



### *Toxic Occupational Neuropathy — Continued*

3. Notifying these purchasers and users, and unions representing people who work with the product, of the potential hazard,
4. Notifying the Occupational Safety and Health Administration (OSHA) of the NIOSH findings, and
5. Preparing to conduct additional occupational health studies, as necessary, at facilities using Lucel-7.

Lucidol has informed NIOSH that it has withdrawn Lucel-7 from the market.

#### *Reference*

1. Spencer PS, Bischoff MC, Schaumburg HH. On the specific molecular configuration of neurotoxic aliphatic hydrocarbon compounds causing central-peripheral distal neuropathy. *Toxicol Appl Pharmacol* 1978;44:17-28.

## Current Trends

### **Influenza — United States, Worldwide**

**United States:** In the period October 10-22, an outbreak of influenza occurred in San Francisco among residents and staff of a nursing home. About 10% of the more than 300 nursing home residents and 20% of the staff became ill, and 5 virus isolates have been typed as influenza A(H3N2) strains. This outbreak began coincidentally with the initiation of a vaccine program in the facility, and after influenza A virus was established as the cause of illness, amantadine treatment was initiated on October 22 for most residents at a dosage of 100 mg twice a day. However, the treatment was discontinued after 5 days because some of this elderly population reportedly experienced undesirable side effects (ataxia, confusion, and tremor). No further influenza activity has been reported in the facility.

Elsewhere in the United States, influenza A(H1N1) virus, similar to A/Brazil/11/78 in hemagglutination-inhibition tests, was isolated from 1 person in Puerto Rico in September. An outbreak had previously been detected there by serologic diagnosis (7).

**Worldwide:** Influenza activity in South America continued to be reported in September with the isolation of an H3N2 strain in Bogota, Colombia. The isolate has been confirmed as resembling A/Bangkok/1/79. Some A/Bangkok/1/79-like strains were also identified among isolates from outbreaks earlier in the year in Argentina, Brazil, Chile, French Guiana, and Panama, although the majority of isolates were highly reactive with both A/Texas/1/77 and A/Bangkok/1/79.

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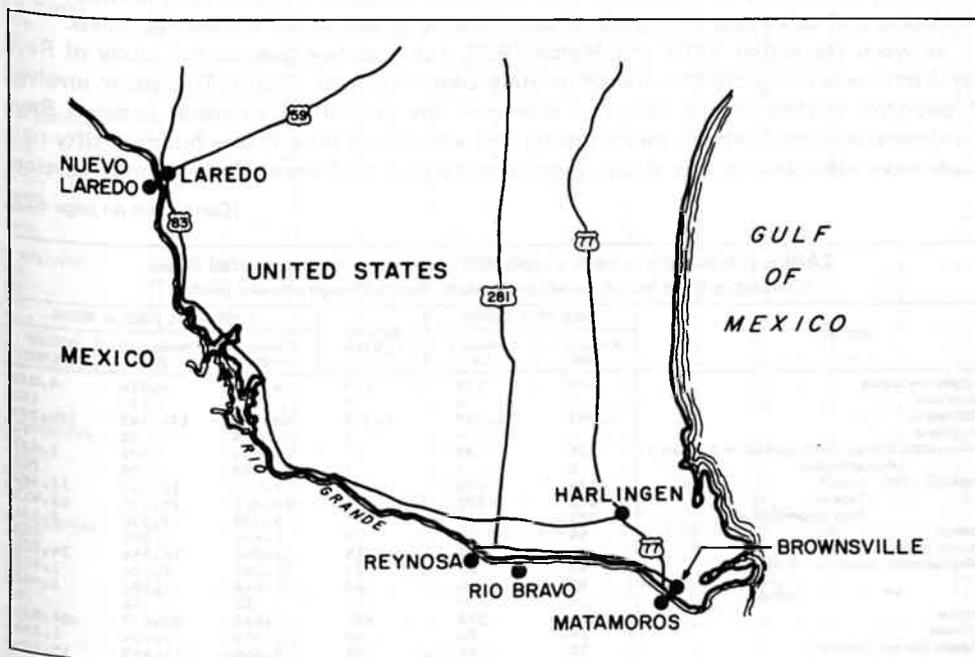
#### *Reference*

1. MMWR 1980;29:503-4.

Epidemiologic Notes and Reports**Dengue — United States**

Since the recent identification of the first indigenous dengue infection in the United States in 35 years (1), 10 more indigenous dengue infections have been documented in residents of Texas communities in the lower Rio Grande Valley. None of the patients had traveled across the U.S.-Mexican Border during the time when they became infected. Eight of the patients were residents of Brownsville, 1 of Harlingen, and 2 of Laredo (Figure 1). Dengue virus was isolated from 7 of the patients. Dengue was documented in the remaining patients by serologic tests.

**FIGURE 1.** Sites of dengue or dengue-like illness along the United States-Mexican Border, 1980



Ten of the 11 patients were discovered through a surveillance system initiated by the state and local health departments to detect dengue-like illness in Texas hospitals and clinics. The other case was detected during a follow-up investigation in Brownsville after the first case was recognized (2).

