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CURRENT TRENDS
NOMENCLATURE OF ANTIGENS ASSOCIATED WITH VIRAL HEPATITIS TYPE B
by
Committee on Viral Hepatitis* of
the National Research Council—National Academy of Sciences

FEB 1 1974

In April 1972, the Committee on Viral Hepatitis of the National Research Council employed, in its first publication (1), the descriptive terms HB Ag and HB Ab for the antigen and antibody associated with viral hepatitis type B. Since then, growing evidence of the complexity of the antigen has highlighted the need to modify this nomenclature. It has been clearly established that the 42-nm structure now known as the Dane particle and the 20-nm spherical and filamentous particles are associated with viral hepatitis type B. The Dane particle consists of a core and an outer surface component, each having specific antigenic properties. The surface component is antigenically similar to the 20-nm particles. The 20-nm particles appear to be formed as the result of overproduction of the surface component of the Dane particle. In addition, it has been established that this surface antigen manifests a group-specific determinant, a, and subtype-specific determinants, d or y, and w or r.

In view of these circumstances and in expectation of continuing revelations in this field, the Committee believes that scientific communication would be greatly enhanced by the acceptance of a standard nomenclature adaptable to the newly discovered antigens, antibodies, or viruses. We therefore suggest that consideration be given the following system of nomenclature.

- HB_s Ag** The hepatitis B antigen found on the surface of the Dane particle and on the unattached 20-nm particles
- HB_c Ag** The hepatitis B antigen found within the core of the Dane particle

- Dane particle** A current term for the 42-nm particle containing HB_c Ag in its core and HB_s Ag on its surface
- HBV** Reserved for hepatitis B virus. The Dane particle may turn out to be HBV.
- HB_s Ag/adr** Hepatitis B surface antigen manifesting the group-specific determinant, a, and subtype-specific determinants, d and r. All recognized subtypes are to be indicated to the right of the slash.
- anti-HB_s** Antibody to hepatitis B surface antigen. If the subtypic reactivity is known, the appropriate antigenic determinants are to be indicated to the right of a slash.
- anti-HB_c** Antibody to hepatitis B core antigen. If more than one core antigen is discovered, the corresponding antigens can be indicated.

The present use of HB Ab in designating the antibody to hepatitis B antigen should be abandoned.

Reference

1. Committee on Viral Hepatitis, National Academy of Sciences: The public health implications of the presence of hepatitis B antigen in human serum. *Morbidity and Mortality Weekly Rep* 21:133-134, 1972

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CONTENTS

Current Trends	
Nomenclature of Antigens Associated with Viral Hepatitis Type B	29
Epidemiologic Notes and Reports	
Influenza — Georgia, Illinois, Iowa, Michigan, Minnesota, Oklahoma, Wisconsin	30
<i>Salmonella eastbourne</i> Infections — Colorado, Illinois, Louisiana, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, South Dakota, Wisconsin, Canada	35

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EPIDEMIOLOGIC NOTES AND REPORTS

INFLUENZA — Georgia, Illinois, Iowa, Michigan, Minnesota, Oklahoma, Wisconsin

Georgia: Between January 5 and 20, 1974, an outbreak of influenza occurred at a children's home in Atlanta; 29 (46%) of the 63 residents had a syndrome characterized by fever, nonproductive cough, and headache. Cultures of specimens from 7 ill children were positive for influenza B. The virus isolated, B/Georgia/7/74, has been characterized as a strain "intermediate" between the previously prevalent type B and the newer B/Hong Kong (Table 1).

On January 10, 1974, a 2 1/2-year-old Atlanta boy was seen at the Grady Memorial Hospital emergency room with a syndrome characterized by fever, cough, and headache. Viral cultures were positive for influenza A; the virus was similar to A/Port Chalmers/1/73 (MMWR, Vol. 22, No. 48). Surveillance at Grady Memorial Hospital has not detected any increase in febrile, respiratory disease in Atlanta.

(Reported by John McGowan, M.D., William Marine, M.D., Grady Hospital Epidemiology Unit, Emory Departments of Medicine, Preventive Medicine and Community Health, and Pediatrics; John E. McCroan, Ph.D., State Epidemiologist, Georgia Department of Human Resources; the Bureau of Laboratories, and the Viral Diseases Division, Bureau of Epidemiology, CDC.)

Table 1

Hemagglutination-Inhibition Reactions of Current Influenza B Strains

Antisera	Strains				
	B/Victoria	C/Hannover	B/Hong Kong	B/Memphis	B/Georgia
B/Victoria/98926/70	320	160	10	40	40
B/Hannover/3/73*	80	160	20	20	20
B/Hong Kong/5/72	10	20	160	20	40
B/Memphis/1/74**	<10	10	10	40	40

*Representative "intermediate" strain previously reported from Europe

**Representative "intermediate" strain from United States

Illinois: Two isolates of influenza B have been reported from an area near Chicago. The specimens were obtained on January 17, 1974, from 2 boys who had a syndrome characterized by fever, sore throat, and cough. Further characterization of the virus is in progress. In addition, there has been an increase in school absenteeism in the Springfield area and Clay County. (Reported by Byron J. Francis, M.D., State Epidemiologist, Illinois Department of Public Health; and an EIS Officer.)

