

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

COMMUNICABLE DISEASE CENTER
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SPECIAL NOTE

The information provided in this report represents the latest data reported to the Poliomyelitis Surveillance Unit from State Health Departments, Epidemic Intelligency Service Officers, participating laboratories, and other pertinent sources. Much of the material is preliminary in nature and is subject to confirmation and change. It is distributed for the benefit of all participants with the understanding that it will not be released to the press or to unauthorized persons. Any release of this information will be strictly limited to the Office of the Surgeon General, United States Public Health Service, Washington, D. C. In such releases cases will be identified by State only; initials and residence will not be made public. State Health Officers, of course, are free to reveal any information they may wish concerning data from their State.

Dr. Louis P. Gabhardt, Department of Bacteriology, University of Utah, College of Medicine, reports the isolation of Type 1 poliomyelitis virus from a vial of cutter Vaccine, Lot Number E6058, received from the Idaho Department of Health.

On May 6 a cynomolgus monkey was inoculated intro-muscularly with this vaccine. On May 19, this animal showed ruffed fur and weakness of the legs. On May 20 frank paralysis developed and the animal was sacrificed. Histopathologic sections of the spinal cord were compatible with a diagnosis of poliomyelitis.

Portions of the cord were inoculated into intro-cerebrally and intro-muscularly into one rhesus and one cynomolgus monkey, on May 23. On May 31 the rhesus monkey showed definite paralysis and the cynomolgus monkey showed irritability.

The cord from the original monkey was also inoculated into tissue cultures, with the subsequent growth of an agent, identified Type 1 poliomyelitis virus. Growth in tissue culture occurred at dilutions of cord material up to 1:10,000.

Poliomyelitis in Vaccinated Individuals

Accepted cases total 116 at 12:00 noon 6-1-55 (Table 1). Two new cases were accepted today. The first case, from Virginia, developed meningeal signs 38 days after inoculation with Lilly vaccine. The second case, from Oregon, became ill 24 hours after inoculation with Parke-Davis Vaccine and developed paralysis three days later.

Dr. Edwin H. Lannette, Virus and Rickettsial Laboratory, State Department of Health, Berkeley, California, reports isolation of Type 1 poliomyelitis virus from PSU Case No. Cal-14. Isolation of Type 1 virus from three contacts of this case was previously reported. Dr. Lannette also reports isolation of Type 1 virus from the stool of two other cutter associated cases, PSU Case Nos. Nev-1 and Nev-2.

Two tables, containing experimental data of general interest, are included in the present report. Table A presents results of an experiment by Dr. Albert Sabin, showing the incubation periods between subcutaneous inoculation of various amounts of virulent Mahoney Virus and the onset of paralysis in injected monkeys. Table B has been abstracted from a paper published by Dr. David Bodian and presents incubation periods following intra-muscular injection of gelation combined with various titers of Mahoney Virus. In both experiments, variations in the amount of virus inoculated did not influence the observed incubation periods.

Poliomyelitis in Parents and Siblings of Vaccinated Individuals.

Accepted cases total 54 at 12:00 noon 6-1-55 (Table 2). Four new cases were accepted today. Of these, three cases from Alabama occurred in Siblings of Lilly vaccinated children with intervals after inoculation of contacts of 26, 24, and 12 days. The fourth case, from Maryland, occurred following contact with a Wyeth vaccinated Sibling and the interval from inoculation of the contact to onset in the case was 35 days.

Dr. Karl Habel of the National Institutes of Health reports isolation of Type 1 poliomyelitis virus from two cases occurring in siblings of Wyeth vaccinated children. (PSU Case Nos. Md-X5 and DC-X1). Dr. Habel has also isolated Type 1 virus from the Wyeth inoculated contact of PSU Case No. Md-X2.

Poliomyelitis in Community Contacts of Vaccinated Individuals

Two community contact cases were accepted today from Alabama and Oregon. In a report from Alabama the aunt of a two-year old child developed Bulbar poliomyelitis 27 days after her nephew received Cutter vaccine. The patient died 5 days after onset of symptoms. The Oregon case developed paralytic poliomyelitis 40 days after a playmate was inoculated with Cutter Vaccine.