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**Editorial Note:** For most southeastern states the risk of dengue outbreaks appears to be diminishing with the advent of cooler weather. However, in the lower Rio Grande Valley, *Aedes aegypti* may be still active throughout the winter months. Although no outbreaks

*Dengue — Continued*

have been observed in the United States, dengue continues to be present in northern Mexico and along the U.S.-Mexican Border. Surveillance will continue into 1981 to detect any evidence of increased dengue activity with the return of warm weather in the spring.

*References*

1. MMWR 1980;29:451.
2. MMWR 1980;29:481.

**Reye Syndrome — Ohio, Michigan**

In addition to a previously reported study from Arizona (1), CDC has received reports of studies conducted in Ohio and Michigan which suggest a relationship between Reye syndrome and salicylates (i.e., aspirin) taken during an associated antecedent illness.

Between December 1978 and March 1980, a prospective case-control study of Reye syndrome was conducted by the Ohio State Department of Health. This study involved 6 pediatric centers in the state and examined the possible relationship between Reye syndrome and medications taken during the antecedent illness. One hundred fifty-nine cases were identified in this study; slightly more than half were relatively mild, develop-

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**TABLE I. Summary — cases of specified notifiable diseases, United States**  
 [Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	44th WEEK ENDING		MEDIAN 1975-1979	CUMULATIVE, FIRST 44 WEEKS		
	November 1, 1980	November 3, 1979		November 1, 1980	November 3, 1979	MEDIAN 1975-1979
Aseptic meningitis	287	219	139	6,228	7,076	4,037
Brucellosis	-	6	3	155	151	188
Chickenpox	1,007	1,307	1,375	160,875	176,147	156,399
Diphtheria	-	-	2	4	58	76
Encephalitis: Primary (arthropod-borne & unspec.)	35	22	27	951	924	1,027
Post-infectious	5	7	3	185	209	209
Hepatitis, Viral: Type B	424	340	283	15,073	12,342	12,680
Type A	571	575	593	23,711	25,174	25,913
Type unspecified	277	236	177	9,938	8,752	7,131
Malaria	44	12	6	1,631	645	463
Measles (rubeola)	28	89	115	13,095	12,588	24,826
Meningococcal infections: Total	45	26	29	2,227	2,206	1,473
Civilian	45	26	28	2,216	2,186	1,462
Military	-	-	-	11	20	20
Mumps	104	193	356	7,668	12,017	17,831
Pertussis	24	20	40	1,419	1,164	1,380
Rubella (German measles)	27	46	87	3,464	11,053	15,399
Tetanus	3	2	2	60	59	63
Tuberculosis	542	548	540	23,234	23,302	25,542
Tularemia	8	2	2	187	173	117
Typhoid fever	9	9	9	427	436	360
Typhus fever, tick-borne (Rky. Mt. spotted)	17	6	6	1,096	991	991
Veneral diseases:						
Gonorrhea: Civilian	16,644	20,376	20,376	846,290	848,795	848,795
Military	300	512	611	22,855	23,395	23,395
Syphilis, primary & secondary: Civilian	515	441	444	22,790	21,057	20,504
Military	8	6	3	267	264	264
Rabies in animals	53	95	60	5,427	4,367	2,600

**TABLE II. Notifiable diseases of low frequency, United States**

	CUM. 1980		CUM. 1980
Anthrax	1	Poliomyelitis: Total	8
Botulism Calif. 1	52	Paralytic	6
Cholera	8	Psittacosis	92
Congenital rubella syndrome	46	Rabies in man	-
Leprosy Md. 2, Calif. 7, Hawaii 3	191	Trichinosis	100
Leptospirosis	64	Typhus fever, flea-borne (endemic, murine)	61
Plague	18		

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 1, 1980, and November 3, 1979 (44th week)