(Continued on page 35)

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	4th WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 4 WEEKS		
	January 26, 1974	January 27, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis	34	29	29	137	172	147
Brucellosis	—	2	2	4	6	6
Chickenpox	3,870	4,944	—	11,375	17,091	—
Diphtheria	—	4	1	3	9	9
Encephalitis:						
Primary: Arthropod-borne and unspecified . .	11	11	14	52	49	68
Post-Infectious	8	3	5	12	10	19
Hepatitis, Viral:						
Type B	200	147	147	585	525	525
Type A	875	1,007	1,113	3,111	3,724	4,316
Type unspecified	173	—	—	523	7	191
Malaria	4	1	50	9	—	—
Measles (rubeola)	510	543	543	1,539	2,093	2,399
Meningococcal infections, total	20	29	62	96	113	228
Civilian	20	27	58	96	105	213
Military	—	2	3	—	8	9
Mumps	1,690	1,450	2,203	5,817	6,341	8,034
Pertussis	27	—	—	81	—	—
Rubella (German measles)	157	453	577	657	1,325	1,724
Tetanus	1	2	1	4	4	3
Tuberculosis, new active	471	521	—	1,880	1,834	—
Tularemia	—	—	2	6	8	8
Typhoid fever	7	3	6	24	13	20
Typhus, tick-borne (Rky. Mt. spotted fever) . .	—	—	—	10	2	1
Venereal Diseases:						
Gonorrhea	17,436	15,461	—	63,105	56,509	—
Syphilis, primary and secondary	588	480	—	1,712	1,893	—
Rabies in animals	63	71	71	175	213	221

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	1	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome: * Tex. 1	4	Psittacosis: Calif. 1	1
Leprosy:	3	Rabies in man:	—
Leptospirosis:	4	Trichinosis: Ohio 1, Va. 1	11
Plague:	—	Typhus, murine:	—

* Delayed Reports: Cong. Rubella Syndrome: Okla. 1 (1973)

Morbidity and Mortality Weekly Report

31

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JANUARY 26, 1974 AND JANUARY 27, 1973 (4th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1974	1973	1974	1974	1974	1974	1974	Cum. 1974
UNITED STATES	34	-	3,870	-	3	11	11	8	200	875	173	4	9
NEW ENGLAND	1	-	809	-	-	1	-	-	2	40	32	-	-
Maine *	-	-	3	-	-	-	-	-	-	4	-	-	-
New Hampshire *	-	-	67	-	-	-	-	-	1	3	-	-	-
Vermont	-	-	17	-	-	-	-	-	-	3	1	-	-
Massachusetts	-	-	268	-	-	-	-	-	-	9	31	-	-
Rhode Island	1	-	173	-	-	-	-	-	1	9	-	-	-
Connecticut	-	-	281	-	-	1	-	-	-	12	-	-	-
MIDDLE ATLANTIC	2	-	213	-	-	2	1	-	24	96	23	-	-
Upstate New York	-	-	42	-	-	-	-	-	7	53	18	-	-
New York City *	1	-	63	-	-	1	1	-	5	14	-	-	-
New Jersey *	1	-	NN	-	-	1	-	-	9	21	5	-	-
Pennsylvania *	-	-	108	-	-	-	-	-	3	8	-	-	-
EAST NORTH CENTRAL	6	-	1,458	-	-	-	5	3	29	132	11	-	-
Ohio	2	-	370	-	-	-	3	-	12	34	-	-	-
Indiana *	-	-	149	-	-	-	-	-	-	14	-	-	-
Illinois	-	-	-	-	-	-	2	3	3	12	2	-	-
Michigan	4	-	512	-	-	-	-	-	13	59	9	-	-
Wisconsin	-	-	427	-	-	-	-	-	1	13	-	-	-
WEST NORTH CENTRAL	4	-	372	-	-	-	-	-	11	38	18	-	-
Minnesota *	2	-	39	-	-	-	-	-	5	8	1	-	-
Iowa *	1	-	302	-	-	-	-	-	-	8	-	-	-
Missouri	1	-	3	-	-	-	-	-	4	3	15	-	-
North Dakota	-	-	28	-	-	-	-	-	-	1	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	4	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	2	-	-
Kansas	-	-	-	-	-	-	-	-	2	14	-	-	-
SOUTH ATLANTIC	8	-	201	-	-	2	3	-	31	180	24	1	2
Delaware	-	-	10	-	-	-	-	-	-	1	-	-	-
Maryland	-	-	4	-	-	1	-	-	3	7	4	-	-
District of Columbia	-	-	5	-	-	-	-	-	-	2	-	-	1
Virginia	1	-	27	-	-	-	1	-	2	17	6	1	1
West Virginia *	-	-	118	-	-	-	-	-	1	6	-	-	-
North Carolina *	-	-	NN	-	-	-	-	-	2	17	-	-	-
South Carolina	-	-	37	-	-	-	1	-	1	3	6	-	-
Georgia *	-	-	-	-	-	-	-	-	-	4	-	-	-
Florida	7	-	-	-	-	1	1	-	22	123	8	-	-
EAST SOUTH CENTRAL	2	-	159	-	-	-	-	3	1	60	9	-	-
Kentucky	-	-	131	-	-	-	-	-	-	10	9	-	-
Tennessee	-	-	NN	-	-	-	-	3	1	34	-	-	-
Alabama	-	-	23	-	-	-	-	-	-	14	-	-	-
Mississippi	2	-	5	-	-	-	-	-	-	2	-	-	-
WEST SOUTH CENTRAL	4	-	188	-	-	1	-	1	13	98	1	-	-
Arkansas	-	-	3	-	-	-	-	1	2	4	-	-	-
Louisiana *	2	-	NN	-	-	-	-	-	6	9	1	-	-
Oklahoma *	1	-	5	-	-	1	-	-	1	17	-	-	-
Texas	1	-	180	-	-	-	-	-	4	68	-	-	-
MOUNTAIN	-	-	95	-	-	1	-	-	2	47	11	-	-
Montana	-	-	43	-	-	-	-	-	1	9	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	7	1	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado*	-	-	22	-	-	-	-	-	-	-	6	-	-
New Mexico	-	-	7	-	-	-	-	-	-	16	-	-	-
Arizona	-	-	-	-	-	-	-	-	1	2	1	-	-
Utah	-	-	22	-	-	-	-	-	-	13	2	-	-
Nevada	-	-	1	-	-	1	-	-	-	-	1	-	-
PACIFIC	7	-	375	-	3	4	2	1	87	184	44	3	7
Washington	-	-	358	-	3	-	-	-	5	6	15	-	-
Oregon	2	-	1	-	-	1	-	-	2	14	2	-	-
California *	5	-	-	-	-	3	2	1	77	160	25	3	7
Alaska	-	-	3	-	-	-	-	-	3	2	-	-	-
Hawaii	-	-	13	-	-	-	-	-	-	2	2	-	-
Guam	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	-	-	-	-	-	-	-	-	-	-	-
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-	-

