

Rubella — Continued

4. Pollard RB, Edwards EA. Epidemiologic survey of rubella in a military recruit population. *Am J Epidemiol* 1975;101:431-7.
5. Preblud SR, Halsey NA, Herrmann KL, et al. Susceptibility to measles and rubella in merchant marine cadets, Kingsport, Long Island, New York, 1977. Presented at the Immunization Conference, Washington, DC, March 1978.
6. Immunization Practices Advisory Committee. Rubella prevention. *MMWR* 1981;30:37-42,47.

*Epidemiologic Notes and Reports***Raynaud's Phenomenon in a Foundry — Wisconsin**

A high prevalence of Raynaud's phenomenon (also called vibration-induced white finger, or VWF) among metal foundry workers exposed to hand vibration when using air hammers and grinding tools was recently found in a National Institute for Occupational Safety and Health (NIOSH) investigation.

In June 1980, the International Molders and Allied Workers Union requested that NIOSH evaluate 74 men employed as chippers and grinders in 2 metal casting cleaning rooms (51 in Room A and 23 in Room B) at a foundry in Wisconsin. In August and September 1980, NIOSH investigators conducted medical evaluations and assessed vibration exposure.

Sixty-four employees (47 in Room A and 17 in Room B) were interviewed and examined. Fifty-five percent (26/47) of Room A employees and 18% (3/17) of Room B employees reported experiencing symptoms of Raynaud's phenomenon since beginning work as chippers. Men who were symptomatic also tended to have decreased sensory abilities in their hands. Of 14 men with 3 or more years of work as chippers in Room A, 2 had not suffered episodes of Raynaud's phenomenon.

Assessment of vibration exposure revealed that the chipping hammer (a tool similar to a small jackhammer used to remove excess metal from castings) had handle accelerations in the range of 15-60 x *g* (comparable to those of similar tools previously measured by NIOSH [7]), and the handles of the grinding machines had accelerations in the range of 15-20 x *g* (15-50 times the level of similar tools previously measured by NIOSH). Room A employees used the chipping hammer approximately 2-3 hours/day and the grinding machines 4-5 hours/day, while Room B employees used vibrating tools to a lesser extent because the Room B castings required less thorough or precise metal removal. The lower prevalence of Raynaud's symptoms in Room B employees may be due to the lower mean years of exposure of these workers (Room B, 2.3 years; Room A, 4.1 years) and the lesser time per day that they used vibrating tools.

Reported by W Taylor, MD, University of Dundee, Scotland; Physical Agents Effects Br, Div of Biomedical and Behavioral Science, Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluation, and Field Studies, NIOSH, CDC.

Editorial Note: European and American studies of foundry workers using chippers and of loggers operating chain saws have shown prevalences of Raynaud's phenomenon ranging from 20% to 90% (depending on the duration and intensity of vibration exposure), while <10% of male controls not exposed to vibration experienced symptoms of Raynaud's phenomenon. The increased risk of developing Raynaud's phenomenon due to long-term use of vibrating hand tools has received little attention in the United States (2-5).

The initial symptoms of vibration-induced Raynaud's phenomenon consist of an episodic blanching and numbness of a fingertip and are usually initiated by exposure to cold. With continued vibration exposure, VWF may involve more fingers, require less cold stimulus for initia-

Raynaud's Phenomenon — Continued

tion and, consequently, occur more frequently. Even persons with only moderately advanced VWF avoid outdoor activities (occupational endeavors, fishing, hunting, etc.) in cool or cold weather, because exposure to cold brings on attacks of Raynaud's phenomenon, and they are unable to grasp objects or safely hold tools. Many persons with advanced disease have decreased sensory abilities in the hand and are unable to grasp small objects or perform fine motor and/or hand movements. A small proportion of workers develop ulceration or gangrene of the fingers because of peripheral arterial occlusion. If vibration exposure is stopped before symptoms become severe, episodes of Raynaud's phenomenon usually subside over a period of several years. The pathogenesis of the initial blanching episodes and subsequent sensory and motor impairment is not well understood, particularly whether the primary lesion is neurologic or vascular (2,4,5).

While changes in work practice may lessen an individual worker's vibration exposure, ultimate control of vibration-induced Raynaud's phenomenon depends on development of tools which greatly reduce the vibration imparted to the user's hand.

