

TO	FIELD POINT OR DEPT. & BLDG. NO.	DATE YOUR LETTER
J. W. Gressler	Avon Lake G.C.	
FROM	FIELD POINT OR DEPT. & BLDG. NO.	DATE THIS LETTER
H. W. Dietz, M.D.	Akron - D/0020, 5-H	6-9-82
SUBJECT		

Dr. Guyton passed to me the list of individuals who have, or died of ischemic heart disease, together with your concerns.

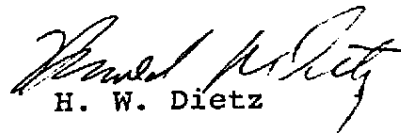
I have analyzed the numbers and do not believe you have a problem. Heart disease is still the leading cause of death in this country; recent statistics show a death rate of 330/100,000/year from ischemic heart disease.

Using your list of deaths and the year of death, together with the plant population, I calculated death rates for all years in which deaths occurred. These ranged from 142 to 416/100,000/year, with only one exceeding 344. When you consider there were several years with no deaths, these rates are not excessive and overall there is probably a deficit of deaths.

At the end of 1981 you indicate 15 active employees with a plant population of 692 or 2.17 cases per hundred employees. In 1974, a national survey indicated approximately 2 out of every 100 individuals were to some extent disabled by ischemic heart disease. This is not a significant difference.

Additionally, we have used the BFG Medical Surveillance System to compare Avon Lake ischemic heart disease with the rest of the company and find an overall deficit at Avon Lake.

I hope this answers the questions you have on this subject.


H. W. Dietz

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Marbidity and Mortality



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WEEKLY
REPORT

For
Week Ending
July 19, 1975

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE
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EPIDEMIOLOGIC NOTES AND REPORTS VINYL CHLORIDE AND CONGENITAL MALFORMATIONS - Ohio

In March 1975 the Ohio Department of Health reported a significantly increased rate of central nervous system (CNS) malformations in 3 Ohio communities where polyvinyl chloride (PVC) polymerization plants are located (1); the increase was not uniform and appeared most prominent in Painesville, Ohio. The birth defect rates were computed from birth certificate data for 1970-73 and were compared to similar data for the entire state of Ohio. This study suggested a relationship between the increased rates of CNS malformations and the increased risk of exposure to vinyl chloride (VC) in these communities.

Data available through the CDC Birth Defects Moni-

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toring Program (BDMP) (2) provided an opportunity to further examine this suggested relationship. Two hospitals that participate in the BDMP are located in cities with PVC polymerization plants: one in Pennsylvania, the other in Painesville, Ohio. CNS malformation rates for these 2 hospitals in 1970-74 were compared with the rates in their respective

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

DISEASE	29th WEEK ENDING		MEDIAN 1970-1974	CUMULATIVE, FIRST 29 WEEKS		
	July 19, 1975	July 20, 1974		1975	1974	MEDIAN 1970-1974
Aseptic meningitis	84	84	172	1,320	1,210	1,334
Brucellosis	5	6	5	118	91	91
Chickenpox	940	928	---	113,682	96,940	---
Diphtheria	5	6	1	203	154	107
Encephalitis	17	19	34	386	468	640
{ Primary	10	5	11	185	152	177
{ Post-Infectious	240	215	175	6,218	5,814	4,734
Hepatitis, Viral	624	823	---	19,508	23,859	---
{ Type B	161	106	1,014	4,494	4,657	30,925
{ Type A	31	11	21	210	101	623
{ Type unspecified	358	199	271	20,074	18,835	25,764
Malaria	32	20	19	930	845	938
Measles (rubeola)	31	20	26	909	822	914
Meningococcal infections, total	1	---	---	21	23	35
{ Civilian	574	530	698	44,264	42,245	53,831
{ Military	27	46	---	714	767	---
Mumps	79	122	185	14,263	9,015	25,166
Pertussis	4	---	1	44	35	55
Rubella (German measles)	659	600	---	18,503	16,933	---
Tetanus	4	6	6	63	79	79
Tuberculosis	9	7	7	166	206	173
Tularemia	46	34	32	394	418	244
Typhoid fever	---	---	---	---	---	---
Typhus, tick-borne (Rky. Mt. spotted fever)	---	---	---	---	---	---
Venereal Diseases:	---	---	---	---	---	---
{ Gonorrhea	20,410	18,067	---	527,957	480,767	---
{ Civilian	585	625	---	16,362	16,088	---
{ Military	387	507	---	14,013	13,907	---
{ Syphilis, primary and secondary	9	10	---	191	255	---
{ Civilian	60	52	63	1,370	1,637	2,068
{ Military	---	---	---	---	---	---
Rabies in animals	---	---	---	---	---	---

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	---	Poliomyelitis, total:	1
Botulism:	13	{ Paralytic:	1
Congenital rubella syndrome:	12	Psittacosis: Calif. 1, Texas 1	22
Leprosy: Calif. 2	103	Rabies in man:	1
Leptospirosis: Ca. 1	20	Trichinosis: NYC 1	50
Plague: Utah 1	7	Typhus, murine: Texas 2	17

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VINYL CHLORIDE - Continued

states. No rate increase was seen in the Pennsylvania hospital, but an increase, primarily in the categories of anencephalus and spina bifida, was noted in the Painesville hospital (Table 1).