REPORTING AREA	ASEPTIC MENINGITIS		BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
	1980	1980	1980	1980	CUM. 1980	Primary		Post-infectious	B	A	Unspecified	1980	CUM. 1980	
						1980	1979	1980	1980	1980	1980			
UNITED STATES	287	-	1,007	-	4	35	22	5	424	571	277	44	1,631	
NEW ENGLAND	9	-	158	-	-	2	-	-	18	11	8	1	94	
Maine	-	-	65	-	-	-	-	-	1	1	-	-	14	
N.H.	2	-	9	-	-	-	-	-	-	1	-	-	7	
Vt.	-	-	21	-	-	-	-	-	-	-	-	-	1	
Mass.	5	-	41	-	-	2	-	-	8	4	8	1	50	
R.I.	1	-	8	-	-	-	-	-	1	2	-	-	9	
Conn.	1	-	14	-	-	-	-	-	8	3	-	-	13	
MID. ATLANTIC	48	-	86	-	1	3	3	1	33	26	12	4	217	
Upper N.Y.	12	-	49	-	-	2	-	-	15	11	4	1	36	
N.Y. City	4	-	20	-	1	-	1	-	5	5	3	2	61	
N.J.	25	-	NN	-	-	-	-	-	13	10	5	1	54	
Pa.	7	-	17	-	-	1	2	1	NA	NA	NA	-	66	
E.N. CENTRAL	43	-	293	-	1	10	8	-	39	65	28	3	97	
Ohio	23	-	13	-	-	2	5	-	5	10	7	1	16	
Ill.	-	-	39	-	-	-	-	-	10	4	8	-	12	
Mich.	-	-	36	-	-	-	-	-	5	26	11	2	37	
Wis.	17	-	95	-	1	3	3	-	15	23	2	-	22	
	3	-	110	-	-	5	-	-	4	2	-	-	10	
W.N. CENTRAL	19	-	149	-	1	5	1	1	29	39	9	4	69	
Minn.	-	-	2	-	-	-	-	-	16	23	2	4	25	
Iowa	9	-	47	-	-	4	1	-	3	5	3	-	7	
Mo.	3	-	2	-	1	-	-	-	6	5	4	-	13	
N. Dak.	-	-	6	-	-	-	-	-	-	-	-	-	-	
S. Dak.	-	-	73	-	-	-	-	-	2	-	-	-	4	
Nebr.	-	-	-	-	-	1	-	-	-	1	-	-	7	
Kans.	7	-	19	-	-	-	-	1	2	5	-	-	13	
S. ATLANTIC	54	-	86	-	-	4	1	1	79	95	47	6	174	
Del.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-	
Md.	11	-	-	-	-	1	-	-	14	2	10	2	29	
D.C.	-	-	-	-	-	-	-	-	-	3	3	1	3	
Va.	9	-	2	-	-	-	-	-	10	5	6	1	59	
W. Va.	1	-	23	-	-	1	-	-	1	7	-	-	4	
N.C.	20	-	NN	-	-	1	-	-	8	10	5	-	17	
S.C.	-	-	-	-	-	1	-	-	13	3	3	-	10	
Ga.	3	-	-	-	-	-	-	-	7	12	-	-	17	
Fla.	10	-	61	-	-	-	1	1	26	60	13	2	35	
E.S. CENTRAL	6	-	19	-	-	2	-	-	22	16	3	1	12	
Ky.	2	-	12	-	-	-	-	-	-	-	-	-	3	
Tenn.	-	-	NN	-	-	-	-	-	-	-	-	-	-	
Ala.	4	-	6	-	-	-	-	-	19	5	3	1	7	
Miss.	-	-	1	-	-	2	-	-	3	11	-	-	2	
W.S. CENTRAL	14	-	-	-	-	-	1	2	16	17	18	-	139	
Ark.	1	-	-	-	-	-	-	-	6	1	5	-	8	
La.	-	-	NN	-	-	-	-	-	7	9	10	-	42	
Okla.	13	-	-	-	-	-	-	2	3	7	3	-	12	
Tex.	NA	NA	NA	NA	-	NA	1	-	NA	NA	NA	NA	77	
MOUNTAIN	5	-	27	-	-	1	2	-	16	70	56	-	15	
Mont.	-	-	8	-	-	-	-	-	-	1	-	-	1	
Idaho	-	-	-	-	-	-	-	-	-	10	-	-	1	
Wyo.	-	-	-	-	-	-	-	-	1	-	-	-	2	
Colo.	-	-	-	-	-	-	-	-	-	-	-	-	-	
N. Mex.	2	-	16	-	-	-	-	-	4	16	3	-	33	
Ariz.	3	-	-	-	-	-	-	-	2	5	3	-	6	
Utah	-	-	NN	-	-	-	-	-	5	22	38	-	17	
Nev.	-	-	3	-	-	1	2	-	1	11	12	-	15	
	-	-	-	-	-	-	-	-	3	5	-	-	10	
PACIFIC	89	-	189	-	1	8	6	-	172	232	96	25	744	
Wash.	1	-	177	-	1	1	2	-	9	11	4	-	49	
Oreg.	6	-	1	-	-	-	-	-	14	20	2	-	40	
Calif.	82	-	-	-	-	6	4	-	147	201	88	25	632	
Alaska	-	-	11	-	-	1	-	-	2	-	1	-	6	
Hawaii	-	-	-	-	-	-	-	-	-	-	1	-	17	
Guam	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	3	
P.R.	-	-	3	-	-	-	-	-	-	-	9	-	3	
V.I.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-	
Pac. Trust Terr.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	2	

NN: Not notifiable.