(Community contacts are not as yet being listed in a tabular summary).

NEAL NATHANSON *[Signature]*
Neal Nathanson, M.D., Chief
Poliomyelitis Surveillance Unit

Table 1
Vaccinated Cases by State and Manufacturer
(PSU Accepted Cases Through June 1, 1955)

State	C**		L		PD		PM		W		Total
	P*	NP*	P	NP	P	NP	P	NP	P	NP	
											33
California	27	6									16
Idaho	15	1			1						4
Oregon	3										5
Louisiana	1		2	2							1
Washington	1										1
											3
Colorado	1				2						1
Illinois	1										2
Indiana			1								1
Georgia	1		1								
New York	1										4
											14
West Virginia			4								1
Texas	1		1	12							1
Hawaii	1										4
Missouri	1										
Nevada	3	1									6
									3	3	1
Pennsylvania											1
Wyoming	1										1
Connecticut			1								3
Mississippi				1					1	1	
Ohio	1										5
					5				2		2
Virginia											2
Delaware					2						2
Arkansas							1	1			1
Nebraska											1
Arizona			1						1		
Maryland											
Sub-Totals	59	10	10	21	3	0	1	1	7	4	116
Totals		69		31		3		2		11	

* P - Paralytic; NP - Non-paralytic
 ** C - Cutter; L - Lilly; PD - Parke-Davis; PM - Pittman-Moore; W - Wyeth

Table 2

Poliomyelitis in Parents and Siblings of Vaccinated Individuals
(PSU Accepted Cases Through June 1, 1955)

State	Manufacturer**						Relationship to Vaccinate			Health of Vaccinate		
	C	L	W	PD	PM		Par-	Sib-	No	Ill	Not	No
	P* NP*	P NP	P NP	P NP	P NP		ent	ling	Data	Ill	Ill	Data
California	6 1						5	1	1	2	2	3
Idaho	6 1							7		2	3	2
Colorado	2						2				2	
Georgia	3	1					3	1		2	2	
Maryland	1		5 1				1	5	1	3	3	1
Montana	1						1			1		
Nevada	3 1						1	3		1	3	
Tennessee	1						1			1		
New Mexico	1 1							2		1	1	
Texas	1	2					2	1			3	
Arizona		2					2				1	1
Hawaii	1							1		1		
Dist. Columbia			1					1			1	
Oregon	1							1			1	
Washington	1 1						2			1	1	
Pennsylvania			1				1					
Ohio	1	1	1 1				2	2		1	3	1
Mississippi		1						1				1
Alabama		1 2						3				3
Sub-Totals	29 7	6 2	8 2	0 0	0 0		23	29	2	16	26	12
Totals	36	8	10	0	0		54				54	

* P - Paralytic; NP - Non-paralytic

** C - Cutter; L - Lilly; W - Wyeth; PD - Parke-Davis; PM - Pittman-Moore

Table A

Incubation Periods for Onset of Paralysis in Cynomolgus Monkeys After Subcutaneous Injection of Varying Amounts of Virulent Mahoney Virus
(From Dr. Albert B. Sabin, Personal Communication)

Dilution of CNS Suspension	TCD ₅₀ in Inoculum	Incubation periods in paralyzed monkeys
10 ⁻¹	10 ⁵	8, 8, 9, 10
10 ⁻²	10 ⁴	6, 7, 7, 8, 8
10 ⁻³	10 ³	7, 8, 8, 9
10 ⁻⁴	10 ²	9, 12, 16, 20
10 ⁻⁵	10 ¹	7, 8, 14

Table B

Provoking Effect of Intramuscular Injections of Gelatin When Combined with Various Titrations of Mahoney Virus in Right Calf of Cynomolgus Monkeys (Single experiment). Inoculum Vehicle: 4ml 1.5% gelatin
(From Dr. David Bodian, "Viremia in Experimental Poliomyelitis," American Journal of Hygiene, Vol. 60, p.358-370, November 1954)

Concentration of Virus in Inoculum	Incubation periods of paralyzed Monkeys. 0 = No paralysis by 30 days
10 ⁻²	6, 6, 10, 18, 0
10 ⁻³	7, 12, 13*, 0, 0
10 ⁻⁴	8, 8, 10, 0, 0
10 ⁻⁵	8, 10, 0, 0, 0