* Delayed Reports:

Aseptic meningitis: N.J. 3, Penn. 3, Minn. 1 (1973),
N.H. 1, Ind. 1, Calif. 1 (1974)
Chicken pox: Me. 14, Ind. 1, Calif. 5
Encephalitis, primary: N.J. 1, Penn. 1, Okla. 1 (1973),
Colo. 1 (1974)

Hepatitis B: Penn. 11, Iowa delete 1, La. delete 6 (1973), Ind. 1, N.C. 4 (1974)
Hepatitis A: Penn. 24, Iowa 18, Ga. 7, La. delete 10 (1973), Me. 5, N.H. 3,
W.Va. 1, Ind. 11 (1974)
Hepatitis, unspecified: N.C. delete 4

Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JANUARY 26, 1974 AND JANUARY 27, 1973 (4th WEEK) — Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1974	Cumulative		1974	Cumulative		1974	Cum. 1974	1974	1974	Cum. 1974	Cum. 1974
		1974	1973		1974	1973						
UNITED STATES	510	1,539	2,093	20	96	113	1,690	5,817	27	157	657	4
NEW ENGLAND	21	137	847	—	6	6	303	878	2	5	36	—
Maine *	1	4	2	—	—	—	16	143	—	—	—	—
New Hampshire*	12	83	125	—	1	1	7	61	—	—	2	—
Vermont	—	—	14	—	—	—	1	3	—	—	3	—
Massachusetts *	5	21	442	—	1	3	34	134	—	2	17	—
Rhode Island	—	25	26	—	3	—	120	285	—	1	5	—
Connecticut	3	4	238	—	1	2	125	252	2	2	9	—
MIDDLE ATLANTIC	81	420	171	3	12	20	137	458	2	4	39	1
Upstate New York	1	5	20	—	1	6	13	85	1	—	12	—
New York City	12	37	107	1	5	6	16	79	1	3	15	—
New Jersey *	60	298	33	2	5	4	42	127	—	—	8	1
Pennsylvania	8	80	11	—	1	4	66	167	—	1	4	—
EAST NORTH CENTRAL	343	599	563	1	6	10	477	1,736	13	80	256	—
Ohio	217	332	24	—	3	7	101	482	—	5	37	—
Indiana *	9	19	63	—	—	—	38	134	—	17	46	—
Illinois	63	111	219	—	—	1	62	178	—	13	27	—
Michigan	42	97	149	1	3	1	208	697	3	19	105	—
Wisconsin	12	40	108	—	—	1	68	245	10	26	41	—
WEST NORTH CENTRAL	1	51	63	3	7	8	144	391	1	3	8	—
Minnesota	—	41	3	2	4	—	9	9	1	1	1	—
Iowa	—	2	53	—	1	3	107	295	—	—	2	—
Missouri *	1	4	3	—	—	3	15	56	—	1	3	—
North Dakota	—	3	1	1	1	—	1	1	—	1	1	—
South Dakota	—	1	—	—	—	—	—	—	—	—	—	—
Nebraska	—	—	—	—	—	—	—	18	—	—	1	—
Kansas	—	—	3	—	1	2	12	12	—	—	—	—
SOUTH ATLANTIC	18	47	68	5	19	17	185	445	—	11	46	1
Delaware	—	—	—	—	3	—	3	9	—	1	2	—
Maryland	—	—	—	—	2	7	3	8	—	—	—	—
District of Columbia	—	—	—	—	—	1	—	11	—	—	—	—
Virginia	2	4	5	—	5	3	19	50	—	—	—	—
West Virginia	6	14	21	1	1	—	80	213	—	5	28	—
North Carolina	—	—	2	4	5	5	NN	NN	—	—	1	—
South Carolina	—	6	2	—	1	1	1	3	—	—	—	—
Georgia	—	1	1	—	—	—	—	—	—	—	2	—
Florida	10	22	37	—	2	—	79	151	—	5	13	1
EAST SOUTH CENTRAL	2	7	46	1	6	11	127	556	—	3	47	1
Kentucky	2	7	12	—	2	4	40	197	—	1	8	—
Tennessee	—	—	20	1	3	4	67	284	—	—	30	1
Alabama	—	—	—	—	1	2	19	61	—	—	4	—
Mississippi	—	—	14	—	—	1	1	14	—	2	5	—
WEST SOUTH CENTRAL	4	18	91	4	23	11	99	402	1	21	33	—
Arkansas	—	—	2	1	4	1	2	45	—	5	6	—
Louisiana *	2	3	—	—	4	1	—	20	—	—	—	—
Oklahoma	—	3	4	1	4	2	8	22	1	5	10	—
Texas	2	12	85	2	11	7	89	315	—	11	17	—
MOUNTAIN	12	105	46	1	2	8	50	232	1	5	65	—
Montana	9	94	1	—	—	—	11	46	—	1	47	—
Idaho	1	1	4	—	—	—	—	55	—	2	2	—
Wyoming	—	—	—	—	—	—	—	—	—	—	—	—
Colorado	1	4	9	—	—	2	19	82	—	1	5	—
New Mexico	1	5	27	1	1	1	20	48	1	—	9	—
Arizona	—	1	5	—	—	2	—	—	—	—	—	—
Utah	—	—	—	—	1	1	—	1	—	—	—	—
Nevada	—	—	—	—	—	2	—	—	—	1	2	—
PACIFIC	28	155	198	2	15	22	168	719	7	25	127	1
Washington	3	5	112	1	3	2	57	237	5	6	65	—
Oregon	—	—	42	—	3	2	39	191	—	7	11	—
California *	25	150	42	1	9	18	63	254	2	12	49	1
Alaska	—	—	—	—	—	—	5	32	—	—	—	—
Hawaii	—	—	2	—	—	—	4	5	—	—	2	—
Guam *	—	—	—	—	—	—	—	1	—	—	—	—
Puerto Rico	—	8	137	—	—	—	—	7	—	—	—	—
Virgin Islands	—	3	—	—	—	—	—	2	—	—	—	—

* Delayed Reports: Measles: N.J. 9, Mass. delete 7 (1973), Mo. delete 1, Ind. 3, N.J. 1 (1974)
Meningococcal infections: La. delete 2 (1973)
Mumps: Me. 25, N.H. 1, Calif. 40, Ind. 42, Guam 1

Pertussis: Calif. 3
Rubella: Ind. 14

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JANUARY 26, 1974 AND JANUARY 27, 1973 (4th WEEK) — Continued

