduced, while protein accumulation increases. Where potassium is reduced, fat formation also is suppressed. The authors also studied the nature of protein in cotton seeds relative to fertilizer composition, and found that the water-soluble protein content and fat content correlated. The intensity of protein accumulation was

determined by the amount of free nitrogen in the soil. The general principle is that the higher the harvest of cotton seed per unit of free nitrogen in the soil, the lower the percentage of protein and higher the fat content of the seeds.

12131/12379
CSO: 1840/2089

UDC 633.11"324".001.57

AGROCHEMICAL PRINCIPLES FOR PROGRAMMING CROP CAPACITY OF WINTER WHEAT

Moscow DOKLADY VASKhNIL in Russian No 1, Jan 86 (manuscript received 19 Dec 84) pp 8-10

[Article by V.K. Tevzadze, O.G. Oniani and M.K. Kayumov, Scientific Research Institute of Agrochemistry and Reclamation imeni M.I. Samashvili]

[Abstract] One of the principles used for programming crop capacity of field cultures is based on determination of water supply to the sowing area during the vegetative period. Crop capacity was determined for winter wheat of the Bezostaya I brand for field conditions of Iorsk Plateau of the GSSR using rain fall historical data. On the basis of these data, a conclusion was reached that the greater the accumulation and more economical utilization of rain water, the greater was the yield. Evidently, the use of NPK fertilizers did not add significantly to the yield over and above proper supply of rain water. The use of fertilizers should be related to the quality of soil and grain. References 9 (Russian).

7813/12379
CSO: 1840/1135

UDC 581.6:582.61/.9:581.19:547.9(571.63)

DISTRIBUTION OF ANTIOXIDANTS AMONG FLOWERING HERBACEOUS PLANTS IN PRIMORYE KRAY

Leningrad RASTITELNYYE RESURSY in Russian Vol 21, No 4, Oct-Dec 85 (manuscript received 24 Oct 84) pp 426-431

[Article by O.B. Maksimov, P.G. Gorovoy, O.Ye. Krivoshchekova, M.V. Kazantseva and G.N. Chumak, Pacific Ocean Institute of Bioorganic Chemistry, Far Eastern Science Center, USSR Academy of Sciences, Vladivostok]

[Abstract] A simple screening method for antioxidants was reported, based on ethanol extraction followed by TLC which identified relative content and

tentative chemical structure of these compounds. Over 340 plant types were analyzed from Primorye kray and most of them exhibited the following antioxidants: phenolic aglycons and glycosides. The antioxidants were abundant in the Rosaceae, Pyrolaceae and Asteraceae families and seldom showed up in the families of Liliaceae, Caryophyllaceae, Apiceae and Campunulaceae. References 9: 6 Russian, 3 Western.

7813/12379
CSO: 1840/2040

UDC 633.11:631.52:31

SPRING WHEAT CROP OBTAINED UNDER VARIOUS ECOLOGIC CONDITIONS AS A FUNCTION OF MORPHOLOGIC INDICES

Alma-Ata IZVESTIYA AKADEMII NAUK KAZAKHSKOY SSR: SERIYA BIOLOGICHESKAYA in Russian No 1, Jan-Feb 86 pp 6-13

[Article by G.Z. Biyashev, T.V. Dobrotvorskaya, S.P. Martynov and A.I. Sedlovskiy, Institute of Botanics, KaSSR Academy of Sciences]

[Abstract] Agricultural crops depend on a complex relationship between genotypes and ecological conditions. A number of morphological characteristics determining plant habitus was evaluated as contributory to the productivity of spring wheat by studying the same lines in two geographical areas. Many crossed lines were studied, 140 in all at Saratov and Alma-Ata experimental fields. In Alma-Ata, where irrigational conditions were kept, no relationship could be seen between the crop yield and any of the indices studied. In Saratov, high productivity was observed for tall, early ripening bearded lines with galucous leaves and wheepy spikes. Evidently irrigation removes conditions limiting the crop yield due to the plant habitus. None of the lines studied showed maximum yield potential during the study period, however. References 8: 5 Russian, 3 Western.

7813/12379
CSO: 1840/2046

UDC 581.192.7+581.5.036

EFFECT OF CYTOKININS ON COLD RESISTANCE AND HEAT RESISTANCE OF ACTIVELY VEGETATING PLANTS

Kiev FIZIOLOGIYA I BIOKHIMIYA KULTURNYKH RASTENIY in Russian Vol 18, No 1, Jan-Feb 86 (manuscript received 25 Dec 84) pp 64-69

[Article by A.F. Titov, S.N. Drozdov, S.P. Kritenko, V.V. Yalanova and Ye.G. Sherudilo, Institute of Biology, Karelian Branch, USSR Academy of Sciences, Petrozavodsk]

[Abstract] Cold and heat hardening in the presence and in the absence of cytokinins in 7-day-old isolated cucumber cotyledons were studied in 12-day old tomato shoots and barley shoots, grown in a 0.5 Knop nutrient solution (pH 6.2-6.4) at air temperature of 25°, relative air humidity 60-70 percent and lighting at 1 $10^4$ lux in a 14-hour light cycle. The cytokinins kinetin and 6-benzylaminopurine [BAP] improved efficiency of both cold hardening off and heat hardening off of the plants but this effect varied significantly according to the hormone concentration. Treatment of non-hardened plants by kinetin and BAP at physiologically optimum temperatures also increased the plants' resistance to heat and cold significantly. BAP stimulated incorporation of H-alanine into proteins with simultaneous increase of the isolated cotyledons resistance at both optimum and hardening off temperatures. Increase of the plants' resistance was attributed to activation of protein biosynthesis in the cell. Figures 2; references 23: 15 Russian, 8 Western.

2791/12379
CSO: 1840/2073

UDC 636.034

PRODUCTIVITY AND BIOLOGICAL CHARACTERISTICS OF BLACK-PATCHED AND HYBRID DAIRY CATTLE

Moscow MOLOCHNOYE I MYASNOYE SKOTOVODSTVO in Russian No 1, Jan-Feb 86 pp 45-47

[Article by Ya. Lebengarts, candidate of biological sciences, All-Union Scientific Research Institute of Breeding]

[Abstract] A number of biochemical parameters were evaluated for black-patched heifers and hybrid heifers obtained by mating black-patched cows with Holstein-Friesian bulls, in order to assess and relate metabolic characteristics to milk quality and quantity. Monitoring of the physiological parameters, such as weight gain, and biochemical indicators, such as changes in serum amino acid levels with age and fatty acid composition of milk, demonstrated a positive correlation between the genotype, metabolic indicators, and breed productivity.

The greater productivity and commercial value of the hybrids was seen to be predicated on a more efficient pattern of metabolism during growth and during lactation. Tables 2.

12172/12379
CSO: 1840/350

BIOCHEMISTRY

# YEAST BIOMASS ACCUMULATION ON LUCERNE BROWN JUICE PREPARED BY DIFFERENT METHODS OF PROTEIN COAGULATION

Kishinev IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR: SERIYA BIOLOGICHESKIKH I KHIMICHESKIKH NAUK in Russian No 4, Jul-Aug 85 (manuscript received 27 May 83) pp 36-38

[Article by V.M. Boguslavskiy, D.I. Atamanyuk, T.A. Borisova, T.Ye. Tsygulya and Ye.S. Krepis]

[Abstract] Studies were conducted on the biomass accumulation of several yeast species cultured on brown lucerne juice prepared from green juice by either acidification to pH 4.8 with formic acid (I), adjustment to pH 7.5 with 25% ammonium sulfate and heat coagulation (90-95°C) (II), or by "spontaneous fermentation" with acidification to pH 4.9 (III). On medium I and III, peak biomass was obtained in 24 h in the case of Saccharomyces cerevisiae, Hansenula anomale, Candida utilis and unidentified culture 176 isolated from lucerne. On these 2 media, Rhodotorula gracilis yield peak biomass values at 48 h, followed by a gradual decline to 72 h. The other yeasts, after a decline in biomass at 48 h, showed a renewed gain in biomass to 72 h at variable rates (with the exception of H. anomale on medium I). On medium II peak biomass accumulation in 24 h was shown by S. cerevisiae, 176, and C. utilis, followed by a further gain after a plateau or a temporary decline. H. anomale yielded maximum biomass at 48 h on medium II, while R. gracilis showed an exponential increase in biomass to 72 h. Figures 1; tables 2; references 3: 2 Russian, 1 Western.

12172/12379
CSO: 1840/2155

## LYSINE SUPPLEMENT NEGLECTED IN ARMENIAN ANIMAL HUSBANDRY

Yerevan KOMMUNIST in Russian 11 Apr 86 p 2

[Article by V. Musayelyan]

[Abstract] Although the Charentsavan Experimental Industrial Plant is one of the most efficient and productive sources of lysine, the use of lysine in Armenian agriculture is almost totally neglected. And yet, this essential amino acid is one of the most important contributions that science has made to the feeding of livestock. It has been anticipated that in the 12th Five Year Plant lysine production at the Charentsavan plant will increase two-fold. Yet most of it, if the present pattern is followed, will go to the RSFSR and Belorussia because of lack of demand for this product in Armenia. What is necessary, and what has been neglected, is an intensive educational campaign for agricultural administrators as to the value of lysine in feed in improving the productivity of livestock. Until this is accomplished, livestock farms in Armenia will continue to suffer.

12172/12379
CSO: 1840/1188

UDC: 613.471/.471

# SOME PROBLEMS OF HYGIENIC STANDARDIZATION OF LEVELS OF HARMFUL SUBSTANCES IN BODIES OF WATER IN UZBEKISTAN

Tashkent MEDITSINSKIY ZHURNAL UZBEKISTANA in Russian No 7, Jul 85 (manuscript received 10 May 84) pp 7-9

[Article by Sh.T. Atabayev, professor, Department of Hygiene, Tashkent Order of Labor Red Banner Institute for the Advanced Training of Physicians]

[Abstract] One of the most important tasks for hygiene science is standardization of the content of pesticides and other harmful substances in bodies of water in agricultural areas. Hyperthermia and other harmful effects of the climate of Uzbekistan can intensify the effects of harmful substances on the human body. The hot weather also changes the time of persistence of chemical substances in natural bodies of water. Experiments to determine the effects of substances on the body must consider the earliest changes in the functional status of the body. The most sensitive tests are those which determine the conditioned reflex activity of animals, changes in the excretory function of the liver, using the bromosulfalein test, determination of coproporphyrin in the urine and spectrometric determination of blood sulfhydryl groups. Additional tests must be used to determine changes in toxic effects with simultaneous exposure to high temperatures and ultraviolet radiation.

6508/12379
CSO: 1840/2108

EPIDEMIOLOGY

DANGER OF BRUCELLOSIS

Frunze SOVETSKAYA KIRGIZIYA in Russian 26 Mar 86 p 4

[Article by K. Omuraliyev, chief physician, Kirghiz SSR Sanitary Epidemiologic Station]

[Abstract] The danger of brucellosis for agricultural workers at cattle farms and those working with other animals persists in Kirghizia because of negligence in following rudimentary hygienic instructions on the part of many farm managers. A number of farms are listed where the conditions are extremely unsanitary and the risk of infection runs high, with recommendations made for disciplinary action to be taken against the responsible administrative personnel. Inadequate cattle and human vaccination schedules, failure to practice test and slaughter programs, absence of rubber boots, gloves and other essential paraphrenalia, as well as inefficient waste disposal and other shortcomings contribute to this dangerous situation. Rigorous measures are required on the part of party, government, and health activists to rectify this threat to public health.

12172/12379
CSO: 1840/1193

UDC: 576.851.31:613.2-099(575.4)

STUDY OF HALOPHILIC VIBRIONS AS POSSIBLE PATHOGENS OF TOXIC INFECTIONS IN TURKMENIAN SSR

Ashkhabad ZDRAVOOKHRANENIYE TURKMENISTANA in Russian No 2, Feb 85 pp 23-27

[Article by E.V. Friauf, L.F. Zykin, F.F. Ilkevich, V.I. Svyatoy, V.M. Razvykh, Yu.L. Florentsev and V.N. Yezhikov, Turkmen Anti-Plague Station (Headed by R.T. Gerasimenko), USSR Ministry of Health]

[Abstract] For the first time in the Turkmen SSR, in 92 analyses of stool samples from workers of the Krasnovodsk Fish Packing Plant, 8 parahemolytic and 7 alginalolytic vibrions were isolated from 15 workers. A study of 105 stool samples from patients with acute gastrointestinal disease in the Krasnovodsk

Infectious Hospital revealed three cases in which parahemolytic vibrions were found. Case histories are presented. It was found that the parahemolytic vibrions isolated from the patients were kanagawa-positive strains. All of the kanagawa-positive strains of parahemolytic vibrions isolated caused death in laboratory animal studies. References 10: 8 Russian, 2 Western.

6508/12379
CSO: 1840/2072

UDC 681.3.06:665.1.013

## OPERATIONAL PRODUCTION REGISTRY BASED ON MINI-COMPUTERS IN FOOD INDUSTRY

Moscow MASLO-ZHIROVAYA PROMYSHLENNOST in Russian No 2, Feb 86 pp 22-25

[Article by N.F. Vasilev, candidate of technical sciences [CTS], State Agricultural Industry RSFSR, Y.M. Kvalyardi, V.V. Vorobyeva and M.Sh. Ablavskiy (CTS), Institute "Pishchepromavtomatika", and A.B. Demidov, Leningrad Oil-Fat Combine]

[Abstract] Implementation of an operational production registry makes it possible to monitor the state of sales of the available inventory, it shortens the period for preparation of accounts and accelerates cash flow. Data retained in computer memory yield the information necessary for current periods making it possible to quickly analyze attainment or shortfalls in reaching of projected goals by month or by quarter. It is an important link in the chain of production transportation and realization process. A data base management for production of margarine was reported as an example of the above conclusions. Figure 1.

7813/12379
CSO: 1840/2085

UDC 637.132.5:664.067.38

## NUCLEAR FILTERS IN ULTRAFILTRATION CONCENTRATION OF RAW MILK PRODUCTS

Krasnodar IZVESTIYA VYSSHYKH UCHEBNYKH ZAVEDENIY: PISHCHEVAYA TEKNOLOGIYA in Russian No 1, Jan-Feb 86 (manuscript received 6 Jun 85) pp 78-81

[Article by A.P. Chagarovskiy, M.A. Grishin, V.I. Kruglik, O.L. Orelovich and B.V. Mchedlishvili, Odessa Technologic Institute of Food Industry imeni M.V. Lomonosov; Institute of Crystallography imeni A.V. Shubnikov, USSR Academy of Sciences]

[Abstract] A study of skim milk concentrations with the use of nuclear filters with pore density of 0.02-0.03, 0.038-0.040, 0.065, 0.12 and 0.14 $\mu$m showed

that those filters with pore diameter 0.065-0.12 $\mu$m are superior to asymmetric ultrafiltration membranes made from acetate-cellulose and polysulfonamide in productivity (permeability) and selectivity. The nuclear filters are more convenient to use and have better strength and storage properties than acetate-cellulose and polysulfonamide filters. Figures 3; references 2 (Russian).

2791/12379
CSO: 1840/2074

IMMUNOLOGY

## MASS PRODUCING NEW IMMUNOLOGICAL PREPARATIONS

Moscow NEDELYA in Russian No 15, 7-13 Apr 86 p 20

[Article by N. Lazareva]

[Abstract] In an interview, Rem Viktorovich Petrov, member of the USSR Academy of Medical Sciences and the USSR Academy of Medical Sciences and Director of the USSR Health Ministry's Institute of Immunology, commented on the body's immune system and on chemical immunology's role in the treatment of immunity disorders. He assessed progress in developing and mass-producing new medicinal preparations based on substances secreted by the body.

These substances include mediators such as prostaglandins and neuropeptides. Therapeutic use of neuromediators is anticipated in the near future, according to Petrov. He related that a group of peptides produced by cells of the bone marrow was recently isolated in a laboratory of the Institute of Immunology and given the names of myelopeptides. Anesthetic substances and stimulators of cell division have been discovered among these peptides, as well as a stimulator of antibody producers which is said to be of particular interest. A preparation called B-aktivin was developed at the institute on the basis of this stimulator and has been turned over for clinical testing. Another preparation, T-aktivin, is based on a substance isolated from the thymus gland. It reportedly has proved effective against chronic infectious diseases, skin diseases and other disorders.

Petrov pointed out that the number of preparations based on indigenous substances of the body is still small, and none are in production as yet. An interferon obtained by genetic engineering is perhaps the closest to the production stage. It was developed by scientists under the direction of Academician Yu. Ovchinnikov. Petrov explained that neuromediators and other substances needed for the production of such preparations occur in very small concentrations in tissues, and isolating even minute amounts of them requires huge expenditures when conventional technology is used. Broad introduction of chemical, genetic-engineering synthesis and other advanced production methods is urged for the purpose of solving this problem.

A photograph is given showing Candidate of Biological Sciences A. Pereverzev and Ye. Igonin, an engineer, studying the action of an artificial vaccine on a lymphocyte cell.

FTD/SNAP
/12379
CSO: 1840/1205

SOVIET VACCINE DEVELOPMENT AFFECTED BY SLOPPY CONTROL MEASURES

Moscow SOVETSKAYA ROSSIYA in Russian 10 Apr 86 p 2

[Article by M. Kushtapin]

[Abstract] In 1982 the Central Scientific Research Institute of Vaccines and Sera imeni I.I. Mechnikov proudly announced that two scientists at the institute, T. Belova and D. Yefimov, had perfected a combined meningococcal A, B and C vaccine. Patents were applied for, the work was confirmed for a doctoral dissertation by T. Belova, the experimental batches of the vaccine passed all the tests, scientists from the USA, France, England, West Germany and other countries showed their interest and wrote to the institute, and Belgium granted the first patent on the vaccine. Subsequently, difficulties arose with large-scale commercial batches of the vaccine, T. Belova and D. Yefimov were discredited, accused of data falsification by B.F. Semenov, the director of the institute, and summarily dismissed by him without recourse because of his influence with high officials at the USSR Ministry of Health, and credentials as corresponding member of the USSR Academy of Medical Sciences. Objective and uninvolved scientists pointed out that neither Belova nor Yefimov had anything to do with the commercially-produced vaccines and that, in fact, the meningococcal laboratory had been disbanded as soon as the test vaccine was produced, and the vaccine itself turned over to unqualified researchers. On the whole, it appears that a grab for undeserved glory by Semenov backfired on him, and he simply chose Belova and Yefimov as his scapegoats. In the meantime, Belova and Yefimov have been notified by the British firm Wellcome that it had produced a new meningococcal B vaccine. Eventually, the institute will inevitably go back to producing meningococcal vaccines, but they won't be Soviet and Soviet medicine has sustained a tremendous blow to its prestige.