References

1. Wasserman D, Taylor W, Behrens V, et al. Vibration white finger disease in U.S. workers using pneumatic chipping and grinding hand tools. Cincinnati: National Institute for Occupational Safety and Health (in press).
2. Taylor W, Pelmear PC. Vibration white finger in industry. London: Academic Press, 1975.

*(Continued on page 521)***TABLE I. Summary — cases of specified notifiable diseases, United States***[Cumulative totals include revised and delayed reports through previous weeks.]*

DISEASE	41st WEEK ENDING		MEDIAN 1976-1980	CUMULATIVE, FIRST 41 WEEKS		
	October 17 1981	October 11 1980		October 17 1981	October 11 1980	MEDIAN 1976-1980
Aseptic meningitis	311	243	182	7,095	5,735	4,883
Brucellosis	6	1	3	124	145	145
Chickenpox	855	610	620	169,735	159,880	159,880
Diphtheria	-	-	-	3	2	63
Encephalitis: Primary (arthropod-borne & unspec.)	45	66	39	1,078	914	914
Post-infectious	5	6	6	69	171	183
Hepatitis, Viral: Type B	353	398	287	15,897	14,030	11,807
Type A	414	638	612	19,446	22,110	23,453
Type unspecified	197	232	177	8,549	9,002	6,938
Malaria	21	33	11	1,092	1,611	588
Measles (rubeola)	24	64	87	2,722	13,021	24,375
Meningococcal infections: Total	47	49	40	2,788	2,160	1,940
Civilian	47	49	40	2,777	2,144	1,917
Military	-	-	-	11	16	17
Mumps	40	92	130	3,373	7,392	13,889
Pertussis	26	43	43	954	1,356	1,354
Rubella (German measles)	6	34	48	1,815	3,388	10,890
Tetanus	-	-	1	45	67	58
Tuberculosis	486	577	459	21,208	21,333	22,911
Tularemia	3	8	4	209	181	134
Typhoid fever	26	27	12	455	409	401
Typhus fever, tick-borne (Rky. Mt. spotted)	16	26	16	1,118	1,085	975
Venereal diseases:						
Gonorrhea: Civilian	20,084	23,757	19,845	784,887	789,267	789,267
Military	400	974	393	22,026	21,925	21,796
Syphilis, primary & secondary: Civilian	618	537	497	23,848	20,914	19,022
Military	21	3	3	306	251	244
Rabies in animals	104	108	70	5,789	5,232	2,512

TABLE II. Notifiable diseases of low frequency, United States

DISEASE	CUM. 1981	DISEASE	CUM. 1981
	-		4
Anthrax	61	Poliomyelitis: Total	3
Botulism	3	Paralytic	88
Cholera	10	Prrittacosis (Ariz. 1, Calif. 2)	1
Congenital rubella syndrome (Calif. 1)	198	Rabies in man	115
Leptosy (Calif. 2)	37	Trichinosis	37
Leptospirosis (Mich. 1)	9	Typhus fever, flea-borne (endemic, murine)	
Plague			

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

Raynaud's Phenomenon — Continued

3. Hamilton A. Effect of the air hammer on the hands of stonecutters. Bureau of Labor Statistics. Industrial accidents & hygiene series no. 19, 1918.
4. Taylor W. The vibration syndrome. London: Academic Press, 1974.
5. Wasserman D, Taylor W, Curry M, eds. Proceedings of the International Occupational Hand-Arm Vibration Conference. Cincinnati: National Institute for Occupational Safety and Health, 1977. (DHEW publication no. [NIOSH] 77-170).

Surveillance Summary**Nutrition Surveillance — United States, 1980**

The Coordinated Nutrition Surveillance Program of the Centers for Disease Control uses nutrition-related data collected by local health departments as part of routine delivery of child health services. During 1980, data were submitted for more than 250,000 children, ages 6 months-10 years. These data concerned new patients at more than 1,300 clinics in 22 states.

The data consist primarily of identifying demographic information, height (length), weight, birth weight, and hemoglobin and/or hematocrit determinations. Data on height (length), weight, and age are converted to percentiles for height-for-age and weight-for-height, using the National Center for Health Statistics reference population (1). Levels <5th percentile height-for-age and weight-for-height and >95th percentile weight-for-height are reported as potentially abnormal values. Results based on these cutoff points are shown in Table 2. (Asians 6-10 years old are not represented because data for <100 children were reported.)

