

MS-352

Harold Sandler Papers

**Special Collections and Archives
Wright State University Libraries**

Processed by:

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Introduction

Dr. Harold Sandler, MD, donated his accrued books, documents, and papers gathered during his long career in aerospace medicine to the Wright State University Libraries' Special Collections and Archives in February of 2000. The Harold Sandler Collection consists of seven boxes (approximately 7 linear feet) of materials.

The collection contains photocopies of aerospace medical research articles, periodical articles, and books, along with data, photographs, journals of proceedings, and Russian aerospace medicine pamphlets. Included are four bound books containing articles written by Dr. Sandler. The majority of the information within the collection was used by Dr. Sandler to write review articles and to supply background information for his research.

The Harold Sandler Collection contains information dating from 1934 through 1998, with the earlier information found in medical journal articles. Most of the materials date from the 1950s through the 1990s, Dr. Sandler's years of active research concerned with the effects of weightlessness on both animal and human subjects for NASA – often in conjunction and collaboration with other researchers from around the world.

There are no restrictions on the use of the Harold Sandler Collection.

The Harold Sandler Collection is organized into eleven (11) series:

- Series 1: Acceleration Research
- Series 2: Bed Rest Research
- Series 3: Exercise Research
- Series 4: Lower Body Negative Pressure (LBNP) Research
- Series 5: Water Immersion Research
- Series 6: Gravitational Physiology Symposium Papers
- Series 7: Cosmos Projects
- Series 8: Manned Flight
- Series 9: Harold Sandler Articles
- Series 10: Harold Sandler Research Papers
- Series 11: Bound Books

Biographical Sketch

Harold Sandler was born in 1929 and raised in Cincinnati, Ohio. He obtained an undergraduate degree majoring in chemistry and math from the University of Cincinnati in 1951. He then attended the University of Cincinnati's Medical School and graduated with a degree in Internal Medicine in 1955.

Drafted into the Navy in 1961, he embarked on a career of aerospace medical research while based at the Johnsville, Pennsylvania naval facilities. Following his tour of duty, he accepted a position at Moffett Field's Ames Research Center in California as a research scientist. Working for the National Aeronautics and Space Administration (NASA), he participated in important studies pertaining to weightlessness and its effects during real and simulated space flight. Many of these were done jointly with international partners, including the United Soviet Socialist Republic (USSR) and other European countries. Of these activities, his work on the Biocosmos or COSMOS flights 1514 and 1667 are most notable.

Dr. Harold Sandler received many significant academic, government, and professional society appointments, awards, and honors throughout his career. He also participated on important boards and committees, and in societies and social action groups. He retired after twenty-six years of government service, and now works as a consultant in cardiovascular research from his home state of Washington.

Scope and Content Notes

The Dr. Harold Sandler Collection covers important aerospace medical research accomplished prior to and during his study of the effects of weightlessness including the study of the operation of the Gauer-Henry reflex, gravity effects on circulation, and the use of artificial gravity as a countermeasure for weightlessness deconditioning using both animal and human subjects. Researchers will have access to an exhaustive collection of research articles Dr. Sandler used to write review articles on several subjects related to weightlessness, as well as data and information he gathered and used in his own studies. A complete set of his articles and research papers constitutes the published evidence of his highly prolific and successful career as an aerospace medical researcher for NASA.

Many of the files throughout the collection contain documents originally published in German or Russian, only some of which have been translated. Research articles are filed alphabetically by the first author listed, while the articles and papers written by Dr. Sandler himself are filed chronologically.

Series 1: Acceleration Research

Articles and information concerning the effects of gravity due to acceleration and ranging from 1944 through 1993 are included in this series; folder 7 contains articles written by Dr. Sandler on the subject.

Series 2: Bed Rest Research

This series contains an extensive collection of research articles and information on the effects of bed rest on both male and female subjects and dates from 1963 through 1996. Included are the first short-term bed rest studies on 20-30 years-old females, and ground-based simulated Space Shuttle studies in males and females aged 35 to 65 years. Folder 38 contains articles written by Dr. Sandler.

Series 3: Exercise Research

Research articles based on exercise studies using artificial gravity in weightlessness deconditioning may be found here; folder 45 holds Dr. Sandler's articles on the subject.

Series 4: Lower Body Negative Pressure (LBNP) Research

Located within this series are research articles on the application of LBNP in man starting in 1934 and going through 1993. Dr. Sandler's articles are in folder 62; folder 63 holds an LBNP overhead presentation.

Scope and Content Notes, cont.

Series 5: Water Immersion Research

Research articles and related information from 1955 through 1993 concerned with water immersion studies simulating the effects of weightlessness are included. Folder 72 holds a research paper authored by Dr. Sandler while folder 74 contains water immersion viewgraphs.

Series 6: Gravitational Physiology Symposium

This series contains three softbound books containing papers from the 1979 through 1981 Gravitational Physiology Symposiums.