12172/12379
CSO: 1840/1178

## NEW INSTITUTE OF LASER SURGERY

Moscow VECHERNYAYA MOSKVA in Russian No 100, 29 Apr 86 p 1

[Text] A new scientific research center--the Institute of Laser Surgery--opened today in Moscow.

The fact that it has been established does not mean, naturally, that work in this field is only just beginning. Quite the contrary, this work has been conducted in our country for many years, chiefly at the City Clinical Hospital No. 51.

"The use of lasers in medical practice is becoming more and more widespread," related Doctor of Medical Sciences, Prof. O.K. Skobelkin, director of the institute and a USSR State Prize laureate. "Lasers are being used successfully in treatment of burns and disorders of the bile ducts, and in dermatoplasty operations. Broad prospects are opening up for lasers in microsurgery, cardiology, oncology, urology, gynecology and other branches of medicine.

"Such laser instruments as the 'Skalpel-1', 'Skalpel-2' and 'Romashka' are already in series production. Original units called 'Raduga' and 'Razbor', which are intended for surgical intervention, are being readied for introduction.

"Our institute will coordinate research that is being conducted in the field of laser surgery in the country. It will develop new laser units, instruments and methods of surgery. We consider the training of surgeons for health-care institutions to be an important task."

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/12379
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## $CO_2$ LASER THERAPY OF URINARY BLADDER TUMORS

Moscow SOVETSKAYA MEDITSINA in Russian No 11, Nov 85 (manuscript received 23 Oct 84) pp 105-109

[Article by A.D. Nikolskiy, B.V. Dmitriyev, A.M. Tebenkov, M.M. Latysheva and A.A. Vorobyev, Urological Clinic, Kalinin Medical Institute]

[Abstract] This is the first report of $CO_2$ laser surgery in the treatment of a variety of malignant and benign bladder tumors in a group of 62 male and female patients, ranging in age from 30 to over 70 years. The cursory clinical details provided show that a focused beam giving a 1.5 mm coverage with output power of 15 W was used for the resections. Following the resection, a defocused beam was used for 100-150 $W/cm^2$ illumination of the surgical area to minimize the chances of recurrence. While a comparison with other procedures involving conventional resection and/or electrocoagulation would be too premature because of the small sample size and the heterogeneity of the lesions, the preliminary findings are to some extent encouraging. The postoperative period in the laser-treated patients was more favorable with a minimum or even absence of pain. Dysuria was absent, with normal coloration and removal of the catheter within 10-12 days. The vesical fistula healed within 14-16 days, and the average postsurgical hospitalization was 22 days. In 12 of the patients there was no recurrence of the disease within a 4.5 year follow-up period and 3 deaths due to recurrence of malignancy. Figures 2; references 11 (Russian).

12172/12379
CSO: 1840/2154

UDC 616.14-08+615.849.19

## LASER THERAPY IN DISEASES OF VEINS OF LOWER EXTREMITIES

Kiev KLINICHESKAYA KHIRURGIYA in Russian No 7, Jul 85 (manuscript received 18 Mar 85) pp 48-50

[Article by G.I. Dudenko and V.I. Zalyubovskiy, Department of General Surgery (head-professor G.I. Dudenko) of the Therapy Faculty, Kharkov Medical Institute]

[Abstract] Use of laser therapy in treatment of thrombophlebitis patients (39 men and 61 women ranging in age from 18-83 years) was described and discussed. Acute thrombophlebitis of superficial veins of the lower extremities (60 cases) was treated by a 0.7 cm laser beam for 10-20 minutes, providing a radiation power density of 20 $mW/cm^2$. Deep thrombophlebitis was

treated by use of 2 lasers which increased the power density up to 50 $mW/cm^2$ while decreasing general energy-loss in the radiation zone. Energy absorption by tissues, in a 10-20 minute exposure, was 30-60 J. A control group included 150 patients (59 men and 91 women ranging in age from 20-86 years) with thrombophlebitis of superficial or deep veins of the lower extremities who were treated by complex medical therapy without the use of a laser. Laser therapy produced quicker therapeutic effect (significant decrease of pain, reduction of infiltration and hyperemia along the course of the affected vessels and decrease of tissue edema) and shortened the length of hospitalization in comparison to the effects of medical therapy without the use of lasers. The laser therapy produced good or excellent results in 60 percent of the patients treated.

2791/12379
CSO: 1840/2071

UDC 616.352-007.253-08 + 615.472.3

TREATMENT OF ANAEROBIC PARAPROCTITIS WITH LASER SCALPEL

Kiev KHIMICHESKAYA KHIRURGIYA in Russian No 2, Feb 86 (manuscript received 2 Jul 85) pp 66

[Article by Kh.B. Babayev and B.N. Tachmuradov, Chair of Surgery No 3 (Chairman - professor O.G. Babayev), Turkmenian Order of Peoples Friendship State Medical Institute]

[Abstract] A report of two cases was given of gangrenic-purulent paraproctitis in which laser scalpel surgery was applied. Case #1: a 56 year old woman complaining of rectal pain. Case #2: a 51 year old male complaining of pain in the area of perineum; swelling appeared near the rectum. Surgical intervention with laser beam released large volume of pus. Recovery was not easy, treatment included tetanus and antigangrene shots, hyperoxygenation, antibiotics and blood transfusion, antihistamines, cardiac drugs and pain killers. After 42 days the patient was released. There were no complaints during 2.5 years of follow-up.

7813/12379
CSO: 1840/2150

MEDICINE

## ULTRASONIC PROBE FOR BRAIN EXAMINATIONS AND SURGERY

Moscow TRUD in Russian No 96, 23 Apr 86 p 4

[Abstract] The article reports on a multipurpose ultrasonic probe which scientists of the Institute of the Brain of the USSR Academy of Medical Sciences (AMN SSSR) have developed in collaboration with the USSR Academy of Sciences' Acoustics Institute. This probe is described as a pellet-shaped ceramic radiating element about the size of a three-kopek coin. With it, operations or examinations can be performed on deep-seated brain tissues directly through the cranium, without exposing the brain, it is claimed.

Natalya Ivanova Vykhodtseva, science associate of the brain institute's laboratory of conditioned-reflex morphophysiology, demonstrated the use of the ultrasonic probe in an experiment on a rabbit. Ultrasonic vibrations were directed at a small group of brain cells located at a prescribed target area. This point may be only fractions of a millimeter in size. In the experiment, the function of nerve centers responsible for vision was inhibited from the effect of the radiation, but the animal's vision would return completely as soon as the probe was switched off, Vykhodtseva explained. The instrument is said to be capable of temporarily deactivating other sections of the brain, for purposes of anesthesia or for treating disorders such as epilepsy. The radiating element is also capable of destroying nerve cells when its power is increased. Vykhodtseva showed the author of the article an x-ray photograph of a section of a brain in which a group of cells had been destroyed by ultrasonic irradiation, without harm to surrounding tissues or to blood vessels in the focus of the radiation.

Results of the laboratory's developments can already be employed in clinical medicine, according to O. Adrianov, corresponding member of AMN SSSR and director of the brain institute. He expressed confidence that the ultrasonic probe will prove effective in brain surgery.

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/12379
CSO: 1840/1204

UDC 616.98:579.852]-074:543.544

GAS-LIQUID CHROMATOGRAPHY IN NON-CLOSTRIDIAL ANAEROBIC INFECTION

Moscow SOVETSKAYA MEDITSINA in Russian No 1, Jan 86 (manuscript received 12 May 85) pp 40-44

[Article by L.L. Shimkevich, A.A. Vishnevskiy, B.M. Kostyuchenok, V.G. Istratov, S.Ye. Kuleshov, I.Kh. Efendiyev and M.Yu. Vilyavin, Clinical Diagnosis Laboratory, Department of Lung Surgery, and Department of Wounds and Wound Infections, Institute of Surgery imeni A.V. Vishnevskiy, USSR Academy of Medical Sciences, Moscow]

[Abstract] The article reports on new practical applications of gas-liquid chromatography and mass spectrometry to determine the presence and nature of non-clostridial anaerobic infections in phlegm and abscess materials, pathologically changed tissue and surgically removed material. Volatile aliphatic acids, aromatic and other volatile metabolic compounds were identified and analyzed. Results showed the presence of anaerobic metabolites in phlegm and soft tissue wounds in 58.1% of patients, in lung abscesses in 68.1%, in non-clostridial peritonitis and abdominal wall phlegm in 82.3% and in pancreas abscesses in 14.2% of patients. Gram-positive cocci and bacteria of the Bacterioides genus were typical for soft tissue infections, while Gram-negative Rusobacterium and Bacteroides were found commonly in lung abscesses. In peritonitis and abdominal wall infections, isovaleric acid (56.8% of cases), propionic acid (50%) and to lesser degrees butyric, isobutyric, valeric and isocaproic acid were found (42.6% of cases for each). Rapid identification of these and other poisonous substances was facilitated by use of gas-liquid chromatography and mass spectrometry, so that indicated treatment can be followed to eliminate these anaerobic pathogens. Figures 3; references 13: 5 Russian, 8 Western.

12131/12379
CSO: 1840/2083

UDC 616.1/.4-083.08-082.4

EMERGENCY CARE IN LARGE GENERAL HOSPITAL

Moscow SOVETSKAYA MEDITSINA in Russian No 8, Aug 85 (manuscript received 22 May 84) pp 75-77

[Article by M.N. Petrov, candidate of medical sciences, Municipal Hospital No 31 (chief physician E.P. Sorokin) Leningrad]

[Abstract] A summary of operation of the intensive care and reanimation department of a large general clinical hospital (1850 beds) over a 10-year

period presented data concerning number of patients (4266), sex ratio, age range of patients, disease entities involved, times (of day, week, season) of admission, length of hospitalization and readmissions. The main causes for admission to intensive care were need for emergency treatment upon admission, onset of emergency states among hospitalized patients and treatment of planned patients at high risk of development of grave complications. The data showed that the nature of the pathological process is the basic factor in determination of the rise of emergency states and in the length of stay in intensive care. Stability of these indicators over the 10 years of study made it possible to plan the number of beds needed for emergency care in the general hospital.

2791/12379
CSO: 1840/2091

UDC 615.472.03:615.21/28-085.849.19

FIBER OPTIC INSTRUMENTS FOR LOW-INTENSITY LASER FOCUS IN OTORHINOLARYNGOLOGY

Moscow MEDITSINSKAYA TEKHNIKA in Russian No 6, Nov-Dec 85 (manuscript received 11 Mar 85) pp 42-43

[Article by Yu.D. Berezin, V.Sh. Berikashvili, B.S. Ivanov, M.S. Pluzhnikov and I.Ye. Samsonova, 1st Leningrad Medical Institute imeni I.P. Pavlov]

[Abstract] Cursory details are presented on the use of fiber-optic communication for laser focus in otorhinolaryngology, using adaptations of various cannulas, catheters and bougies. Light conduction was attained with a quartz polymer monofiber giving a 400 μm diameter pathway 2 to 3 meters in length, with a numerical aperture of 0.34 and a quenching coefficient of 14.5 dB/km. Enclosed in polyethylene coating, the fiber-optic light conductor was introduced into a variety of instruments, including a eustachian catheter, maxillary sinus lavage cannula, a laryngeal bougie and a subclavian artery catheter for delivery of low-intensity helium-neon light to otherwise inaccessible locations.

12172/12379
CSO: 1840/2140

UDC 616.714+001.5-089

TREATMENT OF DEPRESSED SKULL FRACTURES

Moscow VOPROSY NEYROKHIRURGII in Russian No 6, Nov-Dec 85 pp 31-33

[Article by G.F. Rybakov and A.A. Dyusembayev, Chairs of Neural Diseases and of Traumatology, Orthopedics and Military Field Surgery, Semipalatinsk Medical Institute]

[Abstract] In order to accelerate the pace of rehabilitation of patients with depressed skull fractures, an analyses was conducted on 267 such cases subjected to the full scope of surgical treatment during their first hospitalization. The clinical cases consisted of open and closed, penetrating and nonpenetrating fractions treated with bone-preserving surgery and cranioplasty. Cranioplasty was carried out in three phases, ranging from early intervention in 2-4 weeks to late, in 1 to 1.5 months. Avoidance of trephination whenever possible and limiting the size of the defect whenever unavoidable improved the results of cranioplasty. In general, performing all the required surgical intervention in the course of the first hospitalization was seen to enhance the process of subsequent medical and social rehabilitation.

12172/12379
CSO: 1840/2139

UDC 617.542-001-06:616.714-001]-036.88-084

REDUCING MORTALITY AFTER COMBINED CHEST AND SKULL TRAUMAS

Moscow SOVETSKAYA MEDITSINA in Russian No 9, Sep 85 (manuscript received 20 Jun 84) pp 109-112

[Article by A.O. Likhtenshteyn, V.Ye Krylov and V.F. Altunin, Kazan Scientific Research Institute of Traumatology and Orthopedics]

[Abstract] Analysis--performed at the Kazan Scientific Research Institute of Traumatology and Orthopedics--of 1051 cases of mechanical injury which resulted in death of the patient showed that 368 involved combined trauma of the skull and other organs and 247 involved combined trauma of the skull and chest cage (CTSC). Difficulties encountered in diagnosing CTSC were discussed. The difficulty increases when the patient has impaired consciousness. Treatment was inadequate in more than 30 percent of the cases studied because of errors in diagnosis. Use of intensive anti-shock therapy during CTSC without depending upon classical signs of traumatic shock was explained in considerable detail. The special care required during lumbar puncture was explained. The importance of special care in reading the EEG during study of cerebral

bioelectrical activity because of the state of many CTSC patients was emphasized. Analysis of electromyograms of the respiratory muscles revealed 4 types of changes of bioelectrical activity which indicate predominance of skull or chest injury. Use of instrumental and physiological methods of study of 52 CTSC patients permitted differential diagnosis of central and peripheral types of respiratory disturbances, precise definition of the nature of coma and timely intervention. The great value of improvement of diagnosis of CTSC, in reducing mortality after CTSC, was emphasized.

2791/12379
CSO: 1840/2090

NEUROMOTOR COMPONENTS OF ACCURACY-AIMING MOTIONS

Moscow TEORIYA I PRAKTIKA FIZICHESKOY KULTURY in Russian No 2, Feb 86 pp 10-12

[Article by A.V. Ivoylov, V.A. Furman, S.L. Pikalov and V.V. Nesterkov, Volgograd State University of Physical Culture]

[Abstract] Characteristics of the neuromotor component (NMC) of accuracy-aiming motions (AAM) were studied using pistol markmanship as a model. Time-related parameters of visual-motion reactions of AAM were obtained which could be used in training arms firerers working under time restriction, especially complicated by fatigue (bialtone competition). Specific NMC-AAM indices were obtained for volleyball players, swimmers and shooters showing a relationship between the development of NMC-AAM and the sport practiced. Increased stability of the AAM functional system exhibited by the shooters pointed out the training potential of NMC-AAM in the process of the participation in some sport. AAM may be viewed as a specialized motion system whose perfection can be obtained under conditions of specific activity. Figures 2; references 19 (Russian).

7813/12379
CSO: 1840/2034

UDC 616.716.4-089.844-02:617.52-001.45-089

PLASTIC SURGERY OF MANDIBLE IN PRIMARY SURGICAL TREATMENT OF FACIAL GUNSHOT WOUNDS

Leningrad VESTNIK KHIRURGII in Russian No 11, Nov 85 (manuscript received 24 Jan 85) pp 103-106

[Article by S.D. Sidorov, Division of Mandible-Facial Surgery and Stomatology (Chief - S.D. Sidorov), Kursk Oblast Hospital Clinic #1]

[Abstract] Primary bone plastic surgery of mandible during treatment of gunshot wounds occurs under highly unfavorable conditions for regeneration. Detailed reports of two cases of such an intervention are presented. To achieve positive results, the transplant should be covered by surrounding soft tissue with little or no tension on the wound edges; abscess formation should be prevented and factors favoring reparative processes should be activated. This calls for energetic treatment with antibiotics, anticoagulants, dehydration and infusive therapies. The drugs should be administered locally through the carotid artery. Figures 5; references 2 (Russian).

7813/12379
CSO: 1840/2149

UDC 616.1/.8-036.2](5)+(6)]

NON-INFECTIVE PATHOLOGY OF POPULATION OF DEVELOPING COUNTRIES OF ASIA

Moscow SOVETSKOYE ZDRAVOOKHRANENIYE in Russian No 2, Feb 86 (manuscript received 5 Jun 85) pp 43-48

[Article by A.A. Rozov and T.V. Kuznetsova, All-Union Scientific Research Institute for Social Hygiene and The Organization of Public Health imeni N.A. Semashko, USSR Ministry of Health, Moscow]

[Abstract] Previous notions that developing Asian countries suffer mainly from infectious ailments are undergoing a change due to increasing cardiovascular incidence. Data of the World Health Organization show cardiovascular illnesses in the 45-54 age group amount to 258.8 per 100,000, for example, in Kuwait, while in Thailand deaths from cardiovascular causes surpass those from infectious and parasitic ailments 47.4 to 40.3 per 100,000. Hypertension has become as common in the developing countries as it is in economically-advanced societies. A special problem in developing countries is ignorance of the symptoms and course of such ailments. Malignancies are the cause of death for 200,000-500,000 people annually in India, with certain cities particularly afflicted (such as Bombay). There are wide variations per capita in deaths from cancer in various countries, ranging from 8.4 per 100,000 in Syria to 31.8

per 100,000 in Kuwait. In Thailand the number of deaths per capita has doubled since 1970, to 24.7 per 100,000. Chronic liver ailments are also quite common (although these are frequently related to infectious diseases). Psychological disorders have become more common in recent decades, but few developing countries are equipped to handle them. Other common ailments relate to vision, with, for example, some 9 million blind people in India.