* Initial facial paralysis

JUNE 1, 1955
12:00 NOON

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE COMMUNICABLE DISEASE CENTER

POLIOMYELITIS SURVEILLANCE UNIT

Accepted Cases Associated with Poliomyelitis Vaccine

Daily Supplementary Report

PSU CASE NO	Residence	Ini- tials	Age	Sex	Date Inoc	Date 1st Symp	Date 1st Para	Site Inoc	Site 1st Para	Mfr	Lot No	Remarks
Va-5	Alexandria	RK	6	M	4-14	5-22	None	LA	None	L	8122-649334	Non-paralytic, CSF 616 cells
Ore-4	Portland	MS	8	M	5-25	5-26	5-29	LA	RL	PD	028847A	Onset one day after inoculation

REVISIONS
(Revised Items Underlined)

Cal-14	San Diego	JMcC	6	F	4-16	4-22	None	LA	None	C	?E6038, ?E5970 ?E5928	Type 1 virus from case and 3 contacts 5-31 (Lennette)
Nev-1	Ely	JS	2	M	4-17	4-27	4-29	RL	RL	C	E6045	Type 1 virus in stool 5-31 (Dr. Lennette)
Nev-2	Ely	BS	8	M	4-17	4-29	5-1	LL	LL	C	E6045	Type 1 virus in stool 5-31 (Dr. Lennette)

Code of Abbreviations:

PSU - Poliomyelitis Surveillance Unit
Mfr - Manufacturer
C - Cutter Laboratories
L - Lilly Laboratories
W - Wyeth Laboratories
CSF - Cerebro Spinal Fluid

LA - Left Arm
RA - Right Arm
LL - Left Leg or Buttocks
RL - Right Leg or Buttocks

POLIOMYELITIS AMONG UNVACCINATED PERSONS GIVING HISTORY OF FAMILIAL CONTACT WITH INDIVIDUALS
WHO HAVE RECEIVED POLIOMYELITIS VACCINE
(PSU Accepted Cases June 1, 1955)

Vaccinated Individuals										Poliomyelitis Case (Not Vaccinated)						
PSU CASE NO	Residence	Ini- Tials	Age	Sex	Date Inoc	Date Illness	Type Illness	Mfr	Lot Number	Ini- tials	Age	Sex	Date 1st Symp	Date 1st Para	Site 1st Para	Remarks
Ala-X1	Calhoun Co	VV	8	F	4-18	?	?	L	5079-649338	JV	3	F	5-14	5-20	LA	
Ala-X2	?	DC	9	M	4-19	?	?	L	5079-649338	SC	10	M	5-13	None	None	Non-paralytic
Ala-X3	?	JW	8	F	4-21	?	?	L	5079-649338	DW	5	M	5-3	None	None	Non-paralytic
Md-X7	Parkville	JM	7	F	4-22	5-26	Stomach ache	W	23606	JM	3	M	5-27	5-29	LL	
REVISIONS (Revised Items Underlined)																
Md-X2	Taneytown	CEN	7	M	4-26	None	None	W	23605	VLN	4	F	5-15	5-19	LL	Type 1 virus from vaccinated individual 5-31 (Dr. Habel)
Md-X3	Oakland	<u>JS</u>	?	<u>M</u>	4-25	<u>5-16</u>	<u>Fever</u> <u>Malaise</u>	W	23605	WS	19	M	5-16	5-18	Legs	Previously reported as no illness in vaccinated individual
Md-X5	Taneytown	?S	?8	M	4-26	?	?	W	23605	ES	10	F	5-21	5-23	RA	Type 1 virus from Polio Case 5-31 (Dr. Habel)
Ohio-X4	Girard	<u>KR</u>	6	F	4-27	None	None	C	E6044	DLR	29	F	<u>5-23</u>	<u>5-25</u>	<u>Arms</u>	Bulbar, died 5-26
DC-X1	Washington	WHC	6	M	4-27	None	None	W	23611	JC	4	M	5-16	5-18	Bulbar	Type 1 virus from Polio case 5-31 (Dr. Habel)