AREA	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES						RABIES IN ANIMALS
	1974	Cum. 1974	Cum. 1974	1974	Cum. 1974	1974	Cum. 1974	GONORRHEA		SYPHILIS (Pri. & Sec.)			Cum. 1974	
								1974	Cumulative 1974 1973	1974	Cumulative 1974 1973			
UNITED STATES	471	1,880	6	7	24	-	10	17,436	63,105	56,509	588	1,712	1,893	175
NEW ENGLAND	46	101	-	-	-	-	-	510	1,734	1,453	5	30	39	2
Maine	3	8	-	-	-	-	-	29	156	98	-	1	2	1
New Hampshire	3	6	-	-	-	-	-	5	43	41	-	-	1	-
Vermont	-	1	-	-	-	-	-	20	53	22	-	-	2	-
Massachusetts	19	61	-	-	-	-	-	220	737	645	3	12	12	-
Rhode Island	4	8	-	-	-	-	-	48	130	196	-	2	1	1
Connecticut	17	17	-	-	-	-	-	188	615	451	2	15	21	-
MIDDLE ATLANTIC	82	260	1	-	7	-	9	2,465	8,265	8,117	139	386	430	2
Upstate New York	9	13	1	-	-	-	-	526	1,269	1,910	14	32	25	1
New York City	49	136	-	-	7	-	-	891	3,688	3,525	80	232	278	-
New Jersey	8	62	-	-	-	-	-	305	1,295	998	22	54	68	-
Pennsylvania*	16	49	-	-	-	-	9	743	2,013	1,684	23	68	59	1
EAST NORTH CENTRAL	52	289	-	-	1	-	-	2,532	7,824	6,658	38	90	105	9
Ohio *	15	106	-	-	-	-	-	856	3,028	2,229	5	20	12	-
Indiana *	12	34	-	-	-	-	-	373	728	794	10	20	28	1
Illinois	-	55	-	-	-	-	-	278	836	875	10	17	15	1
Michigan	25	94	-	-	1	-	-	737	2,373	2,120	9	26	46	-
Wisconsin	-	-	-	-	-	-	-	288	859	640	4	7	4	7
WEST NORTH CENTRAL	17	59	1	-	1	-	-	646	2,768	3,299	13	29	26	52
Minnesota *	7	17	-	-	1	-	-	206	728	743	1	4	10	27
Iowa	3	10	-	-	-	-	-	-	128	463	-	1	2	8
Missouri	5	21	1	-	-	-	-	181	950	1,359	10	20	13	1
North Dakota	-	1	-	-	-	-	-	24	61	49	-	-	-	11
South Dakota	1	2	-	-	-	-	-	42	151	177	-	-	-	-
Nebraska	-	1	-	-	-	-	-	59	221	265	-	-	1	-
Kansas	1	7	-	-	-	-	-	134	529	243	2	4	-	5
SOUTH ATLANTIC	83	346	1	-	2	-	-	4,609	16,171	14,636	173	556	545	21
Delaware	-	8	-	-	-	-	-	46	194	200	1	13	4	-
Maryland	10	46	-	-	1	-	-	274	1,633	1,356	4	47	103	-
District of Columbia	11	23	-	-	-	-	-	387	1,266	1,296	10	44	58	-
Virginia	5	60	1	-	-	-	-	393	1,608	1,417	43	94	51	11
West Virginia	8	21	-	-	-	-	-	47	179	245	-	1	3	4
North Carolina *	20	62	-	-	-	-	-	515	1,927	1,938	22	44	36	-
South Carolina	4	61	-	-	-	-	-	387	2,005	1,796	28	91	51	-
Georgia *	2	7	-	-	-	-	-	1,207	3,593	2,592	15	52	117	3
Florida	23	58	-	-	1	-	-	1,353	3,766	3,796	50	170	122	3
EAST SOUTH CENTRAL	51	172	1	1	1	-	-	1,257	4,917	4,678	29	106	151	23
Kentucky *	7	32	1	-	-	-	-	115	602	566	5	18	78	13
Tennessee	17	65	-	1	1	-	-	544	2,136	1,978	12	45	31	8
Alabama	10	46	-	-	-	-	-	228	1,105	946	9	22	11	2
Mississippi *	17	29	-	-	-	-	-	370	1,074	1,188	3	21	31	-
WEST SOUTH CENTRAL	48	286	2	1	1	-	-	2,271	9,646	7,049	56	171	203	44
Arkansas	9	48	-	-	-	-	-	164	633	1,163	4	13	10	10
Louisiana *	11	46	1	-	-	-	-	617	1,837	1,248	17	46	60	1
Oklahoma	-	17	-	-	-	-	-	146	739	587	4	9	12	8
Texas *	28	175	1	1	1	-	-	1,344	6,437	4,051	31	103	121	25
MOUNTAIN	8	42	-	2	2	-	1	597	2,421	1,896	22	37	60	4
Montana *	-	1	-	-	-	-	-	27	147	141	-	-	-	-
Idaho	-	-	-	-	-	-	-	37	197	127	-	-	2	-
Wyoming *	1	2	-	2	2	-	-	19	59	11	-	1	1	-
Colorado *	-	-	-	-	-	-	1	146	717	482	7	8	18	-
New Mexico	1	13	-	-	-	-	-	58	319	296	5	5	8	1
Arizona	-	18	-	-	-	-	-	241	734	551	6	14	23	3
Utah	-	1	-	-	-	-	-	39	78	106	1	1	-	-
Nevada	6	7	-	-	-	-	-	30	170	182	3	8	8	-
PACIFIC	84	325	-	3	9	-	-	2,549	9,359	8,723	113	307	334	18
Washington	3	24	-	-	1	-	-	230	791	908	-	-	17	-
Oregon	4	5	-	-	-	-	-	219	712	887	2	8	8	-
California	66	268	-	3	8	-	-	1,982	7,378	6,532	111	297	290	18
Alaska	-	-	-	-	-	-	-	66	244	179	-	-	12	-
Hawaii	11	28	-	-	-	-	-	52	234	217	-	2	7	-
Guam *	-	-	-	-	-	-	-	-	15	40	-	-	-	-
Puerto Rico	-	14	-	-	-	-	-	-	112	255	-	30	50	2
Virgin Islands	-	-	-	-	-	-	-	5	9	16	-	-	-	-

* Delayed Reports:

Tuberculosis: Minn. 7, Ga. 15, N.C. delete 2 (1973), Ky. delete 2,
Mont. 2 (1973), Penn. 11, Ky. delete 1, Miss. delete 1 (1974),
Md. 8 (1974)
RMSF: Colo. 1 (1974)

Gonorrhea: Mont. 22 (1973), La. 1, Wyo. 14, Ind. 121, Guam 15 (1974)
Syphilis: Ohio delete 1 (1973), Ind. 4 (1974)
Rabies: Texas 7

Morbidity and Mortality Weekly Report

Week No.