12131/12379
CSO: 1840/2070

UDC 616-073.5-15-073.756.3

## THERMOGRAPHY IN DISPENSARIZATION OF POPULATION

Moscow MEDITSINSKAYA RADIOLOGIYA in Russian No 10, Oct 85 (manuscript received 12 Apr 85) pp 56-61

[Article by L.I. Ginzburg and L.I. Lindenbraten, 1st Moscow Medical Institute]

[Abstract] Advantages and disadvantages of the use of thermography in various kinds of mass screening medical examinations are described and discussed. Results of use of thermography in breast examinations of 1014 women in 1978-1979 showed the possibility of detecting breast cancer by use of this method but also showed significant ambiguity of results of the examinations. Methods for improving results of thermography screening, developed at the 1st Moscow Medical Institute, were described. Thermography and mammography data were sometimes contradictory and extensive use of thermography was considered to be somewhat premature. Use of thermography to detect circulatory disturbances, digestive disturbances, disturbances of autonomic tonus, neurocirculatory disturbances, ear, nose and throat diseases and some somatic diseases were mentioned briefly. Good results obtained in use of thermography in small groups cannot be duplicated in routine screening required for annual universal physical examinations. Success in the use of thermography for this purpose requires a great increase in the amount and quality of thermography equipment, automatic processing of thermography data and an increase in personnel trained in thermography technique. Some examples of use of thermography at the 1st Moscow Medical Institute were presented.
References 30: 21 Russian; 9 Western.

2791/12379
CSO: 1840/2098

UDC: 616.981.25

# ORGANIZATION OF BACTERIOLOGICAL OBSERVATION OF EPIDEMIC PROCESS OF STAPHYLOCOCCUS INFECTION IN OBSTETRIC HOSPITAL

Ashkhabad ZDRAVOOKHRANENIYE TURKMENISTANA in Russian No 2, Feb 85 pp 12-16

[Article by Ye.G. Stepanyan, N.N. Nepesova, G.P. Sinitsyna, I.R. Mukhtarova and Ye.N. Abukova, Departments of Microbiology (Headed by Prof. M.G. Bostandzhyan), and of Obstetrics and Gynecology (Headed by Docent M.S. Seiradov), Turkmenian Order of Friendship of the People, State Medical Institute (Rector Prof. N.N. Nurmamedov), Ashkhabad Oblast Sanitary-Epidemiologic Station (Physician in Charge Ye.N. Abukova)]

[Abstract] Medical personnel of an obstetric hospital were examined once a month to determine S. aureus in mucosa of the nose and throat. The biological properties of the strains of staphylococcus isolated were studied (plasma coagulation, fermentation of mannitol under anaerobic conditions, lecithovitellase activity, antibiotic resistance) each month for one year. It was found that 50 to 75% of the medical personnel in obstetric hospitals carry S. aureus. Studies of S. aureus cultures isolated from hospital workers showed that the microbes were resistant to penicillin, erythromycin and levomycetin. Only staphylococcus taken from the nasal mucosa were resistant to more than one antibiotic. The greatest frequency of S. aureus among hospital workers was found in February. It is suggested that a card file be kept of the results of such examinations to assist in prevention of hospital staph infections. References 8: Russian.

6508/12379
CSO: 1840/2072

UDC 619.616.988.21:578.082

VIRULENCE OF FIXED STRAIN RABIES VIRUS TOWARDS LABORATORY ANIMALS

Alma-Ata IZVESTIYA AKADEMII NAUK KAZAKHSKOY SSR: SERIYA BIOLOGICHESKAYA in Russian No 4, Jul-Aug 85 pp 90-92

[Article by I.L. Kvasov, Order of the Labor Red Banner Alma-Ata Zoo-Veterinary Institute, Alma-Ata]

[Abstract] Viral strains of fixed rabies are substrains of the original fixed Pasteur virus. Review of literature seemed to indicate loss of virulence by virus-fix upon subcutaneous administration. To resolve this problem, virulence of Pasteur visur-fix strain maintained in the author's laboratory was checked against white mice, rabbits and guinea pigs using intracerebral, subcutaneous and intramuscular administration. The mortality among the infected test animals ranged from 66 to 100% depending on the route of injection and on the animals used. It was concluded that virus-fix maintained in the laboratory is adequately virulent to immunoprophylactic and therapeutic purposes. References: 6 (Russian).

7813/12379
CSO: 1840/2145

UDC: 616.981.553-071-08

BOTULISM (CLINICAL ASPECTS, DIAGNOSIS, TREATMENT)

Minsk ZDRAVOOKHRANENIYE BELORUSSII in Russian No 7, Jul 85 pp 58-62

[Article by Prof. P.L. Novikov, Candidate of Medical Sciences, P.K. Zubritskiy, Department of Infectious Diseases, headed by Prof. P.O. Novikov, Minsk Medical Institute]

[Abstract] Defining botulism as a severe disease caused by the toxin of Clostridium botulinum resulting from consumption of food products contaminated with the bacteria, this article describes in popular form the clinical manifestations, diagnosis and treatment of the disease. It is noted that correct diagnoses are now achieved in Byelorussia in 78.5% of cases of botulism, as opposed to 13% in 1966-68. Therapy includes administration of synthetic colloidal preparations of polyvinyl pyrrolidone, etc., to reduce intoxication, antibiotic therapy and hormone therapy. Resuscitation is required in severe cases, including artificial respiration. Prophylaxis is achieved by observing the proper sanitary-hygienic rules for processing, transportation, storage and preparation of food. Educational work among the population is very important. References 16 (Russian).

6508/12379
CSO: 1840/2064

UDC 576.851.48:616-078

METHOD OF SEROIDENTIFICATION OF SALMONELLAE WITH AID OF O- AND N-IMMUNOINDICATOR PENCILS

Kishinev ZDRAVOOKHRANENIYE in Russian No 4, Jul-Aug 85 (manuscript received 4 Mar 85) pp 23-24

[Article by Yu.N. Roshchin and V.M. Nikitin, Department of Microbiology (head-professor V.M. Nikitin) Kishinev Medical Institute]

[Abstract] Replacement of the liquid phase of diagnostic serum by a solid phase was used to produce an immunoindicator pencil which can write on glass, plastic or porcelain. A stroke of the pencil dissolves readily in water and physiological solution without residue and with liberation of antibodies sufficient to realize the agglutination reaction on the writing surface. The principal of construction of the pencil is described. A 1.5-2.0 cm stroke of the pencil was made to the left and to the right on a clean microscope slide. Drops of the culture (1-2) being studied were applied to the stroke to the right and a heterological microbe culture was applied to the other stroke (control). The pencil strokes were stirred into the drops with separate stirrers until they were completely dissolved (10-15 seconds) and the reaction was observed. A positive reaction produced flakes of the agglutinate within 1 or 2 minutes while the control stroke remains homogeneously turbid. A prepared system of O- and N- immunoindicator pencils was used to type Salmonella. Escherichia, Shigella, Proteus, heterologic Salmonellae and other enterobacteria were used as a control. Both positive and negative reactions corresponded completely to results of Salmonella determination by adsorption sera. Use of the pencil simplified the seroidentification of enterobacteria greatly. The long life of the preparation, the fact that it can be readied for use very quickly and the fact that it can be used for 1500-2000 analyses makes it very valuable for use in laboratory practice.

2791/12379
CSO: 1840/2063

UDC 576.8:550.72

TRANSFORMATION OF ORGANIC SUBSTANCE FROM BITUMINOUS ORIGIN BY MICROSCOPIC FUNGI

Alma-Ata IZVESTIYA AKADEMII NAUK KAZAKHSKOY SSR: SERIYA BIOLOGICHESKAYA in Russian No 1, Jan-Feb 86 pp 46-51

[Article by M.K. Kanatchinova, Institute of Microbiology and Viorology, KaSSR Academy of Sciences]

[Abstract] It is pointed out that fungi are capable of utilizing most organic substances. They have adapted to various soil conditions being capable of

attacking not only simple organic compounds but also complex structures untouched by other organisms. In this study, microscopic fungi were shown to be strong oxidizing agents of organic material in Dzhezkazgan ore deposits. Actinomycetes, components of Dzhezkazgan biogenocenosis, showed much lower destructive power towards bituminous fraction of the ores. Bacterial flora utilized bituminoides poorly. Figures 3; references 10 (Russian).

7813/12379
CSO: 1840/2046

NIEMR

ACTIVITY OF ACID AND ALKALINE PHOSPHATASE IN GUINEA PIGS EXPOSED TO STATIC MAGNETIC FIELDS

Prague JOURNAL OF HYGIENE, EPIDEMIOLOGY AND IMMUNOLOGY in English Vol 29, No 2, 1985 (manuscript received 1 Feb 84) pp 135-139

[Article by E. Gorczynska and R. Wegrzynowicz, Institute of Biophysics, P.A.M., Szczecin, Institute of Fish Physiology, A.R., Szczecin]

[Abstract] Dutch inbred guinea pigs (150 males, age 6 months, weight 670-750 g) were placed in 1 of 15 groups. Groups 2-8 were exposed to a static homogeneous field of 0.05 T magnetic induction and groups 9-14 were exposed to 0.3T. Group 1 (control) was treated the same as the other animals but were not exposed to a magnetic field. Animals in groups 2-8 were exposed to the magnetic field for 1, 2, 3, 4, 5, 6, and 7 weeks respectively and animals in groups 9-15 were exposed for the same periods. Blood was taken directly from the heart by syringe (once a week); acid phosphatase activity was determined by the Jacobsson method and alkaline phosphatase activity was determined by the Bessey method. Alkaline phosphatase activity was unchanged in all animals in the course of the experiment. Change of acid phosphatase activity depended on the length of exposure of the animals to a magnetic field and statistical differences between animals in the experimental group and those in the control group were found between the 4th and 7th week with higher levels of acid phosphatase activity being recorded in animals exposed to higher magnetic induction. References 26: 1 Russian; 25 Western.

2791/12379
CSO: 1840/1166-E

UDC 576.3:577.3

# EFFECT OF POLYGRADIENT MAGNETIC FIELDS ON SOME PHYSICOCHEMICAL AND BIOPHYSICAL CHARACTERISTICS OF PLANT CELLS

Moscow DOKLADY VASKhNIL in Russian No 1, Jan 86 (manuscript received 17 May 85) pp 6-8

[Article by N.F. Bondarenko, L.A. Misyuk, G.L. Maslenkova and L.P. Gusakova, Order of Red Banner of Labor Agrophysical Scientific Research Institute]

[Abstract] Physical-chemical and biophysical characteristics of undamaged plant cells were studied during exposure to gradient magnetic fields (MF) carried by elastic and ferrite plates (magnetophores) creating low intensity fields with different gradients of the intensity along their surface. Giant cells of fresh water alga Nitella flexilis was the test subject. It was shown that in response to gradient MF, the cells alter both the cytoplasmic and membrane characteristics: rate of mobility, aggregate state, cytoplasm viscosity, water retention of the cell, resistance and excitability of the membrane. Removal of MF may lead to the same type of reaction as its application. Figures 2; references 10: 6 Russian, 4 Western.

7813/12379
CSO: 1840/1135

## CELLULAR-IMMUNITY STIMULATOR "TIMALIN" IN PRODUCTION

Moscow TRUD in Russian No 97, 24 Apr 86 p 3

[Excerpt] Leningrad medical personnel have developed a new medicine called timalin, and they have organized its industrial production in collaboration with specialists of a medical-preparations plant. This preparation has been included in the All-Union list "Medicinal Drugs", and has thus been legally approved for use in medical practice.

Timalin is used to treat a great variety of disorders, including viral inflammations, bacterial infections, burns, frostbite, gastric ulcer, bronchial asthma, and multiple sclerosis. Can it be the long-awaited panacea for all afflictions?

"Timalin is no panacea, but it is a very active biostimulator, which promotes recovery from illnesses caused by lowering of cell immunity--the body's defense system," said Professor A. Mirtov, one of the preparation's developers. "It is derived from the thymus glands of calves."

Comprehensive studies of the new medicine were made at the Scientific Research Institute of Oncology imeni Petrov, the Institute of Surgery imeni Vishnevskiy, and Leningrad Medical Institute No. 1 imeni Pavlov, and they yielded excellent results everywhere.

In the opinion of scientists, the new preparation is not an isolated find but the beginning of a major undertaking in the field of bioregulation therapy using substances secreted by the tissues of the organism itself. A whole class of such bioregulators, which are called cytomedins, has been discovered in the course of the research. The Leningrad medical personnel obtained the first timalin; a close relative of this preparation, T-aktivin, was developed a few years ago at Moscow Medical Institute No. 2, and American scientists have developed a preparation of their own, thymazine, from the thymus.

Timalin is the only member of this bioregulator family that has been put into series production as yet.

"We did not develop special equipment for its production but adapted existing equipment," said O. Chayka, chief engineer of the Leningrad Medical Preparations Plant. "This is why the cost of the medicine is comparatively low. Its production process is automated. We plan to produce 100,000 vials

this year. Judging from the number of orders received, however, we alone will be unable to meet the timalin requirements of our country's medical personnel; our plant's capacity is not large enough for this."

FTD/SNAP
/12379
CSO: 1840/1204

UDC 613.262:635.898]-099-036.11-08

ACTIVE TREATMENT METHODS FOR ACUTE TOXIC MUSHROOM POISONING

Moscow SOVETSKAYA MEDITSINA in Russian No 1, Jan 86 (manuscript received 4 Dec 84) pp 96-99

[Article by I.I. Shimanko, S.G. Musselius, Yu.S. Milovanov, G.S. Galkina, G.I. Tseplyayeva and I.V. Aleksandrova, Scientific Research Institute for First Aid [Skoraya Pomoshch] imeni N.V. Sklifosovskiy, Moscow]

[Abstract] Clinical records of more than 600 patients including 158 children show that mushroom poisoning is often complicated by late hospitalization and incorrect diagnoses. The present article reports on study of symptoms that can lead to accurate diagnosis and treatment for various types of poisonous mushrooms. Symptoms include acute gastroenteritis, disturbances of aqueous electrolyte balance and pH of the body, and circulatory factors that vary for different fungus species. For example, pseudomushrooms, and those requiring special preparation before consumption, cause acute gastroenterocolitis and hemorrhagic symptoms, hemoglobinemia and hemoglobinuria. Hepatic blood circulation and liver functions are disrupted. Hemo- and plasmosorption can be used to promote active detoxification. Procedures and results for these methods are summarized. Lymphosorption is another surgical procedure used to remove toxic substances from the blood. In toxic hepatitis, direct catheterization of the kidney vein permitted immediate improvement. Toadstool poisoning cases with late hospitalization have been especially difficult to cure; a case study covering 62 days of treatment is presented. Conservative treatment methods as well as the active procedures mentioned above are required increasingly as diagnosis and treatment are delayed, and thus these first aid procedures must be facilitated. Figure 1; references 3 (Russian).

12131/12379
CSO: 1840/2083

UDC: 614.27:51

SYSTEM OF INDICES AND METHOD OF COMBINED EVALUATION OF RESULTS OF ACTIVITY OF PHARMACIES

Minsk ZDRAVOOKHRANENIYE BELORUSSII in Russian No 7, Jul 85 (manuscript received 15 Oct 84) pp 14-18

[Article by V.F. Gorenkov, Department of Pharmacy Organization and Economics, Headed by Docent V.F. Gorenkov, Belorussian Institute of Continuing Education of Physicians]

[Abstract] A method has been developed for objective evaluation of the results of activity of pharmacies. The method is based on analysis of a mathematical model of a standard pharmacy. Instead of the usual indicator of fulfillment of the plan for sales, the author recommends the rate of growth of retail and total sales, avoiding some subjectivity and certain planning errors. The analysis also includes the specific percentage of medications produced at the pharmacy, productivity of labor and growth rate of productivity of labor, morbidity per 100 workers and a combined indicator, the coefficient of labor quality, which includes a number of factors such as scientific organization of labor, introduction of rationalizers' suggestions, safety, quality of servicing of the population and pharmaceutical order. The method can be used for objective evaluation of the results of socialist competition among pharmacies in an area. References 6 (Russian).

6508/12379
CSO: 1840/2064

EFFECTS OF TRIAZINE HERBICIDES ON SOIL DEHYDROGENASE ACTIVITY

Kishinev IZVESTIYA AKADEMII NAUK MOLDAVSKOY SSR: SERIYA BIOLOGICHESKIKH I KHIMICHESKIKH NAUK in Russian No 4, Jul-Aug 85 (manuscript received 13 Apr 84) pp 67-69

[Article by S.P. Ilyinskiy, A.S. Usataya and E.A. Katruk]

[Abstract] Studies were conducted with several triazine herbicides to determine their effects on the dehydrogenase activity of soils, using the activity as an indicator of the status of microbial ecosystems. The data showed that soils with a humus content of 0.7-2.8% were virtually unaffected, whereas a 7-fold inhibition of dehydrogenase activity was obtained on sandy chernozem with 0.17% humus. Atrazine (50 mg/kg) was found to be the least inhibitory of the triazine herbicides. These findings indicate that dehydrogenase activity may be used as one of the indicators of the biological activity of soils. Figures 1; references 5 (Russian).

12172/12379
CSO: 1840/2155

UDC 340.67:615.285.7

GLIFTOR INTOXICATION

Moscow SUDEBNO-MEDITSINSKAYA EKSPERTIZA in Russian No 1, Jan-Mar 86 (manuscript received 11 Jan 83) pp 55-56

[Article by A.I. Buklan and A.F. Kravets, Bureau of Forensic Medical Expertise, Chernigov Oblast Department of Health]

[Abstract] Gliftor [sic], a mixture of 70-75% 1,3-difluoropropanol-2, 10-20% 1-fluoro-3-chloropropanol-2, epifluorohydrin, epichlorohydrin and water, is used extensive in agriculture as a rodenticide. Ten cases of gliftor toxicity have been reported to date, with all sharing common features of acute abdominal pains, nausea, weakness, and eventual loss of consciousness. The present communication deals with three additional cases of gliftor intoxication resulting from its ingestion in the belief that it was a home brew. All three cases ended in death with the time of onset of symptoms ranging from ca. 20-30 min to 4 days, depending on the intake dose. Autopsy findings demonstrated extensive congestion with petechiae of all the internal organs, indicating the systemic toxicity of this agent. In order to prevent inadvertent misuse of gliftor, all bottles should be carefully labeled with large-type warnings, and access to the supplies of gliftor should be restricted. References 3 (Russian).