Series 7: Cosmos Project

The Cosmos project was a joint US/USSR study using primates sent into space and monitored for hemodynamic data such as heart rate and blood pressure as affected by weightlessness. Folders 76 through 78 in this series contain information from the joint US/USSR Space Medicine Sessions held from 1974 through 1986. Information, data, results, and summaries are included for Cosmos Projects 1514 and 1667, as well as some related texts.

Series 8: Manned Flight

This series contains three subseries with materials dating from 1959 to 1994. The Astronaut Medical Information subseries contains information related to astronaut selection and pre- and post-flight medical exams.

Manned US Space Flight holds research articles, data, and flight reports. Articles by Dr. Sandler are in folder 103. A NASA Press Kit may be found in folder 105, and photographs of Skylab are in folder 106.

The third subseries, Manned USSR Space Flight, contains research articles; NASA reports and photographs (one of President Gerald R. Ford and cosmonauts) are found in folder 113. A photocopied book, Space and Time Perceptions by the Cosmonaut is located in folder 114. Information on women astronauts and cosmonauts is in folder 116, and unique Soviet space activity Timacheff reports can be found in folder 122.

Scope and Content, cont.

Series 9: Harold Sandler Articles

Articles written by Dr. Sandler from 1976 through 2000 are located here, and his detailed biographical information and Curriculum Vita may be found in folder 123.

Series 10: Harold Sandler Research Papers

Individual copies of Dr. Sandler's research papers written during 1976 through 1995 are found in this series.

Series 11: Bound Books

These four large bound volumes contain all of Dr. Sandler's research articles as they appeared in scientific journals from 1959 through 1985.

Container Listing

Box	File	Description	Date
		Series 1: Acceleration Research	1944-1993
1	1	Acceleration A-E	1966-1991
1	2	Acceleration F-J	1944-1990
1	3	Acceleration K-L	1958-1992
1	4	Acceleration M-T	1958-1990
1	5	Acceleration U-Z	1952-1993
1	6	Related Acceleration Material	1944-1993
1	7	Harold Sandler Articles on Acceleration	1973-1974
1		Series 2: Bed Rest Research	1963-1996
1	8	Bed Rest A-B	1966-1991
1	9	Bed Rest Ben-Ber	1968-1995
1	10	Bed Rest Ber-Blom	1963-1983
1	11	Bed Rest Bo-Bra	1970-1988
1	12	Bed Rest Browse	1965
1	13	Bed Rest Bu-By	1966-1989
1	14	Bed Rest C	1965-1993
1	15	Bed Rest D-E	1960-1991
1	16	Bed Rest F-Ga	1961-1987
1	17	Bed Rest Ge	1972
1	18	Bed Rest Ge-Go	1968-1991
1	19	Bed Rest Gra-Gre	1962-1989
1	20	Bed Rest Gre-Gu	1966-1996
1	21	Bed Rest H	1966-1989
2			
2	22	Bed Rest I-Ka	1965-1989
2	23	Bed Rest Ke-Ko	1973-1992
2	24	Bed Rest Kravik	1989
2	25	Bed Rest Kr-Ku	1970-1988
2	26	Bed Rest La-Lo	1964-1991
2	27	Bed Rest Luu	1990
2	28	Bed Rest Ma-Mc	1968-1998
2	29	Bed Rest Me-My	1967-1984
2	30	Bed Rest N	1982-1989
2	31	Bed Rest O-Pe	1967-1985
2	32	Bed Rest Po-R	1980-1988
2	33	Bed Rest S	1965-1990
2	34	Bed Rest Steinberg	1980
2	35	Bed Rest T-Val	1972-1990

2	36	Bed Rest Vallbona	1963
2	37	Bed Rest Vas-Vy	1967-1985
2	38	Bed Rest W-Z	1966-1984
2	39	Harold Sandler Articles on Bed Rest	1975-1990
2	40	Related Bed Rest Material	1975-1978

Series 3: Exercise Research 1963-1991

2	41	Exercise A-C	1963-1991
2	42	Exercise D-K	1968-1991
2	43	Exercise L-R	1965-1991
2	44	Exercise Sai-She	1968-1991
2	45	Exercise Sta-W	1972-1991
2	46	Harold Sandler Articles on Exercise	1980-1982

3 Series 4: Lower Body Negative Pressure (LBNP) 1934-1993

3	47	LBNP A	1967-1992
3	48	LBNP B-Br	1965-1988
3	49	LBNP Bu-D	1934-1991
3	50	LBNP E-F	1968-1993
3	51	LBNP G	1954-1991
3	52	LBNP H-J	1974-1991
3	53	LBNP K-Le	1955-1983
3	54	LBNP Li-Lu	1972-1993
3	55	LBNP Ma-Mi	1964-1991
3	56	LBNP Mo-Ni	1967-1977
3	57	LBNP No-P	1969-1988
3	58	LBNP R-Sa	1956-1986
3	59	LBNP Se-Spe	1948-1982
3	60	LBNP Spo-Su	1960-1988
3	61	LBNP T-V	1949-1991
3	62	LBNP W-Z	1950-1983
3	63	Harold Sandler Articles on LBNP	1979
3	64	LBNP Overhead Presentation	1971