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING JANUARY 26, 1974

4

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes					Pneumonia and Influenza All Ages	Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year			All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	789	501	203	46	22	51	SOUTH ATLANTIC	1,237	685	376	89	37	44
Boston, Mass.	266	147	77	18	14	18	Atlanta, Ga.	101	40	34	9	7	3
Bridgeport, Conn.	42	25	14	2	—	1	Baltimore, Md.	252	135	89	14	4	6
Cambridge, Mass.	32	26	6	—	—	9	Charlotte, N. C.	70	40	20	5	3	—
Fall River, Mass.	20	17	3	—	—	—	Jacksonville, Fla.	83	50	23	5	3	3
Hartford, Conn.	60	38	15	2	4	6	Miami, Fla.	109	57	31	10	5	8
Lowell, Mass.	24	16	6	—	1	1	Norfolk, Va.	54	34	13	4	—	5
Lynn, Mass.	26	19	2	5	—	5	Richmond, Va.	77	38	28	9	2	4
New Bedford, Mass.	43	30	9	4	—	3	Savannah, Ga.	57	36	14	2	1	3
New Haven, Conn.	57	37	12	4	2	1	St. Petersburg, Fla.	99	82	13	1	1	4
Providence, R. I.	66	40	18	5	1	1	Tampa, Fla.	65	30	24	2	8	5
Somerville, Mass.	11	8	3	—	—	—	Washington, D. C.	207	113	64	22	2	3
Springfield, Mass.	52	32	17	3	—	2	Wilmington, Del.	63	30	23	6	1	—
Waterbury, Conn.	35	24	10	1	—	—	EAST SOUTH CENTRAL	783	466	224	49	15	27
Worcester, Mass.	55	42	11	2	—	4	Birmingham, Ala.	117	71	30	10	2	2
MIDDLE ATLANTIC	4,057	2,480	1,106	239	143	126	Chattanooga, Tenn.	55	35	19	—	—	2
Albany, N. Y.	59	30	24	2	2	—	Knoxville, Tenn.	35	23	10	1	—	—
Allentown, Pa.	30	22	8	—	—	3	Louisville, Ky.	113	65	34	11	3	6
Buffalo, N. Y.	154	97	45	4	5	—	Memphis, Tenn.	220	126	70	9	6	4
Camden, N. J.	33	18	10	1	4	—	Mobile, Ala.	76	48	14	7	1	2
Elizabeth, N. J.	36	27	8	1	—	—	Montgomery, Ala.	42	25	13	2	—	4
Erie, Pa.	41	22	16	1	2	2	Nashville, Tenn.	125	73	34	9	3	7
Jersey City, N. J.	47	27	15	3	2	2	WEST SOUTH CENTRAL	1,219	696	339	75	54	52
Newark, N. J.	79	35	22	8	11	5	Austin, Tex.	62	42	14	4	2	3
New York City, N. Y.	1,893	1,170	494	122	64	70	Baton Rouge, La.	34	21	9	2	1	—
Paterson, N. J.	48	32	12	1	3	1	Corpus Christi, Tex.	33	20	8	—	1	—
Philadelphia, Pa.	996	593	276	68	35	6	Dallas, Tex.	179	102	56	10	9	11
Pittsburgh, Pa.	206	115	69	12	3	13	El Paso, Tex.	60	30	15	5	5	9
Reading, Pa.	47	31	11	3	1	5	Fort Worth, Tex.	98	54	29	12	2	4
Rochester, N. Y.	122	89	23	4	5	7	Houston, Tex.	259	129	87	17	13	6
Schenectady, N. Y.	30	20	8	1	—	2	Little Rock, Ark.	61	33	17	3	3	2