12172/12379
CSO: 1840/2143

UDC 581.6

CHROMATOGRAPHIC-MASS SPECTROMETRIC STUDY OF AEROSTIMULANTS OF PLANT ORIGIN

Leningrad RASTITELNYYE RESURSY in Russian Vol 22, No 1, Jan-Mar 86 (manuscript received 4 May 85) pp 79-83

[Article by M.T. Dmitriyev, Ye.G. Rastyannikov and A.G. Malysheva, Scientific Research Institute of General and Communal Hygiene imeni A.N. Sysin, USSR Academy of Medical Sciences, Moscow]

[Abstract] An effective method was developed for studying volatile products of various plants which could act as air stimulants. The method is based on gas chromatographic technique coupled with mass spectrometric analysis. The stimulants were concentrated on polymer sorbent Tenax and then extracted and chromatographed over a silicon elastomer column. Forty-eight potential air stimulants were identified from linden, birch, maple, cherry leaves and from needles of Siberian cedar and spruce by their chromatographic retention time. Mass spectroscopic graph of ethyl pentanoate and ethyl methylbutanoate was reported to show spectral differences in rather analogous structures. Figures 3; references 12: 11 Russian, 1 Western.

7813/12379
CSO: 1840/2148

UDC 581.6:547.944(575+574)

## HISTORY, STATUS AND PROSPECTS FOR UTILIZING ALKALOID PLANTS FROM CENTRAL ASIA. RESEARCH TASKS

Leningrad RASTITELNYYE RESURSY in Russian Vol 22, No 1, Jan-Mar 86 (manuscript received 13 Mar 85) pp 3-11

[Article by K. Tayzhanov, Institute of Natural Products Chemistry, UzSSR Academy of Sciences, Tashkent]

[Abstract] A review of history and current studies was presented. Initial attempts to find and evaluate alkaloid plants in Central Asia flora date back to the 1930's; close to 4500 different plants were studied thus far yielding about 954 alkaloids. This inventory indicates great potential for Central Asian flora as rich resource for new medicinal preparations. These studies should continue because there are at least 7,000 types of higher plants in this region. References 93 (Russian).

7813/12379
CSO: 1840/1155

UDC 633.88:582.572.2:581.19:547.918

## STEROIDAL SAPOGENINS FROM YUCCA GLORIOSA L. INFLORESCENCE

Leningrad RASTITELNYYE RESURSY in Russian Vol 21, No 4, Oct-Dec 86 (manuscript received 14 Feb 85) pp 452-455

[Article by T.A. Pkheidze, M.M. Benidze and E.P. Kemertelidze, Institute of Pharmacochemistry imeni I.G. Kutateladze, GSSR Academy of Sciences, Tbilisi]

[Abstract] Steroidal sapogenins were extracted from the buds, inflorescence, bracts and axial portion of Yucca gloriosa L. by the Rotrok method, modified by L.S. Chetverikova and O.S. Madayeva. The plants were grown on an experimental farm of the Institute of Pharmacochemistry in Tbilisi and Shiraki [eastern GSSR]. The following steroids were isolated: smilagenin, tigogenin and hitogenin. The main component was tigogenin; its levels were the highest in the blossoms and buds (0.95-1.1% and 1.25-1.55% respectively) collected during the height of blooming in June. For best yields, the flowers and the buds should be dried in whole state, not ground up. Grinding leads to decreased yield of tigogenin. References 8: 6 Russian, 2 Western.

7813/12379
CSO: 1840/2040

UDC: 613.632

DIAGNOSIS OF PRECLINICAL STAGES IN CHRONIC PESTICIDE INTOXICATION

Tashkent MEDITSINSKIY ZHURNAL UZBEKISTANA in Russian No 7, Jul 85 (manuscript received 8 Aug 83) pp 10-12

[Article by F.N. Nurivinova, Scientific Research Institute of Sanitation, Hygiene and Occupational Diseases, Uzbek SSR Ministry of Health]

[Abstract] Various functional changes were observed in almost one-third of agricultural workers examined, including functional liver changes, subacute organic dermatitis, high blood pressure and mild bronchitis. Studies of enzymes and specific metabolic disorder products are very important in determining the preclinical stages of pesticide poisoning. Studies of nonspecific immunity revealed a number of changes of varying types, depending on the type of pesticide, time of exposure and age of subject. Chronic hepatocholecystitis is the major form of hepatobiliary system pathology observed in such workers. Comparison of the results obtained with the results of examinations of persons with clinically diagnosed pathology allows determination of the sequence of development of the pathologic process in the cardiovascular system. The data indicate that organophosphorus and chlorinated organic pesticides are risk factors in the development and worsening of existing disorders of a number of organs and systems, as well as metabolic processes. References 2 (Russian).

6508/12379
CSO: 1840/2108

SLOW FILTRATION WITHOUT REAGENTS AS MEANS FOR PURIFYING WATER OF COMBINED AGROCHEMICAL PLUS SURFACTANT CONTAMINATION

Tashkent MEDITSINSKIY ZHURNAL UZBEKISTANA in Russian No 7, Jul 85 (manuscript received 10 Dec 84) pp 25-26

[Article by I.Ye. Ilin, Saratov Medical Institute]

[Abstract] A study was made of th adsorption capacity of sand filters operating at 0.1-0.3 m/hr for the combination of agrochemicals and surfactants. Several classes of chemicals were selected, including chlorinated organics, organophosphorus, organic compounds of mercury, dithiocarbamates and copper-containing as well as mineral- and phosphorous-containing fertilizers. So-called "hard" nonionogenic and anion-active surfactants were used in the study. All of the substances used were introduced at the maximum permissable concentration, corresponding to their actual content in bodies of water. The synthetic detergents were found to "carry" most of the poisons through the filter, the presence of surfactants increasing the content of the poisons in the water passing through the filter by several times. This carrying function

of surfactants results from the specifics of the chemical structure of the substances studied, as well as the homologic specifics of the detergents.

6508/12379
CSO: 1840/2108

UDC: 613.632

TOXICOLOGIC AND SANITARY-CHEMICAL EVALUATION OF NEW FURAN POLYMERS SUCH AS "FURITOL"

Tashkent MEDITSINSKIY ZHURNAL UZBEKISTANA in Russian No 7, Jul 85 (manuscript received 4 Jul 84) pp 51-53

[Article by V.V. Tarasov, G.M. Apollonova and V.G. Likho, Scientific Research Institute of Sanitation, Hygiene and Occupational Diseases, UzSSR Ministry of Health]

[Abstract] Experiments were conducted to determine the possible general toxic effect of furan polymers upon single and repeated intragastric administration, application to the skin and ophthalmic mucosa, and to determine the quantitative composition of the volatile chemical substances liberated from these resins. The $LD_{50}$, upon oral administration of furitol-80 for white mice was 840 mg/kg, for white rats 1250, for rabbits 2320 mg/kg; the figures for furitol-86 were 780, 1070 and 1100 mg/kg, respectively. The major symptom of poisoning was excitation, replaced by flaccidity and adynamia with loss of coordination, paresis of the posterior extremities and excretion from the nose. Clonic-tonic convulsions later developed. The $LD_{50}$ for application to the skin of the white rats was 7260, for rabbits 10200 mg/kg, for furitol-80; for furitol-86 the figures were 56500 mg/kg. Dermal edema, hyperemia and exfoliation were observed. Both compounds were thus moderately toxic, but furatil-86 liberates larger quantities of volatile chemical substances, suggesting that furitol-80 should be used in foundaries.
References: 2 (Russian).

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CSO: 1840/2108

RESULTS AND PROSPECTS OF POSSIBILITY OF USE OF DATA OBTAINED IN SHORT-TERM EXPERIMENT FOR PREDICTING THRESHOLD LEVELS OF CHRONIC EFFECT OF CHEMICAL COMPOUNDS

Prague ZHURNAL GIGIYENY, EPIDEMIOLOGII, MIKROBIOLOGII I IMMUNOBIOLOGII in Russian Vol 29, No 3, 1985 (manuscript received 5 Oct 83) pp 243-249

[Article by I.V. Sanotskiy, I.P. Ulanova, G.G. Avilova, N.G. Ivanov and A.L. Germanova, Department of Toxicology, Scientific Research Institute of Labor Hygiene and Occupational Diseases, USSR Academy of Medical Sciences, Moscow]

[Abstract] Joint studies of toxicologists of Council For Mutual Economic Aid countries led to development of new approaches to prediction of toxicometry parameters and hygienic norms at work posts and to presentation of methodological recommendations for study of chemical irritants when attempting to determine maximum permissible levels of toxic substances. Calculational methods of determining dangerous concentrations of harmful substances in a work post were derived on the basis of quantitative dependences between toxicometric parameters and physicochemical properties of substances studied. The possibility of using non-organismic models, such as registration of changes of oxidative and bioenergetic processes in isolated mitochondria, to predict levels of harmful substances was demonstrated. It was found that thresholds of chronic effect of toxic substances could be determined by studying primary reactions of the body during brief exposure to different levels of an irritant, by use of biochemical, physiological and morphometric methods.
References 9: 6 Russian, 3 Western.

2791/12379
CSO: 1840/1164

UDC 581.6:581.19:665.32/.35:582.975

PHYSICOCHEMICAL PROPERTIES OF FATTY OILS FROM SOME SPECIES OF VALERIANACEAE FAMILY

Leningrad RASTITELNYYE RESURSY in Russian Vol 22, No 1, Jan-Mar 86 (manuscript received 18 Mar 85) pp 66-70

[Article by V.S. Dolya, Zaporozhe Medical Institute]

[Abstract] Fatty oils from the family Valerianaceae have been studied very little. Therefore, their physical-chemical properties and qualitative content in seeds of five species of that family were studied: Valeriana amurensis P. Smirnov ex Kom.; V. sambucifolia Mikan fil.; V. tuberosa L., Centaurus Longiflorus Stev.; and C. ruber (L.) DC. The seeds were collected from 2,3, and 4 year old plants. Fatty oils were extracted insoxhlet extractor with

petroleum ether, esterified and gas chromatographed. The fat content of these oils ranged from 21.86 to 26.74% and their physicochemical constants were similar to each other. Anywhere from 15 to 21 fatty acids were spotted in these seeds, 14 being common to all species studied: caprylic, capric, lauryl, myristic, palmitic, palmitoleinoic, margaric, stearic, oleic, linoleic, linolenic, arachic, docosadienic and erucic acids. Linoleic acid content reached the level of 52.04 - 65.36%. Traces of the following acids were also found in individual species: butyric, caproic, pentadecanoic, heptadecanoic, eucosenoic, eucosadienoic and begenoic. The most varied composition was noticed in V. amurensis. References 14: 10 Russian, 4 Western.

7813/12379
CSO: 1840/2148

## DETERMINATION OF FATTY ACID SPECTRUM OF TOTAL BLOOD LIPIDS DURING PHYSICAL EXERTION

Moscow TEORIYA I PRAKTIKA FIZICHESKOY KULTURY in Russian No 2, Feb 86 pp 41-43

[Article by S.P. Anikeyeva and M.L. Troyanovskaya, All Union Scientific Research Center of the Studies of Surface and Vacuum Properties; All Union Scientific Research Institute of Physical Culture]

[Abstract] The goal of this study was to analyze the response of an athlete's body to prolonged challenge (25 and 50 km walk) based on analysis of blood fat spectrum; the dynamics of reaching a steady state after completion of an exercise and evaluation of the adaptation reaction under middle altitude conditions. Blood was collected at rest, immediately after completion of the task and one hour later. Analysis of the data showed that when athletes live at elevated levels, their levels of blood fatty acids are altered. Lipid metabolism is an active factor in formation of bodily response to higher altitudes. Specific reactions of lipid metabolism towards higher physical exertion shows that the process of energy supply during the performance of a task undergoes drastic changes, especially in regard to myristic and pentadecanoic acids. References 20: 5 Russian, 15 Western.

7813/12379
CSO: 1840/2034

UDC 612.8.015:577.158.4:577.112.3:612.827:612.828.612.826.8

## GLUTAMATE DECARBOXYLASE AND γ-AMINOBUTYRIC ACID TRANSAMINASE ACTIVITY IN BRAIN STRUCTURES DURING ACTION OF HIGH CONCENTRATED SULFIDE GAS ON A BACKGROUND OF HYPO- AND HYPERCALCEMIA

Baku IZVESTIYA AKADEMII NAUK AZERBAYDZHANSKOY SSR: SERIYA BIOLOGICHESKIKH NAUK in Russian No 6, Nov-Dec 85 pp 92-96

[Article by G.K. Kadyrov and A.M. Aliyev, Institute of Physiology imeni A.I. Karayev, AzSSR Academy of Sciences]

[Abstract] Activity of the following enzymes was studied on the background of hypo- and hypercalcemia and exposure to high concentration of sulfide gas:

glutamate decarboxylase (GDC) and γ-aminobutyric acid transaminase (GABA-T). These enzymes regulate metabolism of GABA. The results showed that a 3.5 hr exposure to sulfide gas at a concentration of 0.3 mg/l led to significantly increased activity of GDC in cerebral hemispheres, cerebellum and in brain stem. Activity of GABA-T dropped correspondingly. On the background of hypercalcemia induced by im. injection of 10% calcium gluconate (0.6 ml/200 g body weight of experimental rats) the negative effect caused by the exposure to sulfide gas was diminished. Under conditions of hypocalcemia (im. injection of 10 mg/200 g body weight of sodium oxalate), exposure to sulfide gas led to a significantly decreased activity of GDC and GABA-T in the hemispheres and in the brain stem, but in the cerebellum the activity of GDC increased sharply while that of GABA-T decreased correspondingly. References 8: 6 Russian, 2 Western (1 by Russian authors).

7813/12379
CSO: 1840/2029

## MOSCOW PARTY COMMITTEE ORDERS ACTION ON DRUG ADDICTION PROGRAM

Moscow MOSKOVSKAYA PRAVDA in Russian No 87, 10 Apr 86 p 1

[Abstract] The article is a report on the business discussed at a regular meeting of the bureau of the Moscow City Committee of the Communist Party of the Soviet Union. The first item of business reportedly was discussion of the draft plan of the city's social and economic development for the period 1986-1990. Farther down on the list of questions discussed by the bureau was the following item of business:

"The bureau of the Party city committee examined the question of the organization of the fight against drug addiction. The bureau brought the attention of law enforcement organs and health institutions to existing shortcomings in the organization of this work, and instructed them to identify persons who are disposed to drug addiction, to heighten the effectiveness of their treatment, to ensure proper inventorying, storage and dispensing of narcotic drugs, and to deal resolutely in stopping their transport and dissemination in the city.

"The bureau of the Party city committee has ordered the Moscow City Executive Committee, together with law enforcement organs and health institutions, to work out specific measures for radically improving preventive educational work with persons who are disposed to the use of narcotics, and for eliminating the conditions which give rise to this ugly phenomenon."

FTD/SNAP
/12379
CSO: 1840/1205

## MEDICAL ACADEMY'S GENERAL ASSEMBLY AND TASKS FOR 1986-1990

Moscow MEDITSINSKAYA GAZETA in Russian No 31, 16 Apr 86 pp 1,3

[Abstract] The lengthy article, which is in two parts, reports on proceedings of the 54th session of the General Assembly of the USSR Academy of Medical Sciences, which took place recently in Moscow. Principal speakers at the session are identified. The assembly discussed tasks of medical science and health care for carrying out decisions of the 27th Congress of the Communist

Party of the Soviet Union. V.S. Baltrunas, deputy head of the Department of Science and Educational Institutions of the Party Central Committee, was among the participants in the session.

The first part of the article summarizes a report by S.P. Burenkov, USSR Minister of Health. It was devoted to policy guidelines for the period 1986-1990 and to tasks for improving the organization and equipping of medical research. Burenkov noted that the 12th Five-Year Plan calls for more emphasis on preventive medicine, and particularly for beginning the practice of annual medical examinations of the entire population and for heightening the quality of medical care. Three All-Union scientific-technical programs have been drafted for the advancement of top-priority directions of medical science. These programs are entitled "Diagnosis and Treatment of Illnesses", "Prevention of Diseases of the Population", and "Immunology and Genetics". Cooperation with the USSR Academy of Sciences is to continue within the framework of the program "Basic Sciences for Medicine".

Burenkov noted that a number of directions of medical research are lagging. He complained that many research results are introduced only on the level of individual institutions, and that many scientific research institutes do not have good ties with health-care facilities. Burenkov said that the process for development of medicines and medical equipment requires radical improvement, and he called upon medical scientists to assume more responsibility for raising the scientific-technical standard of public health. Mention was made of plans for reforming the system of scientific research institutes by eliminating organizations with low potential and by forming research centers, inter-industry scientific-technical complexes, and educational, research and production centers.

The second part of the article summarizes the assembly's discussion of Burenkov's report. V.M. Zhdanov, director of the Institute of Virology imeni Ivanovskiy, discussed problems of furthering work on obtaining a hepatitis-B vaccine by genetic engineering. Proposals were made for improving the planning and coordination of medical research. A.I. Potapov, RSFSR Minister of Health, recommended the creation of a single planning agency which would be authorized to use targeted-program methods. Other participants stressed the importance of expanding and improving the training of broad-profile researchers and practitioners as well as specialists in narrow fields. F.I. Komarov, head of the Central Military Medical Administration of the USSR Ministry of Defense, recalled that therapists and surgeons who were general practitioners returned 90 percent of the sick and 70 percent of the wounded to duty during World War II. He said that physicians of this type must continue to be leading figures in Soviet public health.

FTD/SNAP
/12379
CSO: 1840/1204

UDC: 616-084.3:008(47+57)

# MASS HEALTH EXAMINATION OF POPULATION AND SCIENTIFIC AND TECHNICAL REVOLUTION

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 8, Aug 85 (manuscript received 13 Dec 84) pp 6-9

[Article by G.Z. Demchenkova, M.L. Polonskiy and V.S. Preobrazhenskaya, All-Union Scientific Research Institute of Social Hygiene and Organization of Public Health Services imeni N.A. Semashko, USSR Public Health Ministry, Moscow]

[Abstract] The process of mass physical examination of the population [dispensarization] intended to evaluate the status of health, determine and eliminate risk factors, allow early diagnosis of disease and its prevention, support dynamic observation of the health of each individual and aid in the conduct of health improvement and therapeutic measures, has been raised to a new stage by scientific and technical progress. This progress is reflected in medical-biological, social, production-technological and economic processes related to solution of the problem of providing dispensarization services for the entire population. The most important tasks in this process are evaluation of the combined influence of environmental factors on the health of the population and the major parameters of the development of public health, prediction of the health of the population, acceleration of the process of "technization" of dynamic observation of the health of the population, introduction of new technology, mechanization and automation of supplementary processes, modernization of equipment and replacement of technology, improvement of organization of administration of dispensary services by introduction of computers and automated control systems, introduction of scientific organization of labor, of medical workers and organization of systematic and timely information concerning new methods of prophylaxis, diagnosis and treatment. A clear differentiation must be made among methods of examination of healthy persons, those with risk factors and those with disease. In healthy persons, the examination is intended to determine the functional status of the individual systems and organs; among risk factor persons, methods must be added to determine deviations in the functioning of individual organs and systems related to the risk factors, while among persons with diseases, still more tests must be added to determine the status and proper treatment of the disease. Particular attention must be given to automation of the administration of the process of dynamic observation and the conduct of combined health improvement measures for both healthy and diseased persons. In this way, scientific and technical progress can make a valuable contribution to technical support of the process of providing dispensary services for the entire population.