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 1, 1980, and November 3, 1979 (44th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1980	CUM. 1980	CUM. 1979	1980	CUM. 1980	CUM. 1979	1980	CUM. 1980	1980	1980	CUM. 1980	CUM. 1980
UNITED STATES	28	13,095	12,588	45	2,227	2,206	104	7,668	24	27	3,464	60
NEW ENGLAND	-	672	290	4	123	126	5	583	-	2	209	3
Maine	-	33	17	-	5	7	1	298	-	-	68	1
N.H.	-	328	33	-	8	13	-	22	-	-	37	-
Vt.	-	226	119	-	14	7	-	12	-	-	3	-
Mass.	-	58	15	1	41	46	2	124	-	1	72	-
R.I.	-	2	102	-	9	8	1	29	-	-	9	1
Conn.	-	25	4	3	46	45	1	98	-	1	20	1
MID. ATLANTIC	4	3,801	1,541	9	391	343	6	851	4	1	561	8
Upstate N.Y.	4	698	649	3	121	118	4	132	1	1	215	3
N.Y. City	-	1,194	788	-	98	79	-	92	-	-	99	2
N.J.	-	828	58	2	82	87	2	115	1	-	101	-
Pa.	-	1,081	46	4	90	59	-	512	2	-	146	3
E.N. CENTRAL	3	2,447	3,289	2	256	244	46	2,876	4	7	832	3
Ohio	-	380	282	2	84	97	22	1,162	-	-	8	1
Ind.	-	92	223	-	41	43	3	136	1	3	353	-
Ill.	-	347	1,452	-	51	20	4	379	-	-	165	-
Mich.	3	250	838	-	64	65	7	860	2	2	129	1
Wis.	-	1,378	494	-	16	19	10	341	1	2	177	1
W.N. CENTRAL	1	1,321	1,791	5	95	70	3	298	2	5	200	4
Minn.	1	1,105	1,218	3	30	15	-	18	-	-	28	1
Iowa	-	-	16	-	11	11	-	51	-	-	9	1
Mo.	-	65	417	1	38	33	-	101	-	1	42	1
N. Dak.	-	1	21	-	2	1	-	4	2	-	5	-
S. Dak.	-	-	2	-	5	4	2	4	-	-	2	-
Nebr.	-	83	45	-	-	-	-	9	-	-	1	-
Kans.	-	67	72	1	9	6	1	111	-	4	113	1
S. ATLANTIC	8	1,963	1,976	10	527	536	10	1,041	3	-	342	10
Del.	NA	3	1	-	2	5	NA	40	NA	NA	1	-
Md.	-	83	16	-	47	45	-	340	-	-	71	1
D.C.	5	5	-	-	2	-	-	4	-	-	1	-
Va.	1	340	275	1	52	76	3	71	1	-	53	3
W. Va.	1	16	60	-	20	8	4	114	-	-	26	1
N.C.	-	130	114	2	94	84	-	93	1	-	46	3
S.C.	-	159	174	1	60	59	-	206	-	-	54	3
Ga.	-	826	494	4	96	80	-	9	-	-	90	1
Fla.	1	401	842	2	154	179	3	164	1	-	90	1
E.S. CENTRAL	-	333	209	-	190	161	6	876	1	-	84	5
Ky.	-	55	37	-	58	34	-	755	-	-	40	1
Tenn.	-	172	63	-	51	44	1	30	-	-	39	2
Ala.	-	22	85	-	52	38	4	29	-	-	3	2
Miss.	-	84	24	-	29	45	1	62	1	-	2	-
W.S. CENTRAL	1	967	925	2	239	325	1	275	1	-	136	18
Ark.	-	16	7	1	19	24	1	22	-	-	4	2
La.	1	12	254	-	90	118	-	68	-	-	12	5
Okla.	-	776	22	1	20	34	-	-	1	-	6	1
Tex.	NA	163	642	-	110	149	NA	185	NA	NA	114	10
MOUNTAIN	1	490	324	3	90	87	7	211	-	1	157	-
Mont.	-	2	56	-	3	10	2	58	-	-	45	-
Idaho	-	-	18	1	5	9	-	16	-	-	22	-
Wyo.	-	-	36	-	3	1	-	-	-	-	1	-
Calif.	-	24	68	-	23	5	1	58	-	-	12	-
N. Mex.	-	14	38	-	10	5	-	-	-	-	5	-
Ariz.	1	394	77	-	15	36	4	43	-	1	38	-
Utah	-	47	19	-	5	9	-	27	-	-	28	-
Nev.	-	9	12	2	26	12	-	9	-	-	6	-
PACIFIC	10	1,101	2,243	10	316	314	20	657	9	11	943	9
Wash.	-	177	1,139	3	58	54	1	138	-	-	86	-
Oreg.	-	-	62	1	51	26	3	84	-	-	62	-
Calif.	10	912	957	6	198	218	15	403	9	11	778	9
Alaska	-	6	17	-	9	6	-	12	-	-	12	-
Hawaii	-	6	68	-	-	10	1	20	-	-	5	-
Guam	NA	6	12	-	1	1	NA	10	NA	NA	2	-
P.R.	-	157	367	-	9	5	2	143	2	3	23	12
V.I.	NA	6	5	-	1	3	NA	2	NA	NA	1	-
Pac. Trust Terr.	NA	10	9	-	-	1	NA	21	NA	NA	1	-

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont'd). Cases of specified notifiable diseases, United States, weeks ending

November 1, 1980, and November 3, 1979 (44th week)