Table 1
Number of Cases and Rates for Anencephalus and Spina Bifida
in the State of Ohio and the Painesville, Ohio, Hospital,
by Year, 1970-1974

Year	Anencephalus				Spina Bifida			
	Hospital		State		Hospital		State	
	No. Cases	Rate*	No. Cases	Rate	No. Cases	Rate	No. Cases	Rate
1970	(0)	0.0	(26)	5.0	(3)	31.2	(58)	11.1
1971	(1)	10.3	(38)	7.3	(3)	30.9	(44)	8.5
1972	(3)	35.6	(31)	6.3	(0)	0.0	(47)	9.6
1973	(2)	24.9	(27)	5.4	(2)	24.9	(46)	9.2
1974	(0)	0.0	(22)	4.5	(1)	15.1	(29)	6.0
1970-1974	(6)	14.1	(144)	5.7	(9)	21.2	(224)	8.9

*Rates per 10,000 total white births.

The BDMP hospital data for Painesville, Ohio, were compared with the birth certificate data from the Ohio Department of Health and 1 additional case not included in the BDMP report was added to the case group (total of 15). For each case, 2 controls were selected from the hospital birth registry. Medical records for cases and controls were reviewed to confirm the diagnosis and obtain pertinent demographic data, including parental occupation and residence at time of the infant's birth. In addition, parents of 14 of the affected children were interviewed concerning past occupations and residences.

Results of the study indicated that none of the interviewed parents ever worked at either of the 2 PVC polymerization plants in Painesville (1 set of parents could not be located, but records show they did not work at these plants at

the time of their infant's birth); 2 fathers among the parents of the 30 controls were working at 1 of these plants at the time of their infants' births. None of the parents in either group lived within 2 miles of the 2 plants. Statistical analyses comparing the distances from home and workplace to the PVC plants showed no differences between the parents of cases and controls.

(Reported by the Cancer and Birth Defects Division, Bureau of Epidemiology, CDC, in cooperation with the Ohio State Health Department.)

Editorial Note

Vinyl chloride is a known carcinogen (3), and concern has arisen over its possible teratogenic effects. This concern stems from recent studies which have shown a) an increase in mutagenicity in bacterial assay systems (4), and b) increased chromosomal breakage in PVC polymerization workers (5). The Ohio Department of Health study (1) is the only report where VC has been suggested as causing birth defects in humans. Although the follow-up study reported here confirmed a moderate increase in CNS malformations in Painesville, Ohio, it could not establish any association between cases and vinyl chloride exposure. This study clearly does not rule out the possibility that VC may also be teratogenic; other studies are currently underway to evaluate the incidence of birth defects among children of parents highly exposed to PVC.

References

1. Infante P: Oncogenic and mutagenic risk in communities with polyvinyl chloride production facilities. In Program of the Conference on Occupational Carcinogenesis at the New York Academy of Science, 25 March 1975. New York City, March 1975. Proceedings of the New York Academy of Sciences (in press)
2. Center for Disease Control: Congenital Malformations Surveillance, Annual Summary 1974. Atlanta, CDC, July 1975
3. Center for Disease Control: Morbidity and Mortality Weekly Rep 23(6):49-50, 9 February 1974
4. Rannug U, Johansson A, Ramel C, Wachmeister CA: The mutagenicity of vinyl chloride after metabolic activation. *Ambio* 3:194, 1974
5. Funes-Cravioto F, Lambert B, Lindsten J, et al: Chromosome aberrations in workers exposed to vinyl chloride. *Lancet* 1:459, 1975

FOLLOW-UP ON OUTBREAK OF GASTROINTESTINAL ILLNESS AT CRATER LAKE NATIONAL PARK - Oregon

No etiologic agent has yet been demonstrated as the cause of the intestinal illness associated with sewage-contaminated water, that occurred among persons at Crater Lake National Park (MMWR, Vol. 24, No. 28). Rectal swabs and stool specimens from 30 acutely ill persons were negative for salmonellae, shigellae, vibrios, *Yersinia enterocolitica*, and orbivirus. Tests for toxigenic *Escherichia coli* and enteric viruses are in progress.

Three persons with hepatitis who became ill shortly after visiting the park were probably incubating the disease at the time of their visit; 2 of these 3 were reported to have used the park toilet facilities. Surveillance of the exposed population for hepatitis has been initiated by State and Territorial Epidemiologists and by CDC. No definite post-exposure cases

of hepatitis among the persons exposed to the water at Crater Lake during the outbreak have been identified. If any persons develop hepatitis between 2 to 6 weeks after exposure at Crater Lake National Park, they are asked to report their illness to their state health departments and to CDC.

(Reported by members of the Oregon State Health Division and the California State Department of Health; and an EIS Officer.)

Addendum

The following persons who contributed to the investigation of this outbreak were inadvertently omitted from the list of persons mentioned in last week's MMWR: Mary Murphy, RN, Nurse Epidemiologist and Monroe Holmes, DVM, Public Health Veterinarian, Oregon State Health Division.

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