6508/12379
CSO: 1840/2060

UDC: 616.89-008.441.13-084

SOME SOCIAL-HYGIENE ASPECTS OF PREVENTING DRUNKENNESS AND ALCOHOLISM

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 8, Aug 85
(manuscript received 29 Dec 84) pp 20-23

[Article by Zh.K. Kispayeva, All-Union Scientific Research Institute of Social Hygiene and Organization of Public Health imeni N.A. Semashko, Moscow]

[Abstract] A study was undertaken at the Karaganda Metallurgical Combine to determine the influence of social-hygiene factors on the formation and development of chronic alcoholism with the purpose of developing recommendations for organized forms of work for the prevention of drunkenness and alcoholism. All of the subjects in the study were male workers, diagnosed as chronic alcoholics. It is found that children born in the families of chronic alcoholics must be under careful observation by pediatricians as potential alcoholics themselves. Almost 95% of the alcoholics had never been involved in organized social activities. Most of the patients spent their free time watching television. As the disease progresses, the percentage of patients who are divorced increases rapidly. Over half the alcoholics had poor relationships with frequent conflicts in their family life. Differentiated anti-alcohol propaganda should be undertaken among family members of patients, including description of the symptoms of the disease, information on initial manifestations and a clear discussion of the difference between social drinking and alcohol abuse. The group of patients included a higher than average percentage of persons with incomplete educations. A combination of educational, occupational, administrative, social and medical measures should be undertaken to prevent drunkenness and alcoholism.

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CSO: 1840/2060

UDC: 616-036.885-053.3

FIRST DAY DEATH RATE OF CHILDREN LESS THAN ONE YEAR OLD IN RURAL AREAS

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 8, Aug 85
(manuscript received 31 May 84) pp 27-30

[Article by A.V. Frolov, Department of Hospital Pediatrics (headed by Academician, USSR Academy of Medical Sciences, Prof. V.P. Bisyarina) Omsk Medical Institute, Oblast Pediatric Clinical Hospital]

[Abstract] A study was made of children who die within 24 hours after being brought to hospitals to determine the significance of medical-organizational, social and biological factors in first-day mortality. The percentage of children dying within one day after hospitalization remains rather high in

rural areas of Omsk Oblast, 77.6% of all infant deaths, as opposed to 22.3% in urban areas. Boys die 1.6 times more frequently within the first day after hospitalization than girls. First-day infant deaths are more frequent in winter and spring than in summer and fall. Only 8.3% of the first-day death children had received adequate medical treatment before hospitalization; over half of these children did receive adequate treatment after hospitalization. First-day death rate was found to depend greatly on the actions of parents when the children became ill, the education and general level of culture of the mother, her age, family position, relationship with the physician and other medical personnel. In almost a quarter of first-day mortality cases, parents had previously refused hospitalization, in over 10% the mother had remove the child from the hospital against medical advice, in 16% the child had been discharged early from the hospital, usually at the persistent request of the parents. Over 20% of the children who died were children of unwed mothers. Many of the children who died had such diseases as anemia, encephalopathy and common nutritional disorders, or were underweight. The following measures are recommended to decrease first-day mortality: improvement of emergency services provided to children both before and after hospitalization, improvement in sanitary education and prophylactic work with parents of healthy children, improvement of the work of admissions departments, provision of modern equipment and medications for emergency rooms, increasing qualification of pediatricians, nonprofessional medical workers and nurses with respect to provision of emergency assistance to very young children.

6508/12379
CSO: 1840/2060

UDC: 613.6+616-057-082]:622](57-17)

## WORK OF REHABILITATION OFFICES IN FAR NORTH

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 8, Aug 85 (manuscript received 6 Oct 84) pp 41-42

[Article by A.A. Bezrodnikh, G.N. German, O.V. Krasivskaya and G.T. Galanzha, Department of Therapy for Occupational Diseases (headed by Prof. A.A. Bezrodnikh) Yakutsk University, Mirinskaya Central Rayon Hospital, Udachinskaya Uchastok Hospital]

[Abstract] Problems of organization of prophylactic and therapeutic services at industrial enterprises in the Far North are made particularly important by such factors as low temperature, changes in the length of the light day, and the specific nature of industries in the region. Rehabilitation offices (points) at or near industrial enterprises provide therapeutic and prophylactic assistance to workers on the job, at their working locations, under the immediate supervision of the shop physician. Physical therapists, nurses and aides are employed. The rehabilitation office works to restore the health of workers suffering from chronic diseases during the periods of remission as well as persons with initial manifestations of pathology and functionally reversible deviations from the norm. Practically health persons in occupations in which

they are exposed to vibrations and other unfavorable factors with long times in service form a special group of patients. Therapeutic physical culture, massage and heat treatments are all employed in the rehabilitation offices. Rehabilitation offices are primarily provided for mine workers with respiratory diseases, both occupational and nonoccupational in origin, vibration disease, osteochondrosis, metabolic-dystrophic joint disorders and certain other forms of musculoskeletal pathology.

6508/12379
CSO: 1840/2060

UDC: 613/.614-057:636.5]

SOME PROBLEMS OF LIFESTYLE OF POULTRY PLANT WORKERS AND ITS RELATIONSHIP TO THEIR HEALTH

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 1, Jan 86 (manuscript received 25 Feb 85) pp 7-10

[Article by V.L. Krasnenkov, D.P. Derbenev and T.D. Kozlova, Department of Social Hygiene and Organization of Public Health (headed by Prof. N.A. Fralova) Kalinin Medical Institute]

[Abstract] Studies were made of the lifestyle and attitude toward their health of workers at 2 large poultry plants in Kalinin Oblast. A special questionnaire was made up and results were correlated separately for men and women. Some 16 medical and social factors were found to influence the health of the workers. The most significant factors were age, level of education, occupation, time in service, income, housing conditions, and quantity of alcohol consumed. Some 3.3% of males and 15% of females considered their health unsatisfactory or poor. Only 7% of males and 23.1% of females in the group suffering from chronic or frequent acute disease considered their health unsatisfactory. Most of the workers were satisfied with the medical services they received. Factors capable of improving the health of the workers included primarily avoidance of harmful habits (noted by 28.5% of males) and additional free time (noted by 35.5% of females). Improvement in working conditions was noted by both sexes as the second most important factor in improving their health. The significant difference between the workers' estimation of their health condition and the actual facts indicates that educational work is needed.

6508/12379
CSO: 1840/2048

UDC: 616-084.3.:312.6-055.2

STUDY OF ATTITUDE TOWARD THEIR HEALTH OF FEMALE WORKERS IN LARGE INDUSTRIAL ENTERPRISE

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 1, Jan 86 (manuscript received 11 Jun 85) pp 10-12

[Article by S.I. Stegunin, L.A. Zenina and Z.F. Samorukova, Department of Social Hygiene and Organization of Public Health (headed by Prof. S.I. Stegunin) Kuybyshev Medical Institute imeni D.I. Ulyanov]

[Abstract] Female workers of a large metallurgical enterprise filled out questionnaires including questions concerning their own evaluation of their health, hygienic behavior and its motives, and their opinion concerning the organization of gynecologic services. Most of the workers considered their health satisfactory. A smaller number considered it good. Still fewer considered it unsatisfactory. The greatest fraction of women who considered their health good were in the group of workers in the major professions and engineering and technical workers. Unskilled workers were more likely to consider their health unsatisfactory. Women who considered their health unsatisfactory were more likely to follow the recommendations of the gynecologist. Women who considered their health good were more likely to do exercises regularly; women who considered their health unsatisfactory were generally more passive or considered that morning gymnastics could actually make their health worse. Women who considered their health satisfactory or unsatisfactory were more likely to have complaints concerning the organization of gynecological services than women who considered their health good.

6508/12379
CSO: 1840/2048

UDC: 613.88:[614:374]-053.6-055.2

SEX EDUCATION IN SCHOOLS

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 1, Jan 86 (manuscript received 19 Apr 85) pp 27-30

[Article by V.K. Yuryev, Department of Social Hygiene and Organization of Public Health (headed by Prof. I.T. Leonov) Leningrad Pediatric Medical Institute

[Abstract] Sex education is a necessary part of the moral upbringing of the new generation. In order to study the status of individual problems of sex education, a special program was used to survey 679 mothers who had daughters from 1 to 18 years of age in 3 cities in Leningrad Oblast. The daughters, 7 to 18 years of age, were also surveyed, using a separate questionnaire. A third

stage involved questioning of 202 women who had given birth prior to 18 years of age. It was found that 12.2% of the mothers felt that the mother should not be involved in the sex education of her daughter. The mean age at which mothers believed sex education should start was 12.1 years. Only 3.6% of mothers felt that sex education should start before 7 years of age, while 28.6% felt that it should not start before 14 years of age. Some 40% of mothers actually become involved in the sex education of their daughters. At present many women give birth to their first child before they are 18 years old. The questioning of such women revealed that in 35.4% of cases the pregnancy was started accidentally. Reasons for beginning active sexual life included love in 66.5% of cases, curiosity 14.2%, the desire to have a child 12.2%, alcohol 4.6%, other factors 2.5% of the cases (desire for independence, physical attraction, force, etc.). The overwhelming majority of girls beginning active sexual life early and giving birth before reaching age 18 were found not to have received adequate sex education.

6508/12379
CSO: 1840/2048

UDC: 614.1:[312.1/.2+312.6+313.13]-053.2:711.168

SOME SPECIFICS OF INFANT MORTALITY IN NEW CITY

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 1, Jan 86 (manuscript received 10 Oct 85) pp 30-31

[Article by A.A. Bova, Department of Social Hygiene and Organization of Public Health, No 1 (headed by Prof. O.Ye. Chernetskiy) Rostov Medical Institute]

[Abstract] Using Volgodonsk as an example, differences were studied in the level and structure of infant mortality as a function of the length of time the mothers had lived in a newly constructed city. Children were divided into three groups, those whose mothers had lived in the city less than 3 years, 3 to 9 years, and 10 years or more. The greatest rates of infant mortality were found among children of mothers who had lived in the city less than 3 years, infant mortality in this group being 2.5 times greater than in the group whose mothers had lived in the city over 10 years. The younger the child, the greater its health depended on the state of health of the mother and the degree of adaptation of the mother to her new living conditions. The specifics of infant mortality this study reveals, determined by the nature of adaptation of the mother to her living conditions, should be used in developing measures to improve medical services of children in the first year of life in newly constructed cities. Reduction in the infant mortality must be achieved primarily by reducing the number of deaths resulting from factors related to intrauterine development, particularly congenital development defects and problems during the actual birth.

6508/12379
CSO: 1840/2048

UDC: 618.3+618.5]-082

ORGANIZATION OF SPECIALIZED MEDICAL ASSISTANCE FOR RURAL MULTIPAROUS MOTHERS

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 3, Mar 86 (manuscript received 27 Jun 85) pp 18-21

[Article by B.L. Basin and Yu.I. Chulovskiy, Omsk Medical Institute imeni M.I. Kalinin]

[Abstract] Studies indicate that mothers with more than five children must be considered a high risk group, both for extragenital pathology and for serious complications of pregnancy. Recently in Omsk Oblast a number of steps have been taken to improve observation of women in this high-risk group. Women in the group, after initial examination at the Central Obstetric Hospital, are sent to a consultative polyclinic associated with the Oblast Hospital. At the polyclinic, physicians from the Department of Pathology of Pregnancy see the women, consultations with specialists are available, and a plan of observation is drawn up and maintained, indicating times for visits to the doctor, the institution where the birth is to take place, and a plan for resolution of any complications. Observations have shown that this early and complete examination can be decisive in the provision of obstetric services to women in the high-risk group. The women passed through three stages, moving from the nurse-midwife office to the Central Rayon Hospital and the Oblast Consultative Hospital to assure provision of the best possible medical services.

6508/12379
CSO: 1840/2059

UDC: 616.8-082([47+57]-21)

SOME PROBLEMS OF IMPROVEMENT OF NEUROLOGIC SERVICES FOR THE POPULATION OF A LARGE INDUSTRIAL CITY

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 3, Mar 86 (manuscript received 4 Feb 85) pp 26-28

[Article by V.N. Yevseyev, Department of Social Hygiene and Organization of Public Health, headed by Prof. M.N. Tsinker, Novokuznetsk, Institute for Advanced Training of Physicians]

[Abstract] A study is presented of the activity of the neurologic service of Novokuznetsk over the period between 1971 and 1983. Only a few major aspects concerning analysis of trends and proportions of development of neurologic services are covered. It was found that at the beginning of the period in question, neurologic specialists were used to perform duties outside their areas of specialization, as a result of which increases in the population of neurologic specialists did not result in proportional increases in neurologic

consultations. An increase in utilization of neurologic beds over the period resulted primarily from an increase in the length in hospital stays. The system of organization of neurologic services to the population has provided nonproportional development of the major types of medical services, resulting from the primary concentration of resources at neurologic teaching hospitals. There is also a disproportion between the increase in resources and the volume of specialized medical assistance provided. Solving these problems will require adjustment of plans for development of the neurological service to consider a proportional distribution of resources among polyclinics and hospitals, with development of measures to eliminate the overload of the available beds in the hospital and neuropathologists in the polyclinics.

6508/12379
CSO: 1840/2059

UDC: 616-001-082-039.57

UTILIZATION OF AMBULATORY TRAUMATOLOGIC SERVICES BY WORKING POPULATION

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 3, Mar 86 (manuscript received 21 May 85) pp 28-30

[Article by L.A. Pastykhov, Chair of Social Hygiene and Organization of Public Health (headed by Prof. M.Ya. Podluzhnaya) Faculty for the Advanced Training of Physicians, Perm Medical Institute]

[Abstract] A selected study was made of utilization of traumatologic medical services by working-age persons in Perm in 1982-1984. Some 83% of persons treated for injuries during this period were of working age. Men were treated 2.2 times more frequently than women. Less frequently treated were men 20 to 34 years of age, women 40 to 54 years of age. In men the number of injuries decreases with age, in women it increases. Over 1600 injured persons were interviewed, indicating that most injuries occurred during the second half of the day, between 15:00 and 24:00, mostly on holidays or Mondays. Some 90% of injuries occurred in apartments or on the street, half due to falling on level ground. About 15% of injuries occurred while the patient was intoxicated; considering that 42% of the victims did not seek medical assistance for 12 hours, it is probable that the number actually involving alcohol was considerably greater. Injuries were more frequently seen in persons with less education, among persons who do not read books regularly and are not regularly involved in physical culture or sports.

6508/12379
CSO: 1840/2059

UDC: 616-084.3:362.11](470.325)

ORGANIZATION OF MASS HEALTH EXAMINATION OF URBAN POPULATION USING CENTRAL RAYON HOSPITAL

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 3, Mar 86 (manuscript received 3 Jul 85) pp 30-32

[Article by L.G. Mikhneva and V.P. Bondarev, Department of Social Hygiene and Organization of Public Health (headed by Doctor of Medical Sciences T.N. Grosheva) Voronezh Medical Institute imeni N.N. Burdenko; Shebekinskaya Central Rayon Hospital, Belgorod Oblast]

[Abstract] In Shevekinsk Rayon of Belgorod Oblast, a permanent, 15-member commission on dispensarization for the population has been set up at the central rayon Hospital. A plan of measures has been drawn up, with a schedule for the conduct of comprehensive examinations of the urban and rural population. Studies of problems of the dispensarization have been undertaken with physicians and nurses, and physicians' teams and travelling ambulatoria have been organized to conduct examinations of both urban and rural populations. Extensive educational work has been undertaken among the residents of the rayon. Massive examinations are undertaken in two stages, with and without participation of a physician. Patients pass through the examination in four different sequences, depending on sex and age. The four sequences are briefly described. In 1984, 99.7% of the workers of industrial enterprises were examined. Since preventive medicine has been increasingly emphasized, the number of visits to clinics per unit of population has increased from 11.8 to 13.9 per urban resident per year. The additional work required by provision of dispensarization services to the entire population each year has been undertaken without increasing the staff of the hospital.

6508/12379
CSO: 1840/2059

UDC: 614.2.007(470-22)

EXPERIENCE IN STRENGTHENING PUBLIC HEALTH PERSONNEL IN RURAL AREAS

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 3, Mar 86 (manuscript received 28 Jan 85) pp 32-35

[Article by F.G. Grigoryev, Kanash Central Rayon Hospital, Chuvash ASSR]

[Abstract] The Central Rayon Hospital of Kanash Rayon has been involved in the planning of social processes since 1968. In order to stabilize medical personnel, a study was made of the reasons for the loss of such personnel over a number of years in five rural areas. Two major factors were found to assist in reducing the loss in personnel: provision of adequate housing and social-

domestic services; and the creation of opportunities for continuing creative growth. A plan of social development includes complex development of the rayon hospital, sanitary-epidemiologic station and rural first aid stations, as well as provision of social and domestic services enjoyed by medical workers, including provision of fuel delivered to the residence, allocation of garden areas for vegetables, study of the needs of the medical workers for children's preschool institutions and allocation of places in these institutions, favorable-price sale of pigs and meat, daily transportation of medical workers to and from work, provision of scheduled bus services for trips to the theater and excursions to the city, tourist trips, development of physical culture and sports, organization of retail trade at working locations, setting up of hot food services at work, organization of the use of hospital trucks to deliver furniture, potatoes, vegetables and other necessities to workers homes, free trips for leading workers to study at medical schools, creation of conditions for creative growth of physicians, including specialization, continuing education, scientific work, preparation for publication of scientific articles, provision of apartments, organization of collective and individual rest, provision of literature, special medical services, summer vacations for the children of hospital workers, organization of domestic services and special monetary awards.