REPORTING AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
	1980	CUM. 1980	CUM. 1980	1980	CUM. 1980	1980	CUM. 1980	GONORRHEA			SYPHILIS (Pri. & Sec.)			CUM. 1980
								1980	CUM. 1980	CUM. 1979	1980	CUM. 1980	CUM. 1979	
UNITED STATES	542	23,234	187	9	427	17	1,096	16,644	846,290	848,795	515	22,790	21,057	5,427
NEW ENGLAND	15	649	6	-	11	-	14	423	21,445	20,901	12	441	413	55
Maine	1	46	-	-	1	-	-	16	1,234	1,474	-	5	10	24
N.H.	-	15	-	-	-	-	-	19	764	774	1	5	16	7
Vt.	-	22	-	-	-	-	-	8	483	525	1	6	1	-
Mass.	12	361	4	-	7	-	7	166	9,017	8,268	6	261	233	14
R.I.	-	62	1	-	1	-	2	22	1,379	1,682	2	29	15	1
Conn.	2	143	1	-	2	-	5	192	8,568	8,178	2	135	138	9
MID. ATLANTIC	82	3,750	3	2	83	1	48	1,045	93,360	92,831	31	3,105	3,179	68
Upstate N.Y.	5	723	1	-	14	-	14	380	17,179	15,992	6	276	231	36
N.Y. City	41	1,353	1	2	37	-	3	NA	36,367	36,526	NA	1,989	2,162	-
N.J.	26	818	1	-	19	1	19	446	17,102	16,448	9	379	415	13
Pa.	10	856	-	-	13	-	12	219	22,712	23,865	16	461	371	19
E.N. CENTRAL	71	3,324	1	-	44	-	26	3,394	131,461	133,199	41	2,249	2,646	821
Ohio	17	599	-	-	12	-	13	570	34,303	36,876	-	216	518	53
Ind.	13	362	-	-	-	-	2	551	13,679	11,188	4	165	187	68
Ill.	34	1,157	-	-	18	-	6	1,447	41,615	41,977	31	1,352	1,487	443
Mich.	-	997	1	-	10	-	3	826	29,915	31,087	2	333	382	15
Wis.	7	209	-	-	4	-	2	NA	11,949	12,071	4	83	72	242
W.N. CENTRAL	25	842	29	1	27	-	53	948	41,107	41,959	7	305	272	1,753
Minn.	4	155	1	-	3	-	-	147	6,610	6,830	-	99	73	201
Iowa	1	79	1	2	2	-	3	112	4,326	5,030	-	23	29	390
Mo.	19	398	24	-	18	-	34	370	18,399	18,074	2	145	125	340
N. Dak.	1	42	-	1	1	-	-	8	565	723	-	4	2	206
S. Dak.	-	42	-	-	1	-	2	25	1,189	1,397	1	5	2	385
Nebr.	-	35	1	-	1	-	4	140	3,184	3,005	1	8	6	90
Kans.	-	91	2	-	1	-	10	146	6,834	6,900	3	21	35	141
S. ATLANTIC	131	5,124	10	1	43	6	690	5,618	213,592	205,745	179	5,535	4,997	437
Del.	NA	66	-	NA	1	NA	2	NA	2,930	3,378	NA	15	24	1
Md.	9	600	2	1	3	1	73	732	22,873	25,393	21	384	322	32
D.C.	8	318	-	-	4	-	-	419	14,728	13,518	19	415	383	-
Va.	14	556	-	-	8	-	93	646	19,672	19,763	18	494	409	22
W. Va.	3	186	-	-	4	-	5	164	2,918	2,790	-	16	45	24
N.C.	19	920	3	-	5	5	313	1,039	32,069	29,647	14	415	385	20
S.C.	8	443	-	-	3	-	141	363	19,941	19,314	11	323	260	57
Ga.	40	705	5	-	-	-	56	1,065	41,528	38,882	45	1,576	1,392	217
Fla.	30	1,330	-	-	15	-	7	1,190	56,933	53,060	51	1,897	1,777	64
E.S. CENTRAL	42	2,146	10	-	11	2	113	830	68,701	72,085	43	1,886	1,400	300
Ivy.	6	483	-	-	3	1	19	267	10,153	9,549	2	116	141	129
Tenn.	15	690	7	-	1	-	61	298	24,736	26,091	19	788	580	124
Ala.	11	567	1	-	3	-	17	NA	20,205	21,378	NA	414	256	47
Miss.	10	406	2	-	4	1	16	265	13,607	15,067	22	568	423	-
W.S. CENTRAL	42	2,598	85	-	67	8	132	960	105,911	108,345	38	4,552	3,825	1,245
Ark.	5	288	57	-	8	2	34	264	8,741	8,495	10	190	135	165
La.	19	500	-	-	2	-	3	412	19,504	19,150	28	1,164	975	14
Okla.	18	286	20	-	6	6	68	284	10,730	10,781	-	92	78	223
Tex.	NA	1,524	8	NA	51	NA	27	NA	66,936	69,919	NA	3,106	2,637	843
MOUNTAIN	18	648	32	-	22	-	16	593	32,519	33,999	35	574	419	227
Mont.	-	28	9	-	1	-	3	NA	1,020	1,661	NA	5	8	54
Idaho	-	25	1	-	1	-	1	21	1,436	1,525	1	26	25	2
Wyo.	-	20	4	-	-	-	2	32	961	981	-	11	8	15
Col.	7	110	8	-	7	-	5	237	8,916	9,049	5	148	83	54
N. Mex.	1	120	2	-	3	-	4	118	4,037	4,129	8	103	75	44
Ariz.	10	277	1	-	7	-	-	NA	8,637	9,460	14	190	125	54
Utah	-	40	5	-	3	-	1	39	1,652	1,739	-	15	4	3
Neav.	-	28	2	-	-	-	-	146	5,860	5,455	7	76	91	1
PACIFIC	116	4,153	11	5	119	-	4	2,833	138,194	139,731	129	4,143	3,906	521
Wash.	2	354	-	-	3	-	-	NA	11,389	12,327	NA	189	186	-
Oreg.	2	155	4	-	9	-	1	203	9,612	8,764	3	96	148	4
Calif.	108	3,502	6	3	105	-	3	2,469	110,991	111,677	123	3,714	3,468	471
Alaska	-	53	1	-	-	-	-	90	3,429	4,277	-	8	22	46
Hawaii	4	89	-	2	2	-	-	71	2,773	2,686	3	136	82	-
Guam	NA	39	-	NA	1	NA	-	NA	89	101	NA	4	-	-
P.R.	15	171	-	-	8	-	-	57	2,311	1,859	12	520	488	47
V.I.	NA	-	-	NA	-	NA	-	NA	108	135	NA	10	7	-
Pac. Trust Terr.	NA	35	-	NA	-	NA	-	NA	379	413	NA	-	1	-