3 Series 5: Water Immersion 1955-1993

3	65	Water Immersion A-B	1962-1990
3	66	Water Immersion C-F	1970-1993
3	67	Water Immersion G-Ge	1952-1993
3	68	Water Immersion Gi-Gr	1960-1991
3	69	Water Immersion H-J	1955-1985
3	70	Water Immersion K	1974-1983
3	71	Water Immersion L-Q	1974-1993
3	72	Water Immersion R-W	1966-1983

4	73	Harold Sandler Water Immersion Paper	
4	74	Water Immersion Related Articles	1974-1985
4	75	Water Immersion Viewgraphs	1984
		Series 6: Gravitational Physiology	1979-1981
4	76	Gravitational Physiology Symposium	1979-1981
		Series 7: Cosmos Project	1973-1986
4	77	Joint US/USSR Space Medicine Sessions	1974-1984
4	78	Joint US/USSR Space Medicine Sessions	1985
4	79	Joint US/USSR Space Medicine Sessions	1986
4	80	Projects 1514 and 1667	1984
4	81	Projects 1514 and 1667	1973-1986
4	82	Projects 1514 and 1667	1975-1986
4	83	Cardiovascular Results for Project 1514, 1667	No Date
4	84	Cardiovascular Results for Project 1514, 1667	No Date
4	85	Cosmos:20 Beat Snapshots for Project 1667	No Date
4	86	Cosmos:20 Beat Snapshots for Project 1667	No Date
4	87	Cosmos:20 Beat Snapshots for Project 1514	No Date
4	88	Summary of Tilt Events for 1514 and 1667	1983-1985
4	89	Summary of Tilt Events for 1514 and 1667	1983-1985
4	90	Summary of Tilt Events for 1514 and 1667	1983-1985
4	91	Final Reports of US Monkey and Rat Experiments Project 1514	1986
5	92	Cosmos: Preliminary Science Report: Primate Cardiovascular Experiment Project 1667	1986
5	93	Cosmos: Preliminary Science Report: Primate Cardiovascular Experiment Project 1667	1986
5	94	Cosmos Related Texts	No Date
		Series 8: Manned Flight	1959-1994
		Subseries: Astronaut Medical Information	1959-1990
5	95	Astronaut Medical Information: 1990 Listing of Astronauts and Cosmonauts	1990
5	96	Astronaut Medical Information: Medical Standards for Selection	1959-1982
5	97	Astronaut Medical Information: Pre and Post Flight Exam Standards	1977-1980
5	98	Astronaut Medical Information: Space Shuttle Medical Summary Reports	1981-1982

Subseries: Manned US Space Flight		1959-1993
5	99	Manned US Space Flight Research Articles A-H 1970-1991
5	100	Manned US Space Flight Research Articles J-N 1975-1992
5	101	Manned US Space Flight Research Articles P-W 1959-1993
5	102	Manned US Space Flight Periodical Articles 1981-1990
5	103	Harold Sandler Research Articles on Manned US Space Flight 1983-1993
5	104	Manned US Space Flight Reports and Data 1988-1990
5	105	NASA Press Kit
106		Skylab Photographs 1972-1983

Subseries: Manned USSR Space Flight		1965-1994
5	107	Manned USSR Space Flight Research A-F 1970-1991
5	108	Manned USSR Space Flight Research Ga-Gi 1977-1989
5	109	Manned USSR Space Flight Research Grigor'yev 1972-1981
5	110	Manned USSR Space Flight Research Gri-Ka 1965-1994
5	111	Manned USSR Space Flight Research Ko-Ti 1968-1991
5	112	Manned USSR Space Flight Research Us-Y 1966-1988
6	113	Manned USSR Space Flight : NASA Reports and Photographs 1974-1979
6	114	Manned USSR Space Flight: Photocopied Book <u>Space and Time Perceptions by the Cosmonaut</u> 1971
6	115	Manned USSR Space Flight Research Periodical Articles 1977-1988
6	116	Female Cosmonaut/Women in Space 1977-1986
6	117	Library of Congress-Technical News Alerts 1975-1979
6	118	Manned USSR Space Flight Research Articles and Data 1970-1984
6	119	Manned USSR Space Flight Article-Gazenko 1979-1982
6	120	Manned USSR Space Flight Article-Kakurin 1966-1877
6	121	Manned USSR Space Flight Article-Katkov 1976-1981
6	122	Soviet Space Activity Timacheff Reports 1984-1987
Series 9: Harold Sandler Articles		1976-2000
6	123	Harold Sandler Biographical Information 2000
6	124	Harold Sandler Articles 1976-1980

6	125	Harold Sandler Articles	1981-1995
		Series 10: H. Sandler Research Papers 1976-1995	
6	126	Harold Sandler Research	1976
6	127	Harold Sandler Research	1977-1980
6	128	Harold Sandler Research	1980
6	129	Harold Sandler Research	1980
6	130	Harold Sandler Research	1980
6	131	Harold Sandler Research	1981-1995
6	132	Harold Sandler Research	1988
7		Series 11: Bound Books	1959-1985
		(contains copies of research articles)	