6508/12379
CSO: 1840/2059

UDC: 616-002.4+616.24-002.5]-082

MAJOR INDICATORS OF DEVELOPMENT OF PUBLIC HEALTH IN RSFSR

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 3, Mar 86 (manuscript received 12 Sep 85) pp 37-42

[Article by V.N. Ivankina, RSFSR Ministry of Health]

[Abstract] Summary tables are presented and explained, providing statistical materials on the development of public health in the RSFSR since 1975. Characteristics presented include those describing the development of hospital and ambulatory-polyclinic institutions in the Republic (number of institutions, number of beds, number of beds per 10,000 population, number of ambulatory-polyclinic institutions), characteristics of the activity of ambulatory-polyclinic institutions (number of visits, number of housecalls, number of visits to physicians per resident, number of therapeutic sectors, number of pediatric sectors, population per pediatrician), number of hospitals in the RSFSR and their mean capacity (number of oblast kray and Republic hospitals, central rayon hospitals--urban and rural--children's oblast hospitals, children's non-infectious hospitals and uchastok hospitals), the increase in hospitalization of patients (hospitalization of patients in thousands and hospital visits per 1,000 population), the growth in the number

of physicians and other medical personnel, the growth in physicians and other medical personnel in city and rural situations (including the number of TOE physicians positions vacant).

6508/12379
CSO: 1840/2059

UDC: 616.057.082

ORGANIZATION OF OPERATION OF TERRITORIAL SHOP POLYCLINIC UNDER CONDITIONS OF TRANSFER TO ANNUAL PHYSICAL EXAMINATION [DISPENSARIZATION]

Kishinev ZDRAVOOKHRANENIYE in Russian No 4, Jul-Aug 85 (manuscript received 15 Apr 85) pp 25-28

[Article by D.I. Norok, Chief Physician, 4th Municipal Clinical Hospital, Kishinev]

[Abstract] Operation of an independent territorial-shop polyclinic, functionally associated with Kishinev Municipal Clinical Hospital No. 4, was described and discussed. The organization of the polyclinic permits provision of patient services without loss of work time and with the assurance of assistance of specialists when needed. The central figure in the process is the shop physician. A study of the adequacy of observation and treatment of workers before transition to annual universal medical examinations, begun in 1983, included the attempt to include all persons who had not received medical care from 1980-1983. The study showed that 3621 (22.1 percent) of 16,444 persons examined at the polyclinic were observed regularly as members of a group at risk of occupational diseases. Workers and employees (7773) (47.2 percent) receiving medical care or in a group which is examined regularly (pregnant women, youths etc.) had been examined previously. There were 5050 (30.7 percent) workers who were not examined in the last 3 years because previous examination showed them to be healthy. These measures were carried out in a program calling for 2 work-days per week for medical examinations at convenience of the workers, which gave the shop physician 90-95 days per annum for carrying out this work and made it possible for him to examine 1300-1500 workers. There was no need to examine all the workers at one time. The 1983 study showed that 30 percent of the workers examined were healthy or apparently healthy. The overall health provision program closely approximates a transition to annual universal medical examination of the workers but more progress in this direction was recommended.

2791/12379
CSO: 1840/2063

WORK EXPERIENCE IN PREVENTION OF INFECTIOUS DISEASES IN VILLAGE

Kishinev ZDRAVOOKHRANENIYE in Russian No 4, Jul-Aug 85 (manuscript received 25 May 85) pp 42-43

[Article by Z.N. Chebotar, Lopatin Village Feldsher-Midwife Post, Orgeyev Rayon, MSSR]

[Abstract] A description of the work of the Lopatin village feldsher-midwife post, as the primary link in public health care emphasized the importance of improvement of village sanitation and medical care. Active participation of feldsher-midwife post workers in medical inspection of the village, epidemiologically important objects, water supply, public catering enterprises, schools etc., was pointed out. Problems are attacked after public discussions of the issues involved. The vital role of planned immunization was emphasized and its profound effect on incidence of tetanus, whooping cough, poliomyelitis, diptheria and measles was described. Implementation of anti-epidemic measures after isolated cases of an infectious disease arise and prevention of zooanthropozoic infections (especially rabies) were mentioned briefly. Work in tuberculosis prevention was described. The importance of medical awareness of the population and the exchange of professional information in order to prevent infectious diseases was emphasized.

2791/12379
CSO: 1840/2063

EARLY OBSERVATION OF PREGNANT WOMEN AS INSURANCE FOR SAFE DELIVERIES

Kishinev ZDRAVOOKHRANENIYE in Russian No 4, Jul-Aug 85 (manuscript received 25 May 85) pp 43-44

[Article by Ye.F. Negoitsa, Feldsher-Midwife Post, Prutena, Faleshty Rayon, MSSR]

[Abstract] Special attention given to early observation of pregnant women by members of the village feldsher-midwife post includes examinations by a therapist, a dentist and, if necessary, other specialists. Early medical observation was provided for 99.5 percent of all pregnant women in 1984 as compared to 85.0 percent in 1980. Birth rate increased 1.1 percent in this period. Women on maternity leave were examined once a week. Great importance was attached to prophylactic gynecological examination and special attention was given to "high-risk" women of child-bearing age. Cancer screening of women was quite effective. Pregnant women were transferred to non-hazardous job positions. These measures contributed greatly to improvement of the health of pregnant women and their children.

2791/12379
CSO: 1840/2063

UDC: 618.19-614.2-616.006.073

PROSPECTS FOR UTILIZATION OF THERMOGRAPHY FOR SCREENING OF BREAST CANCER IN SYSTEM OF UNIVERSAL DISPENSARIZATION OF POPULATION

Kishinev ZDRAVOOKHRANENIYE in Russian No 5, Sep-Oct 85 (manuscript received 26 Dec 84) pp 26-28

[Article by K.A. Tsybyrne, G.B. Khonelidze and V.Ya. Mazurin, Department of Faculty Surgery (headed by Professor K.A. Tsybyrne) Kishinev Medical Institute; Laboratory of Thermography (headed by Candidate of Medical Sciences V.Ya. Mazurin) Moldavian Scientific Research Institute of Oncology]

[Abstract] Infrared thermography is suggested as an initial screening method for determination of patients to receive additional radiologic studies for detection of early breast cancer. The authors have analyzed the data from examinations of 1500 healthy women with no complaints related to the breast, from 22 to 76 years of age. From 6 to 10 thermograms were made of each patient, following 15 to 20 minutes adaptation to the temperature in the test room, aerosol irrigation of the breasts with 96° ethyl alcohol minutes before examination. Changes indicating pathology were found in 32% of the cases. Thermograms are said to be approximately as accurate as radiology in detecting breast cancer, and much easier and less expensive to perform. It is suggested that all women receive thermogram examinations as a part of routine annual physical exams.

6508/12379
CSO: 1840/2023

UDC 613.81

SOCIAL AND HYGIENIC ASPECTS OF DRUNKENNESS AND ALCOHOLISM

Kishinev ZDRAVOOKHRANENIYE in Russian No 6, Nov-Dec 85 (manuscript received 30 Jul 84) pp 48-52

[Article by I.F. Prisakar and M.S. Chekan, 2d Department of Social Hygiene and Health Care Organization (head-professor I.F. Prisakar) Kishinev Medical Institute]

[Abstract] A general description of the concepts of alcoholism and drunkenness includes brief discussion of the degrees of these conditions. Chronic alcoholism and its stages are described and discussed. Physical, mental and medical changes occurring in alcoholics and the effects of these on the genetic apparatus were presented. Social problems (including casual sexual contacts, unwanted pregnancies, venereal disease and accompanying psychic trauma) created by intoxicated persons were described. The vast economic loss, from medical and social consequences of the use of alcohol to age, occupation, sex,

educational background and family background are given. Causes of alcoholism are discussed briefly. References 11: 9 Russian; 2 Western.

2791/12379
CSO: 1840/2052

UDC: 362.147:353.1

EXPERIENCE OF OPERATION OF PREVENTIVE DEPARTMENT OF CENTRAL RAYON HOSPITAL IN PREPARATION AND CONDUCT OF ANNUAL PHYSICAL EXAMINATION OF RURAL POPULATION [DISPENSARIZATION]

Kiev VRACHEBNOYE DELO in Russian No 5, May 85 (manuscript received 30 Oct 84) pp 9-11

[Article by Ye.I. Samson, M.Yu. Kolomoyets, D.V. Kulchinskiy and D.V. Starinskaya, Department of Internal Medicine I (headed by Prof. Ye.I. Samson) Chernovtsy Medical Institute, Kitsmanskaya Central Rayon Hospital, Chernovitsa Oblast]

[Abstract] The Kitsmanskaya Central Rayon Hospital, in cooperation with other medical institutions of the Rayon, has organized annual physical examinations for all persons living in the rayon. This required a number of preparatory organizational steps, including making a list of the population, announcing the goals and purposes of the examinations by radio and in the print media, and informing the public concerning the dates and times for the examinations. Card files were set up in the dispensary services office, organized by section. The steps involved in the examination of each patient are briefly described. Questionnaires have been made out for individual groups of persons working in rural areas, including mechanization workers, plant protection workers and agronomists. The steps which have been taken have increased the number of persons examined by a factor of 3.5, while reducing the time spent in each examination by a factor of more than 3.

6508/12379
CSO: 1840/2123

UDC: 613.2-085+616-058.3:613.6

FEEDING OF PATIENTS IN CERTAIN DISPENSARY GROUPS AT INDUSTRIAL ENTERPRISES

Kiev VRACHEBNOYE DELO in Russian No 5, May 85 (manuscript received 25 Oct 84) pp 106-108

[Article by T.A. Karpenko, G.A. Dunayevskiy, N.V. Stepanova, and Ye.I. Denisyako, Department of Prophylaxis and Treatments (headed by Candidate of Medical Sciences P.A. Karpenko) Kiev Scientific Research Institute of Nutritional Hygiene]

[Abstract] A study was made of the organization of special diets, as well as the morbidity and the number of days of lost working time of 1383 workers registered at a dispensary which supports 20 large industrial enterprises in the Kiev area. Particular emphasis was given to the morbidity of digestive system diseases, hypertension and ischemic heart disease. It was found that 2.3-27.2% of workers at the enterprises needed special diets. 76.4-82.7% of patients with ulcers, liver and bile-duct diseases followed the diet recommended for them. Most did so regularly, 12.5-20.1% only during acute periods. The number of patients properly observing their special diets in cases of chronic gastritis and cardiovascular diseases was much lower. It was found that 32.6-50.8% of patients consume excessive sugar, fully one-fifth of heart patients consumed too much salt, many ulcer, liver and bile-duct patients consume excessive meat and fish dishes. Insufficient attention in general is given to the organization of diet therapy of patients under dispensary observation. References 8 (Russian).

6508/12379
CSO: 1840/2123

UDC 614.1:312.2]-084([47 + 57]-21)

FACTORS UNFAVORABLY AFFECTING PUBLIC HEALTH

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 7, Jul 85 (manuscript received 25 Dec 84) pp 12-15

[Article by N.G. Petrova; Chair of Social Hygiene and Organization of Public Health (Chairman, Professor V.A. Minyayev) First Leningrad Medical Institute imeni Academician I.P. Pavlov]

[Abstract] Demographic policy can be effective only when it considers regional characteristics. Growth of large cities reflects important socio-economic changes often becoming standards for other centers. Factors affecting human health are internal (genetic) and external (natural and social). It is in the latter group that measures can be undertaken to control undesirable effects: population, population density, nervous tension, psychological stresses, noise

levels etc. Obesity, alcoholism, excessive smoking are other factors of present city life affecting human health and mortality. All of these aspects must be considered in development of measures aimed at lowering mortality: cleaner environment, healthy life style, improved working conditions, better and earlier diagnoses and more effective therapies. References 12 (Russian).

7813/12379
CSO: 1840/2153

UDC 616.056.43-084.3

SOME PROBLEMS IN OUTPATIENT CLINIC ACTIVITY OF ALLERGISTS WORKING IN MUNICIPAL POLYCLINICS

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 7, Jul 85 (manuscript received 29 Dec 84) pp 15-18

[Article by N.I. Vishnyakov, Chair of Social Hygiene and Organization of Public Health (Chairman, Professor V.A. Minyayev) First Leningrad Medical Institute imeni academician I.P. Pavlov]

[Abstract] The mass-screening, dispensarization activities in the allergy service in Leningrad polyclinics were studied during the 1978-1982 period by analyzing case charts and even by video techniques. Medicine and food allergies were the leading causes for patients' visits. On the average, 2.5 visits per year were due to allergic complaints with exception of pollenosis and bronchial asthma in which cases these visits actually doubled. The allergist-patient relationship becomes usually well cemented and lasts a long time. By far not all patients turn to allergists in case of their problems. More educational effort in this area is needed. Analysis of video materials showed that 73% of physician's time is spent with patients (one third of it filling out forms), 13% is devoted to other tasks and 13% was simply irrational waste of time. Prevention is not adequate; informational education material should be more easily accessible to all patients.

7813/12379
CSO: 1840/2153

UDC: 613.62

PHYSIOLOGIC-HYGIENIC EVALUATION OF WORK OF EMPLOYEES OF DZHIZAK COTTON GIN

Tashkent MEDITSINSKIY ZHURNAL UZBEKISTANA in Russian No 7, Jul 85 (manuscript received 14 Feb 84) pp 20-22

[Article by Kh.N. Nasritdinov, O.T. Alyaviya, Z.I. Mirrakhimova, S.V. Pryadko, V.I. Yakovenko, L.G. Airapetova, and S.Kh. Farkhadi, Tashkent Order of Labor Red Banner State Medical Institute]

[Abstract] A study was made of the sanitary-hygienic conditions of labor at the Dzhizak Cotton Gin, with an estimation of the individual degree of adaptation and an investigation of the health of the workers. Some 108 workers with various states of health, 18 to 65 years of age, with 1 to 35 years experience, as well as 21 practically healthy workers, were examined during the winter and summer seasons at the beginning and end of the working shift. Lower blood pressure was found in the summer than in winter, and the response to a mild cardiac stress test was greater in summer than in winter. The results indicate some functional insufficiency of the cardiovascular system in cotton gin workers during the summer and at the end of the working shift throughout the year. This indicates a need for technical, sanitary hygienic and health improvement measures to better the conditions of labor to prevent and to decrease cardiovascular morbidity in this plant.
Figure 1; references 2 (Russian).

6508/12379
CSO: 1840/2108

UDC 618.2.084-618.396(479.24-201)

INCOMPLETE PREGNANCY TERMS AND SOME ORGANIZATIONAL ASPECTS OF PROPHYLAXIS

Baku IZVESTIYA AKADEMII NAUK AZERBAYDZHANSKOY SSR: SERIYA BIOLOGICHESKIKH NAUK in Russian No 6, Nov-Dec 85 pp 116-119

[Article by E.A. Abdullayeva, Azerbaijan Order of the Labor Red Banner State Medical Institute imeni N. Narimanov]

[Abstract] Incomplete pregnancy terms have negative effects on the health of women and on family relationships; they affect the reproductive rates and the economy of the whole country. Prematurely born children are disease-prone. Methods for determining high risk groups among pregnant women were developed; estimates range from 17 to 70% of all pregnant women being in this category. The goal of this study was to analyze incomplete terms in Baku and to propose measures designed to prevent this phenomenon. Analysis of the activities of obstetrics-gynecology units in Baku showed that the level of medical examination in them is inadequate: only 20.8% of women above 18 years of age

were examined by gynecologists, 70.9% of the deceased children were born prematurely. Analysis of mortality causes were given showing that many of them could have been prevented. Organizationally, more consultations and routine examinations of pregnant women were recommended along with proper education, nutrition and rest. References 3 (Russian).

7813/12379
CSO: 1840/2029

UDC 616.12-005.4-084.3

DISPENSARIZATION OF PATIENTS WITH CORONARY ISCHEMIA

Moscow SOVETSKAYA MEDITSINA in Russian No 1, Jan 86 (manuscript received 12 Jun 85) pp 57-62

[Article by D.A. Bekhbudova, Ye.V. Kokurina, Ye.V. Bochkareva and R.K. Urumbayev, Department of Prophylactic Pharmacology, Institute of Prophylactic Cardiology; All-Union Cardiological Scientific Center, USSR Academy of Medical Sciences, Moscow]

[Abstract] The article reports on study of diagnostic procedures for early discovery of coronary ischemia in 412 out-patients at two clinics; the patients were divided roughly equally into those with stenocardic complications and those without. Some two-thirds of these out-patients were brought to the cardiological center for comprehensive examination. The effectiveness of diagnosis at the out-patient clinics and the frequency of myocardial infarction among the patients given full examinations were assessed. Medical history, ECG and stress tests showed that the out-patient clinics sometimes failed to diagnose accurately, often attributing stenocardia when none was actually present. Out-patient clinics failed to use ergometric tests that could readily determine presence or absence of the disease. Clinics have also failed to prescribe, record and follow up on the use of heart medications. Supply problems in providing heart medications are also noted. Figures 2; references 6 (Russian).

12131/12379
CSO: 1840/2083

UDC 614.2+362.1]:06.043(470.61)

## COMMUNITY COUNCILS AT MEDICAL INSTITUTIONS IN ROSTOV OBLAST

Moscow SOVETSKAYA MEDITSINA in Russian No 11, Nov 85 (manuscript received 12 Nov 84) pp 69-71

[Article by V.I. Pakharin, Rostov]

[Abstract] Community Councils at medical institutions serve as a link between society at large and the medical community, and serve to make each alert to the needs and concerns of the other. In Rostov Oblast, more than 450 such councils are currently in existence, including those at the research and educational institutions. Appointments to a council are made by the various collectives for a 2 year term, with approval of the local ispolkoms. Not more than a third of the members of councils that normally has 22-25 members are from the medical establishment. The councils are divided into 3-4 member sections charged with oversight over various projects. Areas of responsibility include sanitary and hygienic conditions, nutrition, material and technical support, health education, cultural affairs, rehabilitation, and so forth. Many of the members of such councils have received recognition and awards for their efforts in promoting and improving health care. Years of experience with the community councils has shown that their contribution to public health is inestimable.

12172/12379
CSO: 1840/2154

UDC 591.484.617.7

## PESTICIDE-INDUCED CHANGES IN COLOR PERCEPTION

Baku IZVESTIYA AKADEMII NAUK AZERBAYDZHANSKOY SSR: SERIYA BIOLOGICHESKIKH NAUK in Russian No 2, Mar-Apr 85 pp 3-6

[Article by Z.A. Aliyeva, M.Yu. Sultanov and T.A. Mirzoyev, Institute of Physiology imeni A.I. Karayev, Azerbaijan SSR Academy of Sciences]

[Abstract] A study was conducted on 369 male agricultural workers, occupationally exposed to pesticides, to determine the effects of such exposure on color perception. All subjects had normal color vision. Threshold determinations showed that in 35.5% of the subjects perception thresholds were raised 2-fold. Among workers with history of exposure of 5 to 10 years the percentage of such individuals was 1.4-fold greater than among those with less than 5 years of occupational exposure to pesticides ($P < 0.05$). The number of individuals with a raised threshold for either red or green color was 50.3% in the cohort, while the number of individuals with a combination of diminished perception for 2 or three colors was 37.5%. With less than 5 years of occupational exposure the threshold elevations were on the order of 2.1- to

2.5-fold above normal, while with 5 to 10 years of exposure the thresholds were raised 2.6- to 3.5-fold. These observations support the contention that diminished color perception is one of the manifestations of CNS toxicity of low pesticide concentrations. Figures 1; references 10 (Russian).