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE IV. Deaths in 121 U.S. cities,\* week ending November 1, 1980 (44th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL	REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1			ALL AGES	>65	45-64	25-44	<1	
<b>NEW ENGLAND</b>	<b>676</b>	<b>457</b>	<b>161</b>	<b>27</b>	<b>20</b>	<b>48</b>	<b>S. ATLANTIC</b>	<b>1,229</b>	<b>728</b>	<b>327</b>	<b>75</b>	<b>58</b>	<b>43</b>
Boston, Mass.	174	100	49	12	9	11	Atlanta, Ga.	134	83	34	8	2	7
Bridgeport, Conn.	42	33	8	1	-	2	Baltimore, Md.	212	121	53	15	12	4
Cambridge, Mass.	44	34	6	2	1	4	Charlotte, N.C.	71	42	24	3	2	3
Fall River, Mass.	26	19	7	-	-	2	Jacksonville, Fla.	80	48	19	4	8	4
Hartford, Conn.	56	35	13	3	3	2	Miami, Fla.	117	65	29	12	6	4
Lowell, Mass.	29	21	7	1	-	1	Norfolk, Va.	63	33	16	4	7	4
Lynn, Mass.	20	16	4	-	-	1	Richmond, Va.	83	51	23	3	2	4
New Bedford, Mass.	31	23	6	1	-	-	Savannah, Ga.	35	18	13	3	-	2
New Haven, Conn.	57	42	13	-	-	11	St. Petersburg, Fla.	90	67	17	2	3	7
Providence, R.I.	63	41	14	3	5	6	Tampa, Fla.	78	48	21	4	5	3
Somerville, Mass.	13	10	3	-	-	-	Washington, D.C.	205	110	65	14	10	1
Springfield, Mass.	37	26	10	1	-	5	Wilmington, Del.	61	42	13	3	1	-
Waterbury, Conn.	31	22	7	2	-	2							
Worcester, Mass.	53	35	14	1	2	1							
							<b>E.S. CENTRAL</b>	<b>658</b>	<b>398</b>	<b>160</b>	<b>43</b>	<b>33</b>	<b>30</b>
<b>MID. ATLANTIC</b>	<b>2,459</b>	<b>1,630</b>	<b>547</b>	<b>147</b>	<b>82</b>	<b>101</b>	Birmingham, Ala.	107	62	21	10	7	-
Albany, N.Y. ††	47	31	10	2	4	1	Chattanooga, Tenn.	44	28	14	2	-	2
Allentown, Pa.	17	12	5	-	-	-	Knoxville, Tenn.	50	35	13	-	1	4
Buffalo, N.Y.	148	108	30	4	4	7	Louisville, Ky.	95	55	30	3	4	5
Camden, N.J.	47	26	15	4	2	1	Memphis, Tenn.	110	70	28	10	-	2
Elizabeth, N.J.	19	14	4	-	-	2	Mobile, Ala.	70	40	16	5	4	7
Erie, Pa. †	30	20	9	-	1	-	Montgomery, Ala.	56	32	7	2	14	3
Jersey City, N.J.	57	35	15	1	4	2	Nashville, Tenn.	126	76	31	11	3	7
Newark, N.J.	67	36	17	5	4	3							
N.Y. City, N.Y.	1,321	890	277	92	31	47	<b>W.S. CENTRAL</b>	<b>1,238</b>	<b>677</b>	<b>278</b>	<b>97</b>	<b>130</b>	<b>35</b>
Paterson, N.J.	22	15	7	-	-	-	Austin, Tex.	34	19	8	1	1	4
Philadelphia, Pa. †	272	165	69	15	18	20	Baton Rouge, La.	42	22	10	6	4	1
Pittsburgh, Pa. †	60	37	16	4	3	1	Corpus Christi, Tex.	41	29	8	1	-	-
Reading, Pa.	44	35	8	1	-	2	Dallas, Tex.	200	109	53	21	11	1
Rochester, N.Y.	110	76	21	9	3	5	El Paso, Tex.	44	31	9	3	1	3
Schenectady, N.Y.	22	17	3	1	-	-	Fort Worth, Tex.	95	60	19	7	4	1
Scranton, Pa. †	23	16	6	-	1	2	Houston, Tex.	338	136	68	32	87	6
Syracuse, N.Y.	88	49	23	7	5	2	Little Rock, Ark.	72	42	18	2	6	5
Trenton, N.J.	24	19	2	-	2	1	New Orleans, La.	130	71	35	10	4	-
Utica, N.Y.	21	16	5	-	-	1	San Antonio, Tex.	126	77	27	8	7	8
Yonkers, N.Y.	20	13	5	2	-	4	Shreveport, La.	26	18	5	2	-	1
							Tulsa, Okla.	90	63	18	4	5	5
<b>E.N. CENTRAL</b>	<b>2,352</b>	<b>1,450</b>	<b>564</b>	<b>139</b>	<b>118</b>	<b>62</b>	<b>MOUNTAIN</b>	<b>617</b>	<b>367</b>	<b>161</b>	<b>37</b>	<b>29</b>	<b>19</b>
Akron, Ohio	68	46	16	1	3	-	Albuquerque, N. Mex.	64	44	12	3	1	7
Canton, Ohio	43	29	10	2	-	2	Colo. Springs, Colo.	32	17	11	1	1	1
Chicago, Ill.	588	352	137	36	41	10	Denver, Colo.	115	72	29	8	2	-
Cincinnati, Ohio	144	86	34	12	11	9	Las Vegas, Nev.	91	43	29	12	5	1
Cleveland, Ohio	196	116	47	15	10	1	Ogden, Utah	10	9	1	-	-	-
Columbus, Ohio	132	86	28	5	6	1	Phoenix, Ariz.	139	82	36	5	12	1
Dayton, Ohio	126	81	34	3	4	4	Pueblo, Colo.	23	18	4	1	-	3
Detroit, Mich.	291	176	68	24	10	3	Salt Lake City, Utah	54	28	16	2	6	3
Evansville, Ind.	32	22	6	3	-	1	Tucson, Ariz.	89	54	23	5	2	3
Fort Wayne, Ind.	52	31	18	2	-	5							
Gary, Ind.	12	7	4	1	-	-	<b>PACIFIC</b>	<b>1,619</b>	<b>1,045</b>	<b>388</b>	<b>80</b>	<b>51</b>	<b>61</b>
Grand Rapids, Mich.	55	39	8	3	4	2	Berkeley, Calif.	16	13	2	1	-	1
Indianapolis, Ind.	144	89	33	6	11	2	Fresno, Calif.	90	50	20	10	5	2
Madison, Wis.	51	31	13	1	2	6	Glendale, Calif.	21	15	4	1	-	2
Milwaukee, Wis.	123	81	32	5	2	7	Honolulu, Hawaii	56	33	16	4	2	3
Peoria, Ill.	65	36	15	7	5	-	Long Beach, Calif.	84	56	22	4	1	2
Rockford, Ill.	34	20	9	2	2	2	Los Angeles, Calif.	365	242	86	16	9	13
South Bend, Ind.	47	34	8	3	2	1	Oakland, Calif.	72	41	24	2	2	2
Toledo, Ohio	88	42	36	5	2	5	Pasadena, Calif.	26	20	3	1	2	2
Youngstown, Ohio	61	46	8	3	3	1	Portland, Ore.	126	89	21	9	4	4
							Sacramento, Calif.	77	50	19	1	3	1
<b>W.N. CENTRAL</b>	<b>734</b>	<b>490</b>	<b>148</b>	<b>38</b>	<b>27</b>	<b>26</b>	San Diego, Calif.	135	87	35	5	2	3
Des Moines, Iowa	55	34	14	3	2	2	San Francisco, Calif.	148	97	38	7	3	3
Duluth, Minn.	32	23	4	3	-	3	San Jose, Calif.	147	92	38	8	4	11
Kansas City, Kans.	42	25	9	3	2	1	Seattle, Wash.	144	85	34	9	9	7
Kansas City, Mo.	106	73	21	5	3	5	Spokane, Wash.	60	43	13	1	2	7
Lincoln, Nebr.	28	19	5	2	-	-	Tacoma, Wash.	52	32	13	1	3	5
Minneapolis, Minn.	90	61	18	2	5	4							
Omaha, Nebr.	96	66	20	6	3	3							
St. Louis, Mo.	165	109	29	12	6	3							
St. Paul, Minn.	63	44	13	-	5	1							
Wichita, Kans.	57	36	15	2	1	4							
							<b>TOTAL</b>	<b>11,582</b>	<b>7,242</b>	<b>2,734</b>	<b>683</b>	<b>548</b>	<b>425</b>

\* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

\*\* Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Data not available this week. Figures are estimates based on average percent of regional totals.

*Reye Syndrome - Continued*

ing only stage I encephalopathy (difficult to arouse, lethargic, sleepy). A large percentage of these patients were identified during an outbreak of influenza A (H1N1) that occurred in December 1978-March 1979 and an outbreak of influenza B that occurred in December 1979-March 1980, or had varicella as an antecedent illness.

Reye syndrome patients and controls, selected from the same school classroom or neighborhood and matched for age, sex, race, and the occurrence of a similar antecedent illness (respiratory, varicella, or gastrointestinal) within 1 week of that which occurred in the case, were interviewed concerning medications taken between the time of onset of the antecedent illness and either admission to the hospital for Reye syndrome (for cases) or recovery from the illness (for controls). For each Reye syndrome case, the date of onset of vomiting, which is usually associated with the onset of Reye syndrome, was recorded. The frequency of usage of only 2 medications was found to be significantly different statistically in cases and controls. Salicylates, including those contained in various compounds, were the only medications which were taken significantly more frequently in cases (95/98, 97%) than controls (114/160, 71%) ( $p < .001$ ). All of the Reye syndrome cases with a history of salicylate ingestion took salicylates during their antecedent illness and prior to the onset of the pre-encephalopathic vomiting associated with this syndrome. Multiple logistic analysis using a model that included histories of salicylate ingestion, fever, headache, and sore throat has demonstrated that although a history of fever was significantly greater in cases than controls, this difference did not account for the even stronger association of cases with a history of salicylate ingestion. Using this model, the estimated relative risk of Reye syndrome for patients taking salicylates was 11.3 (95% confidence limits 2.7-47.5). Histories of headache and sore throats were not significantly different in cases and controls. Medications containing acetaminophen were taken by only 16% (16/98) of cases compared to 32% (51/160) of controls ( $p < 0.01$ ). Although analysis has not yet been completed concerning the dose of salicylates ingested by the patients with Reye syndrome, the majority had a history of taking no more than normally recommended. The medication history was usually obtained from parents within 7-10 days (for cases) and 10-20 days (for controls) after the onset of antecedent illness.