TABLE 2. Nutrition indices, by age and ethnic group*

Age group	Number examined	Height-for-age	Weight-for-height	
		Percentage in the 5th %tile	Percentage in the 5th %tile	Percentage in the 95th %tile
<i>6-11 months</i>				
White	20,072	9.1	4.2	7.8
Black	10,622	12.4	4.8	10.1
Hispanic	2,572	10.4	4.0	9.9
American Indian	843	9.8	3.1	13.3
Asian	244	14.8	4.5	6.6
<i>12-23 months</i>				
White	27,810	10.9	4.7	9.7
Black	13,879	12.2	5.1	11.2
Hispanic	3,494	12.4	4.8	12.0
American Indian	934	15.5	5.5	14.0
Asian	407	28.0	9.1	5.7
<i>2-5 years</i>				
White	61,911	9.0	2.4	7.4
Black	30,057	6.3	3.6	6.9
Hispanic	8,143	11.9	2.2	11.6
American Indian	2,122	10.9	2.3	16.1
Asian	927	28.3	2.4	6.6
<i>6-10 years</i>				
White	18,347	6.5	2.3	5.2
Black	10,358	3.1	3.7	3.7
Hispanic	1,144	8.9	1.9	7.7
American Indian	200	2.5	1.0	5.5

*For children screened January-December 1980, CDC Coordinated Nutrition Surveillance.

MNWR

- Current Trends**
 513 Rubella — United States, 1978-1981
Epidemiologic Notes and Reports
 515 Raynaud's Phenomenon in a Foundry — Wisconsin
Surveillance Summary
 521 Nutrition Surveillance — United States, 1980

MORBIDITY AND MORTALITY WEEKLY REPORT

Current Trends

Rubella — United States, 1978-1981

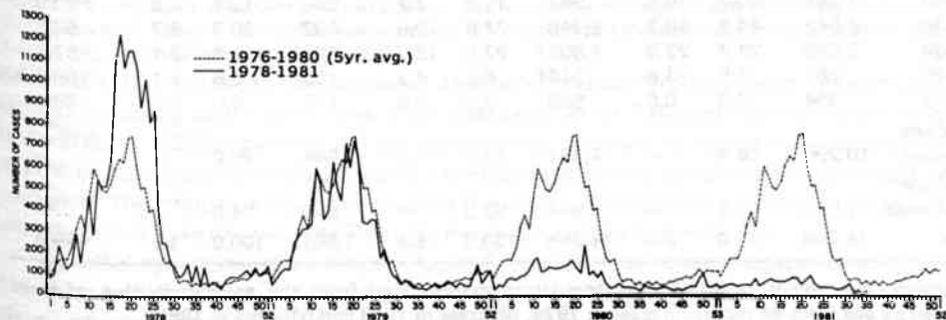
A record low number of 3,904 cases of rubella was reported in the United States for 1980. This was 66.9% less than the 1979 total of 11,795 cases, the previous record low. Between 1978 and 1980, the number of reported rubella cases declined 78.6%. This trend continued throughout the first 35 weeks of 1981 (ending September 5), when 1,717 cases of rubella were reported, a 46.3% decline from the 3,196 cases reported for the same period in 1980 (Figure 1).

Age-specific data were available for 2,964 (76.0%) of the cases reported for 1980. The reported age-specific incidence rate of rubella has decreased for all age groups over the past 2 years, with the greatest decline being that for the 15- to 24-year-old group (Table 1). This has resulted in a marked change in the age-specific characteristics. In 1978, the highest age-specific incidence rate was for 15- to 19-year olds. From 1978 through 1979, 73.8% of the reported cases of rubella were among persons ≥ 15 years old. For 1980, only 46.6% of the cases were reported among persons ≥ 15 years old, and the highest incidence rate was for the < 5 -year olds.

Reported by Surveillance and Assessment Br, Immunization Div, Center for Prevention Services, CDC.

Editorial Note: Initially, rubella-control programs in the United States emphasized vaccination of preschool and elementary school children; vaccination of older individuals received only secondary emphasis. This strategy caused a dramatic decline in reported rubella and eliminated the characteristic 6- to 9-year cycle of epidemic rubella (1). There was also a marked change in the age characteristics for reported rubella cases. Whereas rubella was considered a disease of young children before vaccine licensure in 1969, from 1976 through 1979 approximately 70% of reported rubella cases were among individuals > 15 years of age and the highest incidence rate was for the 15- to 19-year olds (2).

FIGURE 1. Rubella cases, by week of report, United States, 1978-1981*



*1981 data is through the first 35 weeks (ending September 5).