12172/12379
CSO: 1840/2013

## SHORTCOMINGS ALLEVIATED IN SOVIET OCCUPATIONAL HEALTH CARE

Moscow ARGUMENTY I FAKTY in Russian 4 Mar 86 pp 4-5

[Article by I. Borich]

[Abstract] The extensive network of Soviet occupational health services and the constant improvements in the system have resulted in the fact that disease-related incapacity for work has been reduced by 22 days per 100 workers in the first four years of the 11th Five Year Plan. The concern for the health of workers, however, is not predicated on economic factors, but expresses the genuine and humane concern of the party and the government for the welfare of the Soviet people. This concern is evident in constant striving to eliminate or at least diminish existing shortcomings in occupation health services, and place additional emphasis on prevention. In addition to improvements in the health services, a number of other amenities have been introduced, such as the child care centers which have significantly increased the productivity of working mothers.

12172/12379
CSO: 1840/1179

## SITUATION IN PHARMACIES

Moscow SOVETSKAYA ROSSIYA in Russian 25 Mar 86 p 2

[Article by T. Karyakina, V. Mamontov and A. Orlov, special correspondents]

[Abstract] The authors report on the effectiveness of Soviet pharmacy operations. The Central Rayon Pharmacy for Khabarovsk, for example, has a reputation for being well-supplied, but the authors found it impossible to obtain analgin, alochol or nitroglycerin in their test visit. One problem is in accounting procedures and bottlenecks in moving supplies from warehouses to the retail outlet. Expired medications and improperly stored containers clutter warehouses, and computerized record-keeping has failed to streamline processing. In Kalinin Oblast, a pharmacy director reported on shortages of zinc-suspension insulin and other essentials for chronic ailments. Planned amounts of insulin covered only half the known cases of diabetes in the region. A further problem is that many supplies are received in bulk form and are only slowly made available to purchasers in retail packaging. These medications are

packed in large, awkward containers that are often wet or damaged. A shortage of warehousing is also found throughout the USSR. While Soviet pharmacies resist the label of commercial enterprises, the newspaper "raid" determined that they are not successfully carrying out this aspect of their function. The authors requested that consumers respond to two questions, one concerning their experiences in obtaining medicines and the other asking suggestions for improving the situation.

12131/12379
CSO: 1840/1134

MEDICAL CARE IN KIRGHIZIA

Frunze SOVETSKAYA KIRGIZIYA in Russian 8 Apr 86 p 3

[Article by I. Makarova]

[Abstract] The editors of Sovetskaya Kirghizia receive many letters dealing with medical care, both in the positive and negative sense. For every case of deep concern and assistance on the part of the medical personnel there are also examples of disinterest and callousness. In addition, many letters point to the poor working conditions facing the physicians and their colleagues in dilapidated hospitals and clinics, and the demoralizing effect that such conditions have on the patients and the doctors. All of these matters should be given serious consideration and deliberation at the Kirghiz SSR Ministry of Health since, as the 27th Party Congress noted, nothing is more important than health.

12172/12379
CSO: 1840/1186

UDC 362.71:614.2](470.51)

HEALTH ASSESSMENT OF ONE-YEAR-OLDS

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 5, May 85 (manuscript received 17 Oct 84) pp 24-26

[Article by N.N. Yezhova, V.N. Savelyev, L.F. Molchanova, G.A. Illarionova and L.V. Pinegina, Chair of Social Hygiene and Organization of Public Health, Izhevsk Medical Institute, Udmurt ASSR Ministry of Health]

[Abstract] A study was conducted on the medical, social, and hygienic aspects of the health of children in their first year of life, to determine key differences between well babies and those dying in that time frame. Tabulated data are presented for both categories of babies, showing that the elimination of certain discrepancies (e.g., delay in seeing medical attention, regular

medical care, prevention of rickets, etc.) would have prevented 29.4% of the deaths. In view of this, health education measures in the Udmurt ASSR have been intensified, including greater training in pediatrics for the medical personnel. Expert committees have been established to examine all cases of death within the first year to identify additional factors that need medical attention. As a result of such measures there has been a sharp drop in pediatric mortality.

12172/12379
CSO: 1840/2151

UDC 616-055.5/.7-036.4-07.003.1

## COST EFFECTIVENESS OF EARLY DIAGNOSIS AND TREATMENT OF HEREDITARY DISEASES

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 5, May 85 (manuscript received 30 Oct 84) pp 28-30

[Article by S.P. Maksimova, I.V. Polyakov, O.A. Gusev and L.V. Kochorova, Chair of Social Hygiene and Organization of Public Health, First Leningrad Medical Institute imeni I.P. Pavlov; Municipal Medical Genetics Center]

[Abstract] With the founding of the Medical Genetics Center (MGC) in Leningrad earlier diagnosis of phenylketonuria (PKU) and earlier treatment led to a therapeutic success rate of 89.5% in the period 1977-1983, with limited therapeutic success in another 10.5% of the cases. In the previous time frame (1969-1976) the best success rate was 80%, with a failure rate of 20%. Analysis of the economic benefits from the more efficient diagnosis and greater treatment effectiveness in the 1977-1983 period showed that the cost effectiveness per patient was 77,552 rubles, versus 65,126 rubles per patient in the 1969-1976 period. In terms of PKU alone, the cost effectiveness of the MGC operation is on the order of 387,301 rubles per year.

12172/12379
CSO: 1840/2151

UDC 614.2:613/614.378.661]:001.83

PLANNING COOPERATIVE PROJECTS BETWEEN LENINGRAD SANITARY HYGIENE MEDICAL INSTITUTE AND PUBLIC HEALTH AUTHORITIES

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 5, May 85 (manuscript received 23 May 85) pp 34-36

[Article by A.F. Podlevskiy and V.P. Romanyuk, Leningrad Sanitary Hygiene Medical Institute]

[Abstract] The Leningrad Sanitary Hygiene Medical Institute maintains extensive contacts with many health care institutions in Leningrad, and in Leningrad, Pskov, Vologda and Novgorod Oblasts. These joint ventures require careful planning and consist of administrative assistance, joint research projects, postgraduate training, consultation in diagnosis and therapy, and public health education. A special effort is made to bring the latest advances in medical technology into clinical medicine and public health. Careful administrative and research planning is required to avoid duplication of effort and to assure the most efficient utilization of personnel, financial resources, and facilities. Some of the key projects that currently have a high priority deal with improvements in diagnostics, prevention and treatment of noise and vibration diseases, prevention of dermatological, auditory and visual disorders, and hygienic monitoring of the working conditions at microbiological, cellulose-paper and metallurgical plants. Equally important are projects dealing with environmental health, especially those of children and adolescents, and the prevention of nonoccupational diseases, as well as monitoring and updating of health statistics.

12172/12379
CSO: 1840/2151

UDC 362.121:002

ANALYSIS OF SELF-SCHEDULED APPOINTMENTS AT MUNICIPAL POLYCLINIC

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 5, May 85 (manuscript received 28 Jun 84) pp 38-40

[Article by V.N. Chernov, N.A. Fetisova, N.R. Aleksandrovich and M.M. Verentsov, Voronezh]

[Abstract] An analysis was conducted on the compliance rate for self-scheduled appointments at a Voronezh polyclinic serving 38,100 adults. The data showed that only 36.2% of the self-scheduled appointments with the physicians were kept, with the no-show rate ranging from 46.4% for specialist therapeutists, to 69% for opthalmologists and 79.9% for otorhinolaryngologists. The high failure rate to keep self-made appointments may have been due in part to the

availability of other avenues of securing clinical appointments and the ease with which such appointments can be made. Still other patients preferred not to make appointments in advance. These findings have indicated certain weaknesses in the self-scheduled appointment system, which can be used in improving the system in the future.

12172/12379
CSO: 1840/2151

UDC 614.2:008(470)

CURRENT PUBLIC HEALTH PROBLEMS IN RSFSR

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 6, Jun 85 (manuscript received 21 Feb 85) pp 3-7

[Article by N.T. Trubilin, RSFSR Minister of Health]

[Abstract] An analysis is provided of some of the more important achievements and problems of public health in the RSFSR. On the positive side, remarkable progress has been made in health care delivery over the wide area of the RSFSR with the establishment of additional mobile medical teams. In addition, 1984 saw the graduation of more than 22,000 new physicians and some 62,000 intermediate-level medical personnel. This brings to 44.6 the number of physicians per 10,000 citizens, and the corresponding figure for the intermediate-level personnel to 120.6. Other forms of improvement in medical service have involved the break-up of large polyclinic into smaller facilities closer to the target population, as well as the establishment of new polyclinics and hospitals. In certain areas, recruitment and adequate facilities continue to remain a problem, but efforts are underway to alleviate any shortcomings. Encouragement is provided for professional postgraduate education, and other means are being taken to ensure more responsive and efficient operation of existing health facilities and services. New medical technologies are being implemented at a rapid pace, a feature of health care that is of particular importance in view of the mass screening program.

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UDC 616.89-008.441.13-036.12-084.3

## OUTPATIENT CARE OF CHRONIC ALCOHOLICS

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 6, Jun 85 (manuscript received 3 Oct 84) pp 22-24

[Article by G.L. Gomelskaya and N.V. Lazko, Chair of Social Hygiene and Organization of Public Health, First Moscow Medical Institute imeni I.M. Sechenov]

[Abstract] An analysis was conducted on the effectiveness of outpatient management of chronic alcoholics at one of the drug addiction outpatient clinics in Moscow, based on the case histories of 135 patients seen 1982. The patients ranged in age from 31 to 50 years; 18.5% were white collar workers and the remainder manual laborers. The analysis revealed that 84.6% were first seen after a prolonged (5-30 years) history of alcohol abuse, with only 15.4% seen in the first 5 years of the disease. In addition, 10.2% presented when their condition was already complicated by psychotic processes, which further diminished therapeutic effectiveness. One of the key issues that came to light was the fact that early diagnosis was a rarity, indicating that all physicians should undergo intensive training in the diagnosis of alcoholism. In addition, therapy should involve a number of somatic and mental health disciplines to encompass all ramifications of the predisposing and environmental factors. Health education was felt to be a prerequisite for successful management of alcoholics, since in too many cases short-term remissions were due to indifference and passivity of the social environment.

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UDC 616-084.3616-07-039.57

## IMPORTANCE OF CONSULTATION AND DIAGNOSIS POLYCLINICS IN MASS HEALTH SCREENING OF POPULATION

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 6, Jun 85 (manuscript received 27 Nov 84) pp 24-25

[Article by R.S. Khachatryan, Chair of Social Hygiene and Organization of Public Health, First Leningrad Medical Institute imeni I.P. Pavlov]

[Abstract] A study was made of dispensarization problems in the activity of ten therapeutic specializations at two consultation diagnostic service polyclinics. The consultation and diagnosis polyclinics established at various medical institutions of higher learning and research represent a further contribution to expanded Soviet ambulatory care service. Analysis of the operation of such polyclinics in Leningrad has shown that, on the basis of the

number of referrals, confirmation of diagnosis made at the local level was made in 61.4% of the cases. In 38.6% of the cases the diagnosis of the district physicians was either refined (22.4%) or changed (16.2%). The highest incidence of misdiagnosis was encountered in endocrine diseases, where confirmation of the initial diagnosis was made only in 41.6% of the cases, and in rheumatology where the specialists confirmed only 37.2% of the initial diagnoses. These findings indicate that the rate of diagnostic error is too high to be acceptable, and that the patients were subjected to improper treatment at the local clinics. The data indicate that the more complicated cases should be managed in their entirety on an out-patient basis by the consultation and diagnosis polyclinics.

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UDC 616.33/.342-072.1

ATTEMPTED ORGANIZATION OF MASS ENDOSCOPIC STUDY OF DISPENSARIZATION PATIENTS

Moscow SOVETSKOYE ZDRAVOOKHRANENIYE in Russian No 2, Feb 86 (manuscript received 12 May 85) pp 10-12

[Article by Yu.P. Spizhenko, A.N. Soroka, Z.M. Paramonov, S.I. Kulich and V.P. Yevtushenko, Zhitomir District Hospital, Zhitomir District Oncological Clinic]

[Abstract] In recent years fiber optic procedures have been used to diagnose malignant tumors, polyps and other ailments of the digestive tract. Yet experts disagree on the effectiveness of prophylactic examinations. The present article reports on a mass study in 1984-85 of digestive tract, stomach and duodenal tissue in patients at clinics and hospitals of the Zhitomir district. Of 8021 subjects, 101 were found to have stomach cancer, while 5 had digestive tract malignancies and 160 had polyps. Of these 126 were operated on, a figure 3 times greater than the normal yearly pattern. The authors attribute endoscopic examination with early diagnosis and control of such malignancies, and recommend further application of the method. References 7 (Russian).

12131/12379
CSO: 1840/2070

UDC 616.6:313.13

ECONOMIC LOSS DUE TO UROGENITAL DISEASES

Moscow SOVETSKOYE ZDRAVOOKHRANENIYE in Russian No 2, Feb 86 (manuscript received 12 Jul 85) pp 21-24

[Article by G.I. Zaborovskiy, Grodno Medical Institute]

[Abstract] Labor shortages require careful study of losses due to illnesses such as those of the urogenital organs. The present article reports on a 3-year history of such ailments for a population totaling 75,000, and for 11 years for 371,000. Data were considered for urogenital tuberculosis, trichomoniasis, ovary malfunctions, neoplasms and injuries. Economic losses included lost working time, hospital expenses and mortality. Data indicated an average loss of 1,636,602 rubles for an urban working population of 100,000 for labor productivity alone. Figures and formulas are given for hospital use and loss of time on the job. Particular diseases were not as important to the study as their severity and the duration of their course. While malignancies were the cause of significant lost work time and caused invalid status in numerous patients, kidney and urinary tract ailments were more likely to cause death. On the whole, urogenital diseases in the USSR result in economic loss of 20.6 rubles per urban resident. References 4 (Russian).

12131/12379
CSO: 1840/2070

UDC 616-082+362.1]-057:380/.382

ORGANIZATION OF MEDICAL CARE FOR MERCHANDIZING WORKERS

Moscow SOVETSKOYE ZDRAVOOKHRANENIYE in Russian No 2, Feb 85 (manuscript received 20 Jun 85) pp 25-28

[Article by V.V. Yermakov, G.L. Gomel'skaya and G.A. Mikhaylova, First Moscow Medical School imeni I.M. Sechenov]

[Abstract] Goals of providing improved distribution of consumer goods in the USSR bring increasing importance to health care for workers in commercial enterprises. The present article reports on a study of work patterns and health needs in the GUM State Department Store in central Moscow (with its branches of convertible currency shops and branch stores, employing 300,000). Illnesses in 1983 included 121.8 incidents and 1,539.2 lost work days per 100 workers, or roughly the same as in production enterprises. Various respiratory ailments were the most common complaints, followed by cardio-vascular ailments, ulcers and other ailments of the digestive tract, liver and spleen. Circulatory problems in the legs were found in 29.2 per 100 examined subjects. The study conducted by the First Moscow Medical Institute imeni I.M. Sechenov

has led to expansion of the GUM enterprise dispensary, but further recommendations suggest the dispensary should be authorized to grant temporary work release permits, cooperate more comprehensively with more advanced medical institutions, and expand its services to include psycho-emotional assistance for GUM employees.

12131/12379
CSO: 1840/2070

UDC 612.648:616-053.31(-22)

ANTHROPOMETRIC DATA ON RURAL NEONATES

Minsk ZDRAVOOKHRANENIYE BELORUSSII in Russian No 9, Sep 85 (manuscript received 7 Feb 85) pp 10-13

[Article by I.K. Kuzmenkova, Belorussian Scientific Research Institute of Maternal and Pediatric Health Care]

[Abstract] Anthropometric measurements provide one of the means of securing objective health data for a population, as well as an indication of the efforts of environmental factors. To that end, such an analysis was conducted on 1028 neonates in the rural regions of the Polessia in Belorussian SSR. The tabulated data demonstrated that the body size of newborn boys is larger than that of girls, with the exception of femoral circumference. The proximal sections of the extremities were longer than the distal sections in both sexes, and the brachial diameter was 1.4-fold greater than the pelvic diameter. The chest wall was generally found to be rounded in form, while the head had a mesocephalic configuration. Correlation analysis between body length and the various body measurements showed a positive correlation in the $r = 0.5-0.8$ range (hand length, leg length, standing and sitting body length in boys, etc.). A weaker correlation prevailed between such parameters as shin length, should and pelvic diameters, trunk length, and so forth, on the one hand, and the body length, on the other ($r = 0.2-0.3$). Tables 2; references 4: 3 Russian, 1 Western.

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CSO: 1840/2144

UDC 616.89-085.851.82

## ART THERAPY AS A COMPONENT OF PSYCHOTHERAPY

Moscow MEDITSINSKAYA SESTRA in Russian No 9, Sep 85 pp 18-20

[Article by R.B. Khaykin, candidate of medical sciences, Leningrad]

[Abstract] Art therapy has become one of the more important and accessible forms of psychotherapy that appears to be beneficial in a variety of mental disorders. The exact mechanism of action has not been elucidated, but a variety of theories abound to account for its effectiveness. These include the salutary effects of the creative process, release of emotional inhibitions, better recognition of one's own problems, and the formation of a communicative bridge with others. Such sessions should be organized on a voluntary basis and every artistic effort should receive a positive evaluation for reinforcement. Patients with psychomotor disorders and communicative problems in particular should be encouraged to engage in art, as it has been shown to prevent development or onset of schizophrenic tendencies and to develop self-confidence.