Scranton, Pa.	54	30	20	2	2	3	New Orleans, La.	142	78	40	11	5	3
Syracuse, N. Y.	86	53	28	2	1	1	San Antonio, Tex.	136	85	26	5	9	1
Trenton, N. J.	28	19	6	2	1	2	Shreveport, La.	72	45	19	5	2	6
Utica, N. Y.	33	25	3	1	1	2	Tulsa, Okla.	83	57	19	1	2	7
Yonkers, N. Y.	35	25	8	1	1	2	MOUNTAIN	586	329	152	41	39	26
EAST NORTH CENTRAL	2,594	1,512	691	167	118	69	Albuquerque, N. Mex.	58	35	14	4	3	10
Akron, Ohio	57	36	14	3	3	—	Colorado Springs, Colo.	31	13	9	4	2	5
Canton, Ohio	51	32	15	4	—	7	Denver, Colo.	136	71	40	6	15	2
Chicago, Ill.	643	349	186	54	22	13	Las Vegas, Nev.	27	13	9	3	2	4
Cincinnati, Ohio	213	131	52	13	13	2	Ogden, Utah	20	14	5	1	—	3
Cleveland, Ohio	226	124	66	11	21	5	Phoenix, Ariz.	135	75	30	12	9	1
Columbus, Ohio	135	84	33	4	7	5	Pueblo, Colo.	29	17	5	2	2	1
Dayton, Ohio	117	72	28	10	5	1	Salt Lake City, Utah	62	32	20	3	5	—
Detroit, Mich.	305	172	81	26	12	6	Tucson, Ariz.	88	59	20	6	1	—
Evansville, Ind.	36	28	4	3	—	1	PACIFIC	1,884	1,206	457	100	71	52
Fort Wayne, Ind.	51	31	12	3	2	2	Berkeley, Calif.	16	9	6	—	—	1
Gary, Ind.	47	18	20	6	1	2	Fresno, Calif.	59	32	18	2	6	2
Grand Rapids, Mich.	48	32	8	1	3	3	Glendale, Calif.	42	37	4	1	—	—
Indianapolis, Ind.	159	86	45	13	8	5	Honolulu, Hawaii	55	28	16	4	4	1
Madison, Wis.	46	24	13	1	4	6	Long Beach, Calif.	131	85	36	8	1	2
Milwaukee, Wis.	140	101	28	4	2	4	Los Angeles, Calif.	631	424	137	33	24	11
Peoria, Ill.	36	19	10	—	4	1	Oakland, Calif.	92	54	28	7	2	3
Rockford, Ill.	46	21	14	3	2	—	Pasadena, Calif.	25	21	2	1	—	1
South Bend, Ind.	44	32	10	—	1	5	Portland, Oreg.	145	98	29	7	9	7
Toledo, Ohio	132	83	35	6	6	—	Sacramento, Calif.	66	34	24	4	2	2
Youngstown, Ohio	62	37	17	2	2	1	San Diego, Calif.	143	81	40	8	5	4
WEST NORTH CENTRAL	944	615	225	43	30	45	San Francisco, Calif.	181	107	52	13	6	9
Des Moines, Iowa	60	42	13	2	—	—	San Jose, Calif.	68	42	17	4	1	2
Duluth, Minn.	37	27	7	—	1	3	Seattle, Wash.	140	85	33	7	9	1
Kansas City, Kans.	36	19	12	3	—	—	Spokane, Wash.	55	42	7	1	2	5
Kansas City, Mo.	136	83	36	7	5	4	Tacoma, Wash.	35	27	8	—	—	1
Lincoln, Nebr.	22	18	3	1	—	2	Total	14,093	8,490	3,773	849	529	492
Minneapolis, Minn.	128	79	32	8	5	3	Expected Number	13,222	7,887	3,558	828	462	541
Omaha, Nebr.	111	73	22	5	5	4							
St. Louis, Mo.	232	150	61	10	6	17							
St. Paul, Minn.	96	66	21	3	5	—							
Wichita, Kans.	86	58	18	4	3	12							