The recently reported study from Michigan involved 25 patients with Reye syndrome and 44 controls selected in a manner similar to that of the Ohio study, matched for the same criteria, and interviewed 4 to 83 days (mean 6.5 weeks) after their acute illnesses. When cases and controls were retrospectively matched for fever ( $\pm 1^\circ\text{F}$ ), aspirin was taken significantly more often in cases (14/14, 100%) than controls (14/21, 67%,  $p < 0.02$ ), and acetaminophen-containing compounds were taken significantly less often in cases (0/14), than in controls (6/21, 29%,  $p < .05$ ).

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**Editorial Note:** Although the epidemiologic association between Reye syndrome and antecedent viral illnesses is well established, the etiology of this rare disease remains unclear. Several previous reports have suggested the possibility that medications taken during the antecedent illness of patients with Reye syndrome may play a role in the development of this disease, and aspirin is 1 medication which has been mentioned frequently (2-4).

The Ohio and Michigan studies reported here and the previously reported smaller study from Arizona (involving 7 cases and 16 controls) are the only controlled studies of the relationship between Reye syndrome and medications taken during the antecedent

### *Reye Syndrome — Continued*

illness reported since this disease was first described. All 3 of these studies involved in-home interviews focusing specifically on medication histories of Reye syndrome patients and controls.

A number of potential problems are encountered when conducting and analyzing such studies. These include 1) difficulties in obtaining comparable and accurate medication histories in patients following a significant event (Reye syndrome) when compared to controls who have had a relatively minor illness, and the difficulty of accurate recall of events several weeks later, 2) the possibility that cases had a more severe antecedent illness and/or a pre-encephalopathic illness that included severe vomiting and headaches—both of which may have predisposed them to take more medications than controls—and 3) the presumed need to select cases and controls with the same viral infections, including influenza B, influenza A (H1N1), and varicella, since Reye syndrome is thought to be more strongly associated with these infections.

It is possible that parents of patients with Reye syndrome were more likely than parents of controls to recall events immediately preceding their child's major illness and hospitalization, including medications taken by their child during this period. Recall of medication histories for Reye syndrome patients may also have been more accurate and complete than the recall for controls because parents of cases were frequently interviewed earlier after their child's acute illness than were parents of controls. However, the fact that only aspirin or salicylate-containing compounds were found to have been taken significantly more frequently during the antecedent illness in cases than controls in these studies suggests that the association between Reye syndrome and salicylates may indeed be real. Furthermore, the fact that acetaminophen-containing compounds were taken by significantly fewer cases than controls in both studies, which might be expected if Reye syndrome patients were more likely to use salicylates than acetaminophen for fever or other symptoms, suggests that the recall of parents of cases was not greater than the recall of parents of controls for these medications.

Another possible reason for differences in medication histories in cases and controls is that Reye syndrome patients may have a more severe or prolonged antecedent illness and/or may subsequently develop a pre-encephalopathic illness, associated with severe vomiting, for which they might receive additional medications. Because elevated temperatures are 1 major reason for taking salicylates, both of these studies have attempted to compare the effects of differing histories of fever among cases and controls. In the Michigan study, even when cases and controls were matched for degree of fever, the difference in salicylate usage remained significant. Analyses completed in the Ohio study have demonstrated that a history of fever, as well as headaches and sore throats—symptoms which might also cause cases to take more salicylates than controls—did not account for the observed differences in salicylate ingestion. Additional analyses in Ohio of aspirin ingestion histories of Reye syndrome patients for the specific period between onset of prodromal illness and onset of vomiting demonstrated that all of 95 patients who received salicylates received some during their antecedent illness—before the onset of pre-encephalopathic vomiting. The possible confounding effects of other symptoms and combinations of symptoms are being further examined in the Ohio study.

Reye syndrome is rare and associated frequently with certain viruses. Thus, comparison of medication histories in cases and controls who had the same viral infection may be important. In both of these studies, controls were selected from the same school and had a prodromal illness within 1 week of that of the cases. It is probable that many cases

*Reye Syndrome — Continued*

and controls were matched for infection because a large percentage of the cases occurred during outbreaks of influenza, and varicella patients were matched with other children who had varicella. Further analysis of the salicylate association by specific type of infection should be possible in the Ohio study.

In 1976 the Food and Drug Administration advised that, when treating children who develop vomiting associated with a viral illness, caution should be exercised in using acetaminophen, salicylates, and antiemetics because of the suspicion that these drugs, in combination with a viral illness (a possible cause of vomiting in children) might contribute to the development of Reye syndrome (5). The results of these studies suggest that during certain viral illnesses the use of salicylates—even before the onset of vomiting—may be a factor in the pathogenesis of Reye syndrome. In view of these data, parents should be advised to use caution when administering salicylates to treat children with viral illnesses, particularly chickenpox and influenza-like illnesses.

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