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UDC 616.89:061.6(477-25)"1985"

## SCIENTIFIC CONFERENCE DEDICATED TO OPENING OF KIEV BRANCH OF ALL-UNION SCIENTIFIC INSTITUTE OF GENERAL AND FORENSIC PSYCHIATRY IMENI V.P. SERBSKIY

Moscow ZHURNAL NEVROPATOLOGII I PSIKHIATRII in Russian Vol 85, No 11, Nov 85 pp 1747-1748

[Article by A.D. Revenok and V.B. Pervomayskiy, Kiev]

[Abstract] Participants in the conference, which opened 28 March 1985, included leading psychiatrists of the All-Union Scientific Research Institute of General and Forensic Psychiatry imeni V.P. Serbskiy, USSR Ministry of Health, the All-Union Scientific Mental Health Center, USSR Academy of Scientists, psychiatric institutions and Party, government, Soviet and legal

agencies' representatives. G.V. Morozov, director of the All-Union Scientific Research Institute of General and Forensic Psychiatry opened the conference by emphasizing the great concern of the Party and the government for the advancement of sciences and protection of public health, the wisdom of selecting Kiev as the branch site and the role of Party and government groups in the opening. P.G. Otroshchenko, Deputy Minister of Health, UkSSR, discussed the present status of the UkSSR psychiatric service and discussed ways for developing it further. A.D. Rebenok, Director of the Ukrainian branch of the All-Union Scientific Research Institute imeni V.I. Serbskiy, described and discussed some aspects of organization of the branch. Other speakers included Professor P.V. Voloshin, chairman of the board of the Republic Society of Neuropathologists and Psychiatrists, R.A. Nadzharov, All-Union Scientific Mental Health Center, AMS, Moscow, A.L. Romodanov, Kiev Scientific Research Institute of Neurosurgery, V.V. Melnik, V.F. Polenova, Professor G.L. Voronkov, V.N. Sinitskiy, V.S. Shaposhnikov, L.A. Bulakhova and Ye.L. Macheret (all from Kiev). R.A. Nadzharov discussed current problems of exogeneous psychoses with schizophrenia as an example. I.P. Anokhina (Moscow) summarized data concerning the role of catecholamine and opiate systems in formation of alcohol dependence. M.N. Ivanets (Moscow) discussed some key problems in chemical narcology which contribute to establishment of a base for biological and epidemiological studies of alcoholism. A.K. Kachayev (Moscow) discussed exceptional states in forensic psychiatry. E.A. Kostandov (Moscow) described mechanisms of psychological protection after perception of emotionally disturbing stimulii. R.V. Voloshin (Kharkov) discussed new methodological and methodical approaches to solution of urgent problems of narcology and psychiatry at the Kharkov Scientific Research Institute of Neurology and Psychiatry. G.L. Voronkov described some aspects of teaching psychiatry to general physicians.

2791/12379
CSO: 1840/1165

# CHERNOBYL EVACUEES GET MEDICAL, FINANCIAL AID: HIROSHIMA, NAGASAKI VICTIM PARALLELS DRAWN

## Chernobyl Evacuation, Medical Aid Discussed

Moscow MEDITSINSKAYA GAZETA in Russian 21 May 86 p 2

[Article by V. Kalita, MEDITSINSKAYA GAZETA correspondent: "Efficiency"]

[Text] At the last party meeting held at Borodyanskiy Central Rayon Hospital, the question of improving the style of work in the course of reorganization was discussed. The discussion centered around the most rational application of work time, around "compacting" operations and conferences, and around instilling in communists and non-party members a sense of organization, internal cohesion, and true efficiency. And, of course, none of those present at the meeting could know that one week later every member of the collective would be put to a severe test...

Within a 24-hour period, the rayon's medical workers, along with the teams of physicians sent from other oblasts, had to accept around 30,000 evacuees from the emergency zone around the AES [atomic power plant]. To accept meant to give each one a dosimetric measurement, to wash the people, to change clothes for some of them with the aid of the domestic services, to perform the necessary analyses in their living areas, to certify each one, to place those in need of hospitalization into hospitals, and then to provide daily monitoring over the health of all those in their care. Also, the children had to be sent outside the limits of the oblast.

"This was, I believe, more complex than it ever had been at the front," recalled P. I. Yurchenko, therapeutist at the rayon hospital and participant in the Great Patriotic War, in telling of the situation on the first day of work after the accident at the AES. There the usual situations were repeated, but here everything was happening for the first time. Decisions had to be made instantly.

Chief Physician and Communist V. D. Kovalchuk, who has headed the rayon's health service for almost a quarter of a century, showed an example of true efficiency. Having consulted with the republic's Ministry of Health representative V. V. Melnik, he proposed taking the evacuees in two flows, creating a second health screening station and utilizing the shower facilities of a local enterprise. This plan was also supported by the party raykom.

The organization of this matter was performed in counted minutes, without allowing any delays en route.

Over 100 temporary teams of physicians came to the rayon from the republic's oblasts. They set to work in the newly organized physician's clinics, literally taking the dosimetric indicators "from the wheels", giving everyone who came there a blood test, certifying them, and if necessary determining the type of medical aid needed. This was all done on the first day. Then they decided to organize house-to-house rounds of the population. Here, students, interns, and staff physicians from Kiev Medical Institute who came as reinforcements were of great help.

Identified patients were immediately taken by ambulance to clinics or hospitals, and in serious cases--to the central rayon hospital, where there were highly trained specialists from the Kiev Scientific-Research Institute.

"All these days we feel constant support from the republic Ministry of Health and the oblast Health Department," says V. D. Kovalchuk. The rayon has been provided with soft inventory, medicines, the necessary instrumentation, and of course, teams of specialists.

This was a sort of test for implementation of the decisions of the party meeting on improving the style of work. The brief information received from on site is all business. It is taken by a dispatcher and a duty staff member for coordinating the work of the medical service. They do not expound on their achievements, but report only the basics.

There were also a few annoying drawbacks. For example, a team of physicians arrived from Odessa. They were told to bring their dosimetric laboratory apparatus. Yet they arrived empty handed. It is a good thing that the collective from the Kiev Institute for Physician Training helped them out. It sent 30 laboratory technicians with all the necessary equipment. The emissaries from Sumskaya Oblast were also a disappointment. Both the first team of physicians and the one sent to replace it arrived empty handed.

Today, when the heat of the first days of the "medical watch" has somewhat cooled, we may draw certain conclusions.

"The main thing is that we did not find a single person with signs of radiation sickness," says the rayon's chief physician. Those who were directed to the hospitals had exclusively somatic illnesses, and were generally older people...

A telephone call from the party raykom cut short our chat.

"Yes, today we are sending off the last of the school children to pioneer camps and sanatoriums in Odessa," reported V. D. Kovalchuk. "Of course, with medical supervision. There will be two doctors and four mid-level medical workers for each train..."

## Deputy Chairman Danilov Responds To TASS

Moscow MEDITSINSKAYA GAZETA in Russian 21 May 86 p 2

[Interview with Yu. Ye. Danilov, first deputy chairman, USSR SOKK and KP [Order of Lenin Union of Red Cross and Red Halfmoon Societies]: "Humanism in Action"]

[Text] "Chernobyl..." Today this word does not leave the newspaper headlines. How are things going there? What is being done to remedy the consequences of the accident? What kind of aid are the rayons and the victims receiving?

Letters, telegrams expressing sympathy, offers of personal aid, money drafts with the brief note "For Chernobyl" pour into the ispolkom of the USSR SOKK and KP.

A TASS correspondent turned to First Deputy Chairman Yu. Ye. Danilov of the USSR SOKK and KP ispolkom with a request that he tell about the participation of the Soviet Red Cross in alleviating the consequences of the accident at the Chernobyl AES.

"The primary task of the committees and organizations of the Red Cross and Red Crescent Societies and its active members was to render overall assistance in conducting an organized evacuation of the population from the rayons affected by the accident.

Over 160 active members of volunteer sanitary detachments came to the aid of Borodyansk, Polessk, Ivankovsk, Makarovsk rayons of Kiev Oblasts. They participated in the settlement of over 1,500 evacuees, in distributing medicines, and in implementing sanitary-prophylactic and sanitary-anti-epidemic measures at the new settlement site of the people, including also at dining, trade and water supply facilities.

Moreover, our volunteer sanitary workers and active members of medical stations took on the watch duties at treatment-prophylactic institutions. Students from the Chernobyl and Makarov Medical Secondary Schools were also enlisted in this work.

Pioneer camps and other places where evacuated children will be placed are under the special control of our active members.

In the course of making the rounds of the houses in which the evacuees now live, around 70 elderly people were found, ranging in age from 65 to 100 years, and needing special care. We must add that most of them are widows of soldiers from the Great Patriotic War. Each of them has been assigned a Society active worker, trained in caring for the sick. They will also be given the necessary material aid, as will all the displaced persons who are in need."

[Question] What monies are used to make up the aid fund for the victims of the Chernobyl accident?

[Answer] First of all, the annual membership dues of our societies. For the present day, our membership numbers in the tens of millions of people in the Soviet Union. These funds have been used to render material assistance to the victims of the Chernobyl accident. Moreover, since the first days of the disaster, after publication in the press, money orders have begun to pour in addressed to the ispolkom from the Soviet people. And there are many of them, very many people who have answered the call of someone else's misfortune and who want to help the victims. I will name only those who were among the first to send in their monetary savings. It was Pilinyak Ivan Mikhaylovich from Nosovka in Chernigov Oblast. It was the students from the Neskuchnensk Secondary School in Velikonovoselkovskiy rayon of Donetsk Oblast, comrades Orlova from Perm, Rakhmanova from Ilichevsk, the Chuprov family from Pechora, and many, many others.

[Question] What can you say about the work of the associates of the Red Cross Society committees on site in the affected region?

[Answer] The associates of the rayon and city committees of the Red Cross Society and the Ukraine Society Central Committee are working selflessly. They are giving all possible aid to their colleagues from the evacuated rayons. L. N. Forostova, chairman of the Makarovskiy Rayon Red Cross Committee has especially proven herself.

Chernobyl is yet another warning... We have once again been convinced what a disaster even a small leak of atomic energy brings, as occurred in the Chernobyl accident. We remember the victims of the explosions from the American atomic bombs in the Japanese cities of Hiroshima and Nagasaki.

We must safeguard peace, and not in words alone. We must confirm in deeds the concern for the health and life of the people. CPSU Central Committee Secretary General M. S. Gorbachev spoke of this in his address on Central Television.

The Soviet Red Cross has always supported and will continue to support the peaceful initiatives of the Communist Party and the Soviet government, and will continue to rally the world Red Cross community around the struggle for general disarmament and for the prevention of nuclear war.

## Concerts, Financial Aid for Chernobyl Victims

Moscow MEDITSINSKAYA GAZETA in Russian 21 May 86 p 2

[Article: "The Entire Country is Helping: We Are With You, Friends!..."-

[Text] Such is the custom of the Soviet people--to draw together at a difficult moment, and to overcome hardship together. This is what our fathers and grandfathers did in the years of the Great Patriotic War. This, taking up the baton of the generations, is what the young people do today.

In the very first days after the accident at the Chernobyl AES, medical students from our institute's operational Komsomol detachment donated 100 rubles to the Chernobyl aid fund. The professorial and instructional staff and associates pledged one day's wages to the Central Committee of the Ukrainian Red Cross Society for rendering aid to the population of Kiev Oblast. The

students collected over 400 rubles worth of toys for the children of Chernobyl and Kiev Oblast.

A group of student donors offered to give blood without repayment for the sick Chernobyl residents.

...A. GENKINA, editor of the medical institute's newspaper OTLICHNIK UCHEBY Dnepropetrovsk.

* * *

A concert was held at the Palace of Culture at Truskavets Resort, staged by the "Truskavchanka" people's ensemble of song and dance and by the "Truskavchanochka" children's collective.

The proceeds from this concert will be directed to the fund to aid the victims of the accident at the Chernobyl AES.

Account No 700624 of the Union of Red Cross and Red Crescent Societies ispolkom at the Mosgorbyudzhetbank [Moscow State Budget Bank] is known to all the workers of health resort institutions of the all-union sanatoria. They decided to replenish it, pledging one day's wages--around 20,000 rubles.

...I. SUSYUK, Truskavets.

* * *

By unanimous decision of the collective at the USSR Ministry of Health Sanitary-Epidemiological Main Administration pledged one day's wages to the fund for the victims of the accident at the Chernobyl AES. 300 rubles were credited to the account at the State Bank.

## Telegrams Offer Monetary Donations

Moscow MEDITSINSKAYA GAZETA in Russian 21 May 86 p 2

[Telegrams to MEDITSINSKAYA GAZETA]

The collective at the Volynsk Oblast Sanitary Epidemiological Station has unanimously decided to donate one day's wages to the fund for aiding victims of the accident at the Chernobyl AES. We would like this humble contribution to go toward the organization of medical aid.

...TOMASHCHUK, SES Chief Physician.

The collective at the Armmedtekhnika Plant of the Armenian SSR Ministry of Health has unanimously decided at its general meeting to pledge two days wages of the entire collective to the fund for aiding victims of the accident at the Chernobyl AES.

...Plant Director MARKARYAN,
Party Committee Secretary GEVORKYAN
Professional Committee Chairman KARABEKOVA

The collective of the Kemerovo Oblast Stomatological Polyclinic has decided to pledge 1,000 rubles to the fund for the aid of residents evacuated from the zone of the Chernobyl AES.

... Yu. DUBENSKIY, chief physician

## Hysterical Chernobyl Reporting Protested

Moscow MEDITSINSKAYA GAZETA in Russian 21 May 86 p 3

[Report by TASS, APN, MG correspondents: "Doctors Against the Nuclear Threat: To Achieve Mutual Understanding"]

[Text] New York. Progressive American society is decisively condemning the anti-Soviet hysteria unleashed by the reactionary circles in the USA in connection with the accident at the Chernobyl AES. Nevertheless, notes the DAILY WORLD, the Reagan administration continues to spread false reports.

All this is evidence of the goal-oriented campaign of the USA for purposes of undermining trust in the Soviet Union, poisoning the international situation, erecting insurmountable barriers in the path of talks on arms limitation, and continuing the course toward increasing militaristic preparations. However, as Professor Bernard Lawn, co-chairman of the international movement "World Physicians for Prevention of Nuclear War", stressed in regard to this matter, the USA must coexist with the Soviet Union. Is there any other way? The scientist warned that "the detonation of even one nuclear missile will lead to significantly more fatal consequences."

In his message to M. S. Gorbachev and speaking in the name of the international movement of "World Physicians for Prevention of Nuclear War", B. Lawn praised the announcement regarding the extension of the Soviet moratorium on nuclear testing, calling this an act of unprecedented state widsom. Our movement, which includes physicians from 41 countries of the world, stated B. Lawn, promises to double its efforts directed at convincing the United States government to follow the example set by the Soviet Union and thereby to achieve the establishment of a mutual Soviet-American moratorium which could lead to the conclusion of a lasting agreement on the general and total banning of nuclear weapons testing.

12322
CSO: 1840/2156

UDC: 615/849/114(083.3)

# OPTIMIZATION OF RADIATION TREATMENT CONDITIONS AND ESTIMATION OF RADIOBIOLOGICAL PARAMETERS BY ANALYSIS OF SURVIVAL RATE CURVE IN CELL-LEVEL EXPERIMENTS

Baku AZERBAYDZHANSKIY MEDITSINSKIY ZHURNAL in Russian No 3, Mar 85 pp 15-18

[Article by N.R. Ragimov and S.M. Iskenderov, Baku State Oncologic Dispensary (Chief Physician, Doctor of Medical Sciences I.N. Agayev)]

[Abstract] To accommodate to certain fundamental difficulties encountered in estimation of radiobiological parameters to optimize radiation treatment, study was made of some of the theoretical models of the survival rate curve i) to allow specific analysis of these difficulties and ii) to examine the possibility of estimating radiobiological parameters by detailed analysis of the shape of the experimental curve of survival throughout the entire range of radiation doses. Leaving aside temporarily statistically strict extraction of radiobiological parameters, the authors developed a method of estimating the parameters from the experimental curve without applying model considerations with respect to the survival function S(D). This was done by developing a special program written in FORTRAN-IV, tested using a set of hypothetical points showing the variation in survival rate as a function of radiation dose, characteristic for many sets of experimental data. The advantages of the method suggested for calculating radiobiological parameters are that the algorithm of the program is rather simple and that the parameters are unambiguously determined from the shape of the survival rate curve, regardless of model considerations. The linear representation of S(D) allows correct computation of the covariation matrix of parameters and therefore proper determination of the diagonal elements of the matrix. Figures 2; references 5: 4 Russian, 1 Western.

6508/12379
CSO: 1840/2025

UDC: 616-084.3:061.3(47+57)"1985"

# ALL-RUSSIAN CONFERENCE ON ORGANIZATION AND IMPROVEMENT OF CONDUCT OF ANNUAL PHYSICAL EXAMINATIONS OF ENTIRE POPULATION (DISPENSARIZATION)

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 3, Mar 86 pp 46-47

[Article by G.P. Skvirskaya, Moscow]

[Abstract] The conference was held in Penza in November, 1985, and involved the participation of major specialists on ambulatory-polyclinic services from all administrative territories of the Russian Federation. Fourteen reports were heard, covering such topics as major tasks of organizations and institutions in RSFSR public health for the improvement of ambulatory polyclinic services, the activity of therapeutic and prophylactic institutions and public health organizations in Penza, the role of ambulatory-polyclinic services in implementation of the combined program for further development of public health in 1985-1990, organization of automated monitoring of the work of ambulatory-polyclinic institutions, prevention of alcoholism in the polyclinic as a major factor in dispensarization, organization of the work of nonprofessional medical personnel, services in rural areas, active involvement of the population in physical culture and sports, and means for improvement of the work of the laboratory and diagnostic service in the RSFSR.

6508/12379
CSO: 1840/2059

MISCELLANEOUS

FIRE HAZARDS IN MOSCOW

Moscow VECHERNYAYA MOSKVA in Russian 10 Apr 86 p 3

[Interview with N. Ivanov, colonel and deputy chairman, Fire Prevention Service, Main Administration of Internal Affairs, Moscow Fire Inspection Executive Committee, conducted by O. Vasilyev, captain, Internal Service]

[Abstract] The number of fires and conflagrations in Moscow increased by 17.2% in the last year, reflecting lax standards and attitudes as far as fire safety goes. Many of the fires inspected at homes reveal that the cause was either drunkenness, improper wiring or operation of electrical appliances, or lack of proper supervision of children. It appears that many industrial enterprises, their managers, as well as the average Muscovite do not appreciate the danger of fire and the safety measures that must be followed to the letter. Alleviation of this state of affairs will require more public education as well as sanctions against the guilty parties.

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CSO: 1840/1187

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