†Delayed report for week ending January 19, 1974

INFLUENZA – Continued

Iowa: An outbreak of influenza-like disease which began in the northeastern part of the state is now statewide. The disease has primarily affected school children, and school absenteeism has ranged 20% to 36%. Virologic studies are pending. (Reported by Charles A. Herron, M.D., State Epidemiologist, Iowa State Department of Health.)

Michigan: An outbreak of influenza-like disease has been reported from the northern peninsula of Michigan. Delta, Dickinson, Menominee, and Ontonagon counties all reported school closings in the period January 17-24 due to excessive absenteeism of both students and teachers. Marquette County also reported an outbreak of influenza-like disease primarily affecting school-age children. The illness has been characterized by fever, headache, and pharyngitis, although 10% to 20% of the persons affected have had gastrointestinal symptoms. An influenza B virus has been recovered in Menominee County. (Reported by Norman S. Hayner, M.D., State Epidemiologist, Michigan Department of Public Health; and an EIS Officer.)

Minnesota: Influenza-like disease has caused school absenteeism of approximately 30% in elementary schools in Duluth and Austin. The syndrome is characterized by fever, headache, cough, and myalgia. Surveillance in Minneapolis and St. Paul has shown no increase in upper respiratory disease. (Reported by D. S. Fleming, M.D., State Epidemiologist, Minnesota State Department of Health; and an EIS Officer.)

Oklahoma: An influenza-like illness has been reported from Norman, Shawnee, and parts of central and northwestern

Oklahoma. School children have been primarily affected, and there have been several school closings due to high rates of absenteeism. School absenteeism in Shawnee and Norman has been 30% and 25%, respectively.

(Reported by Stanley W. Ferguson, Ph.D., State Epidemiologist, Oklahoma State Department of Health.)

Wisconsin: Increased school absenteeism ranging from 20% to 40% has been recorded in 8 Wisconsin communities scattered across the state. The areas most affected are the southwestern part of the state and the area along the Wisconsin-Michigan border. Three isolates of influenza B have been reported from LaCrosse, and preliminary characterization suggests that they are similar to B/Victoria/98926/70. The disease has been seen primarily in school-age children.

(Reported by Donald Nelson, Chief of Virology, State Laboratory of Hygiene, H. Grant Skinner, M.D., State Epidemiologist, Wisconsin Department of Health and Social Services.)

Editorial Note

The influenza B outbreaks reported above have been caused by 2 forms of influenza B virus, the previously prevalent type, B/Victoria, and an intermediate type. The outbreaks have affected primarily school-age children, which is consistent with the usual course of influenza B outbreaks. Furthermore, the outbreaks in the Midwest are primarily rural in scope. The national reported incidence of influenza is well below last year's levels, and no outbreaks of influenza A have been reported.

SALMONELLA EASTBOURNE INFECTIONS – Colorado, Illinois, Louisiana, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, South Dakota, Wisconsin, Canada

In the first 11 months of 1973, a total of 5 isolations of *Salmonella eastbourne* from humans were reported to CDC. Since December, however, 44 cases of *S. eastbourne* infection have been reported from 11 states: Colorado (2), Illinois (7), Louisiana (1), Massachusetts (5), Michigan (4), Minnesota (4), New Hampshire (1), New Jersey (8), New York (1), South Dakota (1), and Wisconsin (10). The dates of onset of 25 symptomatic cases fell between December 1 and January 9. The median age of the cases was 3 years (range 1 day to 49 years), and the numbers of males and females affected were equal.

A telephone survey of apparently primary cases and of age- and sex-matched neighborhood controls was conducted by state and local health departments on January 25-26 to investigate exposure to 15 items suspected as possible vehicles on the basis of preliminary investigations. The salmonellosis patients contacted were significantly more likely to have eaten chocolate candy balls in Christmas wrapping within 3 days before their illness than were the controls, who were asked about such consumption in the 2-week period before Christmas (Table 2).

Investigations to determine the source of the implicated candies and to obtain specimens for culture are currently being conducted by local and state health departments, the Food and Drug Administration, and CDC.

In Canada, where *S. eastbourne* has also previously been extremely rare, there have been 15 isolates of this serotype reported or submitted to the Laboratory Centre for Disease Control in the last 5 months of 1973.

Table 2

Consumption of Christmas-Wrapped Chocolate Balls, by Persons with Primary *Salmonella eastbourne* Infection and by Controls in 9 States

	Cases	Controls	Total
Ate	20	10	30
Did not eat	8	36	44
Total	28	46	74
Percent eating	71%	22%	41%

$\chi^2 = 15.8, p < 0.00007$

(Reported by Thomas M. Vernon, M.D., State Epidemiologist, Colorado State Department of Public Health; Carl W. Langkop, Field Epidemiologist, Russell J. Martin, D.V.M., and Byron J. Francis, M.D., State Epidemiologist, Illinois Department of Public Health; Nicholas J. Fiumara, M.D., Director, and George E. Waterman, M.D., Assistant Director, Division of Communicable Diseases, Massachusetts Department of Public Health; D. Coohon, D.V.M., Chief, Division of Disease Control, and Norman S. Hayner, M.D., State Epidemiologist, Michigan Department of Public Health; D. S. Fleming, M.D., Director, Division of Personal Health Services, Minnesota State Department of Health; Vladas Kaupas, M.D., State Epidemiologist, New Hampshire State Department of Health and Welfare; George H. Hauser, M.D., Director, Bureau of Laboratories, and Charles T. Caraway, D.V.M., State Epidemiologist, Louisiana Health and Social and Rehabilitation Services Administration; Howard Rosenfeld, V.M.D., Senior Public Health

SALMONELLA EASTBOURNE – Continued

Veterinarian, and Ronald Altman, M.D., State Epidemiologist, New Jersey State Department of Health; Donald Nathan, M.D., Director, Office of Epidemiology, Nassau County Department of Health, Mineola, New York; Alan R. Hinman, M.D., State Epidemiologist, New York State Department of Health; Robert S. Westaby, M.D., State Epidemiologist, South Dakota State Department of Health; Peter K. Mayville, Public Health Advisor, and H. Grant Skinner, M.D., State Epidemiologist, Wisconsin Department of Health and Social Services; Rhoda Laidley, Officer in Charge, National Enteric Reference Centre, Laboratory Centre for Disease Control, Health Protection Branch, Ottawa, Canada; the Field Investigations Branch, Division of Field Operations, Executive Director of Regional Operations, Food and Drug Administration; the Enteric Unit, Enterobacteriology Section, Division of Bacteriology, Bureau of Laboratories, CDC; and 6 EIS Officers.)

Editorial Note

The sudden and widespread upsurge in the incidence of *S. eastbourne* infections suggests that a new or newly con-

taminated product with an international distribution may have been placed into circulation. The age and sex distribution suggests that the product is preferentially, but not exclusively, consumed by children. The significantly greater consumption of chocolate balls in Christmas wrapping by ill persons than by controls suggests that this or a similar candy may be the vehicle for the epidemic strain.

Note to Reader:

Vol. 23, No. 3, p. 22

In Table II, "Notifiable Diseases of Low Frequency – Delayed Reports," the 60 cases of congenital rubella syndrome (CRS) reported from Kansas represent cases in children born over the past 10-12 years but not previously reported. All were born before 1969, the year rubella vaccine was licensed. Recent intensive case finding in Kansas aimed at improving CRS surveillance has resulted in the reporting of these cases.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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